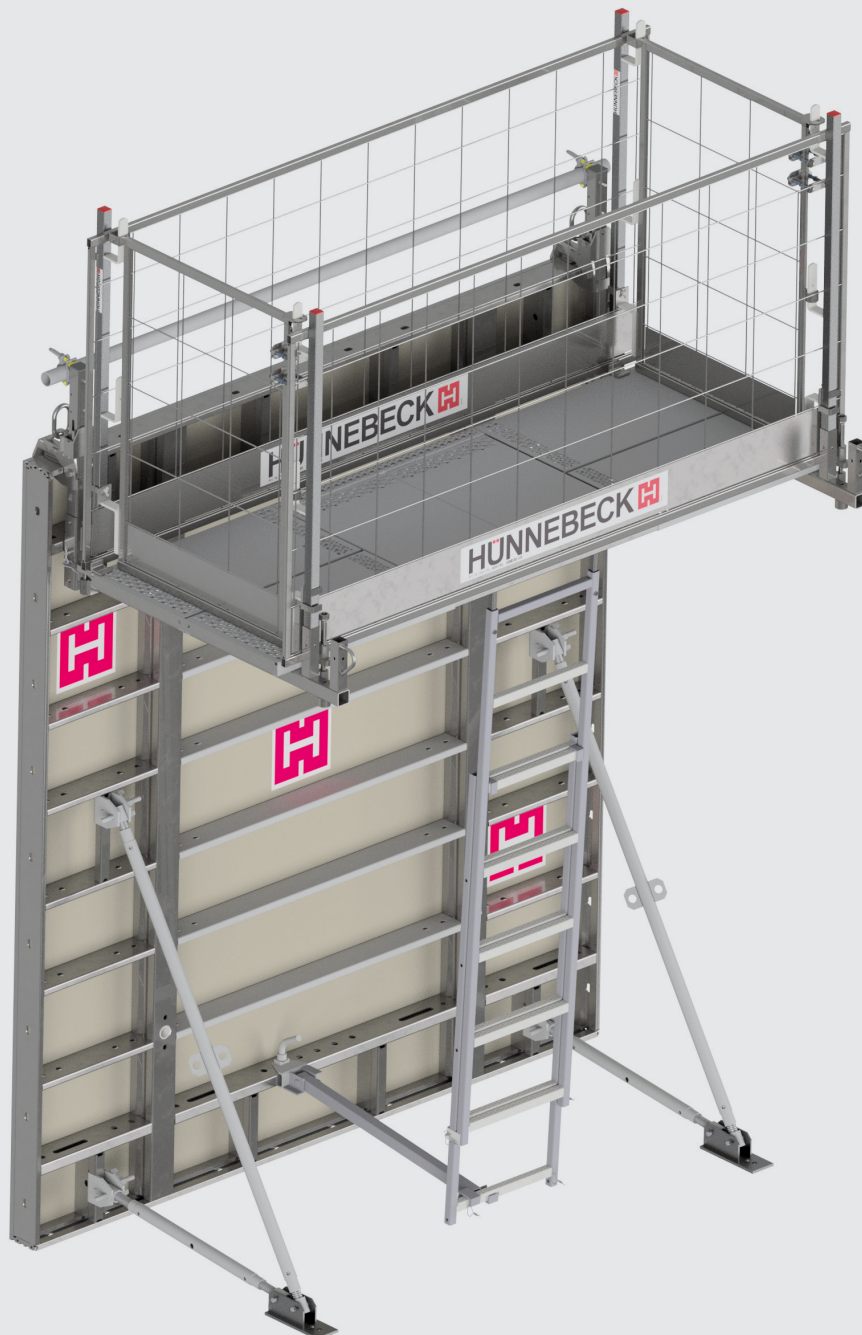


Universal Formwork Platform

User guide



Contents

1	The Universal Formwork Platform	3
1.1	Product features.....	3
1.2	About this document.....	3
1.3	Intended use.....	3
1.4	Safety instructions.....	3
1.5	Conventions in this user guide.....	5
2	Overview	6
3	Components	8
4	Assembling formwork platform	13
4.1	Important components.....	13
4.2	Assembling formwork platform separately.....	17
4.3	Installing side protection.....	19
4.4	Assembling formwork platform on formwork lying on the ground.....	25
5	Raising formwork with platforms attached	36
5.1	RASTO formwork.....	37
5.2	MANTO formwork.....	39
6	Attaching formwork platform to upright formwork using a crane	41
6.1	Bracing Bracket Adapters.....	41
6.2	Preparing Bracket Adapters.....	42
6.3	Attaching formwork platform to crane.....	42
6.4	Hanging formwork platform on formwork.....	43
7	Using the formwork platform	44
7.1	Moving interior Uni Mesh Panel to park position.....	48
8	Creating compensation areas	50
9	Moving by crane formwork with platforms attached	51
10	Lowering formwork to clean form sheet	52
11	Removing formwork platform from panel with a crane	53
12	Disassembling formwork platform	53
13	Storage and transportation	54
13.1	Uni Mesh Panel brackets.....	54
13.2	Other components.....	55
14	Chronology	56

1 The Universal Formwork Platform

1.1 Product features

The Universal Formwork Platform can be used to add working platforms to RASTO formwork, MANTO formwork and PLATINUM formwork. The formwork platforms are completely enclosed in side protection, so people working on the platforms are always assured of the required safety measures.

The formwork platforms are made up of only a few components, allowing them to be quickly and easily assembled on the ground or directly on the formwork. Completely pre-assembled platforms can be attached to the formwork using a crane. To move formwork with assembled and attached platforms, attach a crane to the lifting eyes on the platforms and move the whole unit (Keep in mind the possible combinations).

The formwork platforms are accessed using system ladders and Hatch Decks.

The Safe Working Load of the Universal Formwork Platform is 150 kg/m² (load class 2 pursuant to DIN EN 12811-1).

1.2 About this document

This user guide describes how to safely assembly and effectively work with the Universal Formwork Platform. It is essential that you carefully read the entire user guide before assembling and using the Universal Formwork Platform. Keep the user guide nearby and save it as a reference.

This user guide is designed for commercial users with proper professional training. The information and procedures described here comply with the laws and the occupational health and safety regulations of Germany and Austria. Hünnebeck assumes no liability in the event of deviations from the information and procedures described in the user guide or in the event that the equipment is used outside of this area.

1.3 Intended use

The Universal Formwork Platform is technical equipment. It is used to construct formwork platforms on Hünnebeck RASTO and MANTO formwork. The formwork platforms serve as places for persons to stand while working.

The Universal Formwork Platform may be assembled as stated in this user guide. Any other arrangement of the components or any use that deviates from the intended use is not permitted.

1.4 Safety instructions

Notes on intended and safe use of formwork and falsework

The contractor is obligated to compile a risk assessment and assembly instructions.


Assembly instructions are not the same thing as a user guide.


- Risk assessment
The contractor is responsible for the preparation, documentation, implementation and revision of a risk assessment for each construction site. His/her employees are obliged to implement the resulting measures in accordance with all legal requirements.
- Assembly instructions
The contractor is responsible for compiling written assembly instructions. The user guide is a fundamental aspect of the assembly instructions.


- **User guide**
Formwork and falsework are technical equipment intended only for commercial applications. The equipment may be used only by properly trained personnel under the authority of qualified supervisors.
The user guide is an essential component of the formwork. At a minimum, it contains safety notes, information on the standard configuration and the intended use, and a description of the system. Carefully follow the instructions on use and assembly of the equipment (standard configuration) contained in the user guide. Enhancements, deviations or changes represent a potential risk and therefore require separate verification (with the help of a risk assessment) or a set of assembly instructions which comply with the relevant laws, standards and safety regulations. The same applies in cases where formwork and falsework components are provided on site.
- **Accessibility of the user guide**
The contractor has to ensure that site personnel are familiar with the user guide provided by the manufacturer or the formwork supplier and that it is readily accessible at all times. In case of loss, a replacement can be obtained from Hünnebeck.
- **Illustrations**
Some of the illustrations in the user guide show incomplete assembly and do not necessarily show all aspects relevant to safety.
Safety devices may not always appear in the illustrations, but they are nevertheless mandatory.
- **Storage and transport**
Always comply with the requirements specifically applicable to transporting and storing the respective formwork. An example of such a requirement is the use of lifting gear.
- **Material check**
Formwork and falsework material deliveries are to be checked on arrival at the construction site / destination as well as before each use to ensure that they are in perfect condition and function correctly. Modifications to the formwork materials are not permitted.
- **Spare parts and repairs**
Only original parts may be used as spare parts. Repairs may be performed only by the manufacturer or authorised facilities.
- **Use of other products**
Combining formwork components from different manufacturers poses certain risks. Examine such components individually for suitability; they may require a separate user guide.

1.5 Conventions in this user guide


1.5.1 Warnings and notes


 DANGER	Danger! Danger indicates a hazardous situation that, if not avoided, will cause death or serious injury.
---	--


 WARNING	Warning! Warning indicates a hazardous situation that, if not avoided, can cause death or serious injury.
--	---


 CAUTION	Caution! Caution indicates a hazardous situation that, if not avoided, can cause minor or moderate injury.
--	--

NOTE	Note! Note indicates a hazard that can cause property damage.
-------------	---

	This note indicates that an additional inspection is required.
---	--

	This note shares practical experience with the user, e.g. how to perform a task more easily or quickly.
---	---

	This note indicates particularly important information, e.g. that a requirement has to be fulfilled.
---	--

	This symbol indicates that additional information from other documents is required. These documents could be user guides or operating instructions for other products.
---	--

1.5.2 Instructions

In this document instructions are always identified with the word **Step**, e.g.

Step 1 Insert the locking bolt into the hole from the outside.

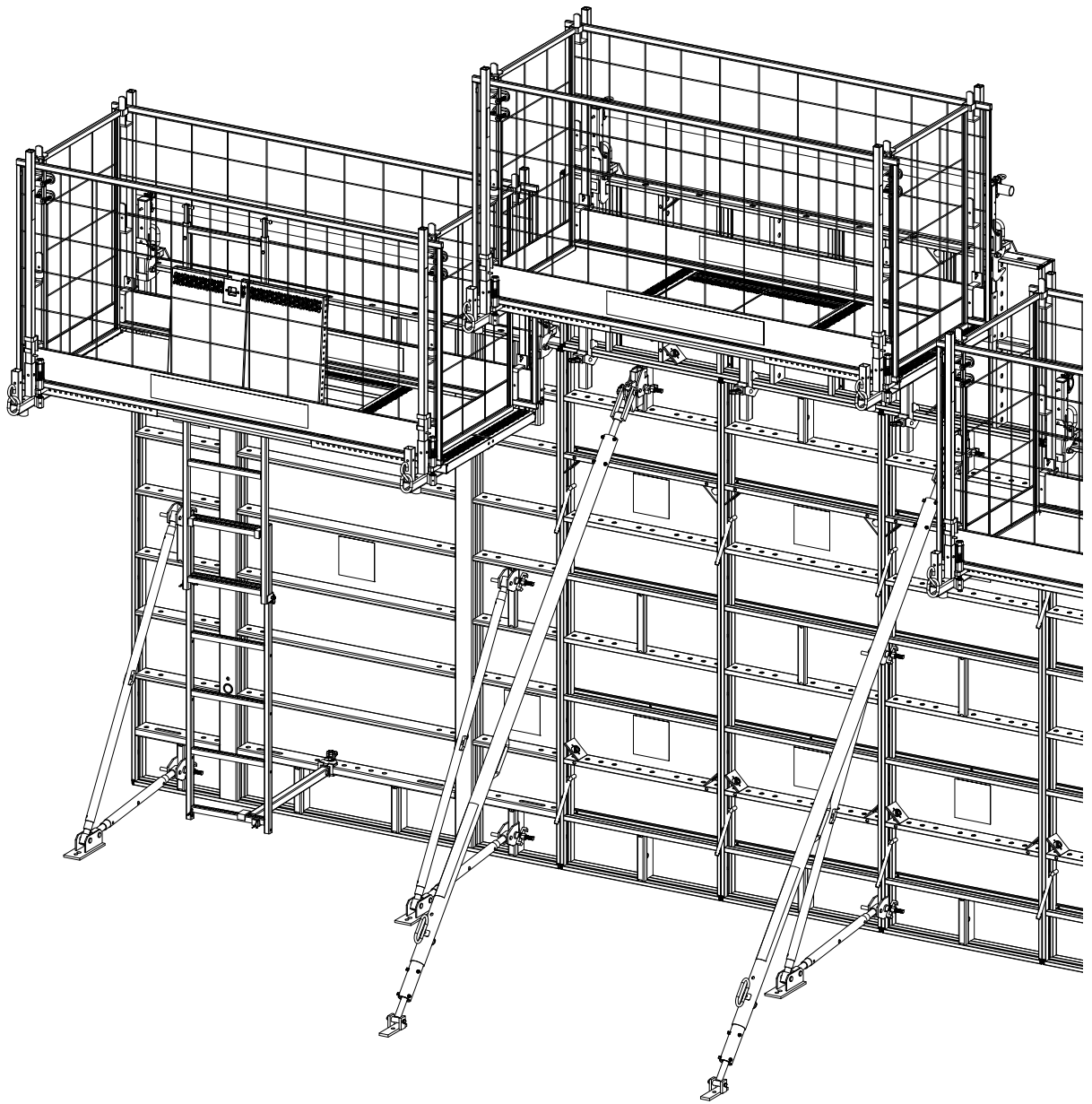
Step 2 Secure the pin with the spring cotter pin.

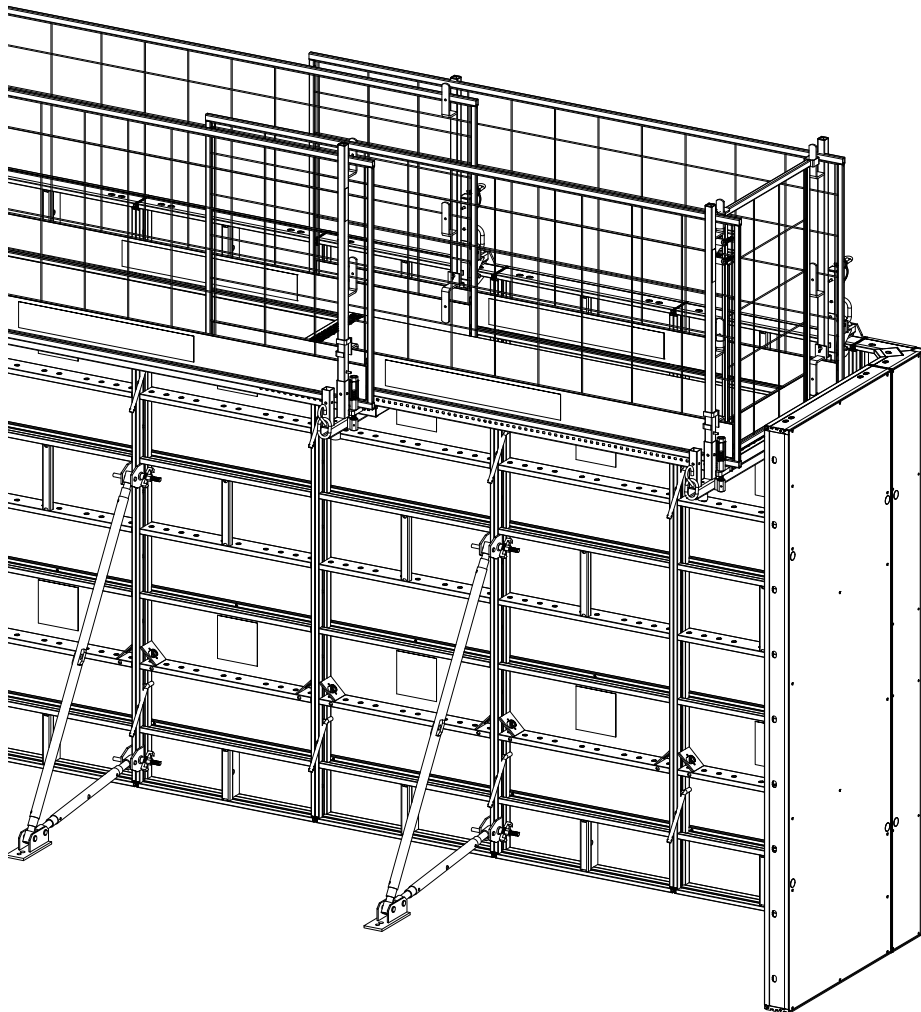
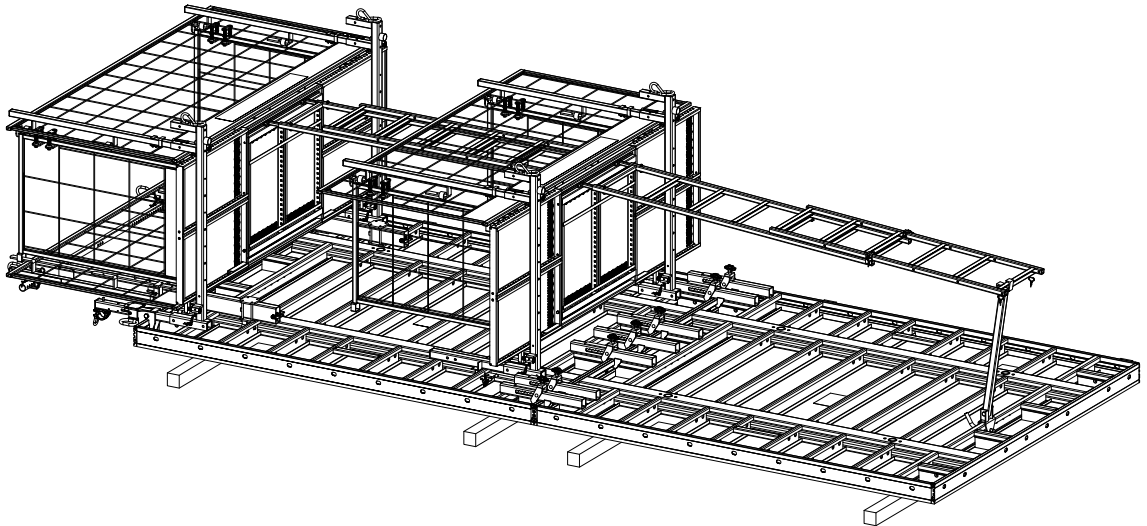
Miscellaneous

We explicitly reserve the right to make changes resulting from technical improvements. For the safety-related application and use of the products, all current country-specific laws, standards as well as other safety regulations are to be complied with, without exception. They form a part of the obligations of employers and employees regarding industrial safety. This results in, among other things, the responsibility of the contractor to ensure the stability of the formwork and falsework constructions as well as the structure during all stages of construction.

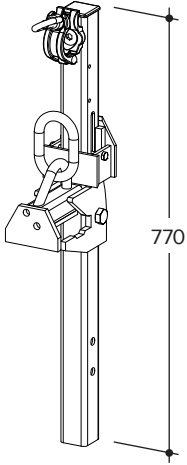
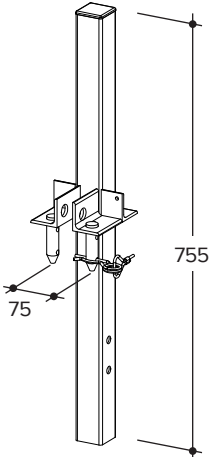
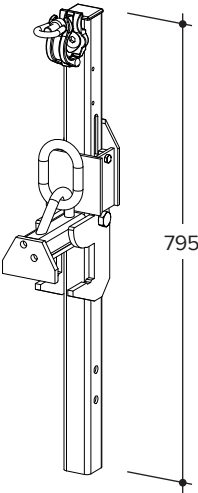
This also includes the basic assembly, dismantling and transport of the formwork and falsework along with their components. Inspect the entire structure during and upon completion of assembly.

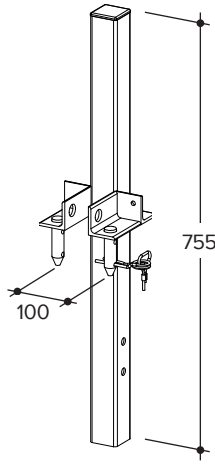
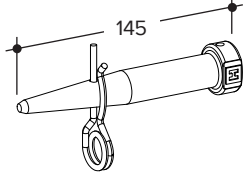
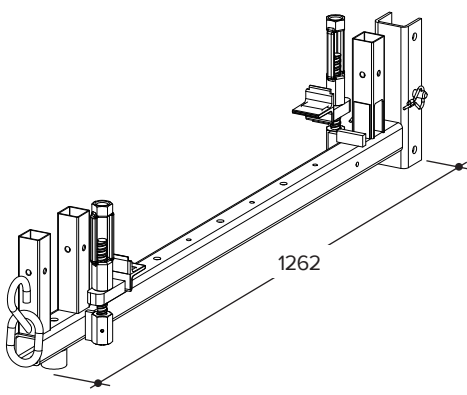
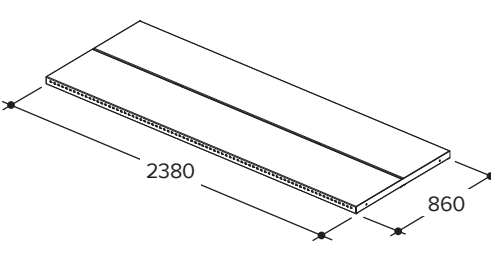
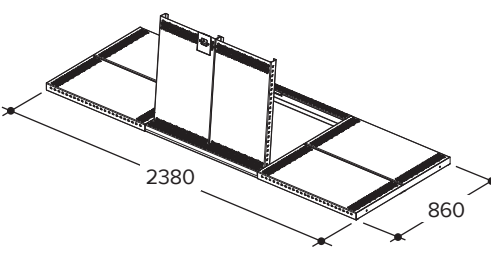
2 Overview

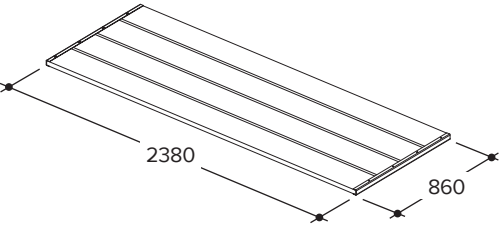
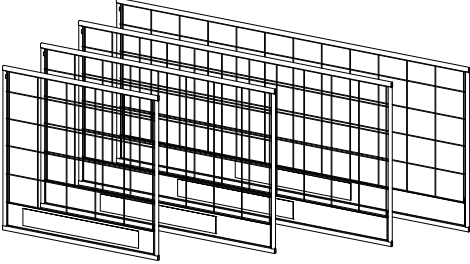
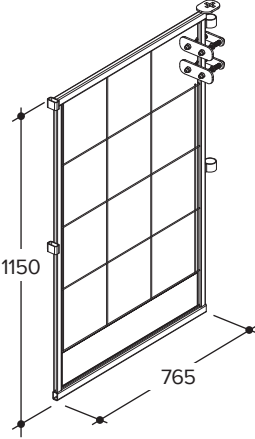
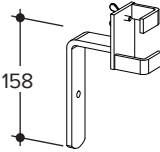
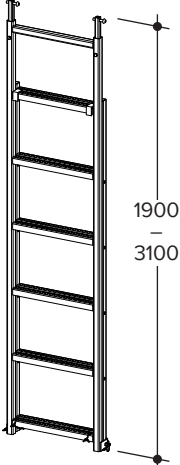


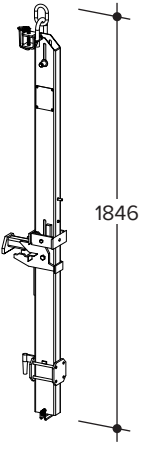
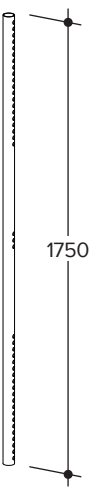
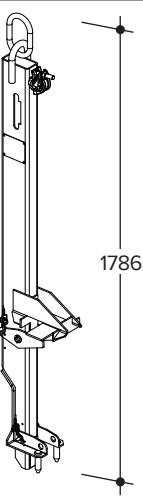


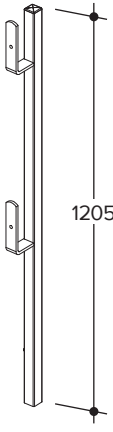
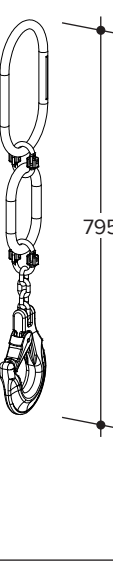
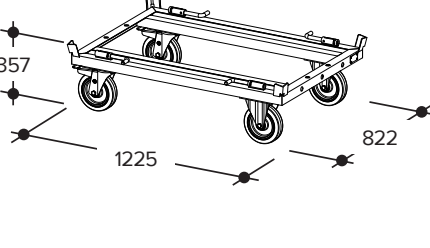
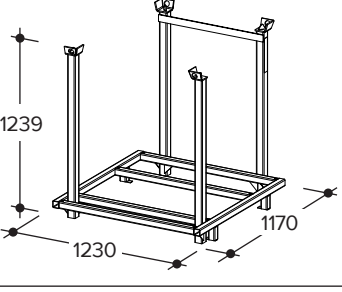
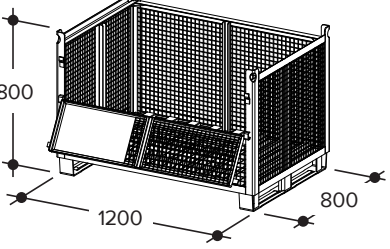
3 Components

	Component	Part code	Weight [kg]
	<p>Bracket Adapter RASTO Edge</p> <p>Used to attach a platform bracket to the edge profile of the RASTO formwork. With lifting eye to transport the formwork platform with a crane.</p> <p>Refer to page 14.</p> <p>Always consult the separate operating instructions for the Bracket Adapter.</p>	<p>607750</p>	<p>10.52</p>
	<p>Bracket Adapter RASTO Rib</p> <p>Used to attach a platform bracket to the H-rib of the RASTO formwork.</p> <p>Refer to page 16.</p> <p>Order a Waler Bolt D20 and a Spring Pin 4 to mount on horizontally aligned formwork.</p>	<p>607795</p>	<p>4.80</p>
	<p>Bracket Adapter MANTO Edge</p> <p>Used to attach a platform bracket to the edge profile of the MANTO and PLATINUM 100 formwork. With lifting eye to transport the formwork platform with a crane.</p> <p>Refer to page 14.</p> <p>Always consult the separate operating instructions for the Bracket Adapter.</p>	<p>607780</p>	<p>11.78</p>

	Component	Part code	Weight [kg]
	<p>Bracket Adapter MANTO Rib</p> <p>Used to attach a platform bracket to the H-rib of the MANTO and PLATINUM 100 formwork.</p> <p>Refer to page 16.</p> <p>Order a Waler Bolt D20 and a Spring Pin 4 to mount on horizontally aligned formwork.</p>	<p>607790</p>	<p>5.87</p>
	<p>Waler Bolt D20</p> <p>Spring Cotter Pin 4</p> <p>Used to secure the Bracket Adapter Rib to horizontally aligned formwork elements.</p>	<p>420000</p> <p>173776</p>	<p>0.32</p> <p>0.02</p>
	<p>Uni Platform Bracket</p> <p>Supports the deck and the side protection. Secured to the formwork with the aid of the Bracket Adapter.</p> <p>Refer to page 13.</p>	<p>607700</p>	<p>13.49</p>
	<p>Steel Deck 120</p> <p>Steel Deck 240</p> <p>Steel Deck 270</p> <p>Placed on the brackets.</p> <p>Refer to page 17.</p>	<p>607930</p> <p>607680</p> <p>607935</p>	<p>21.43</p> <p>41.04</p> <p>45.96</p>
	<p>Hatch Deck 240</p> <p>Placed on the brackets. With self-locking hatch.</p> <p>Refer to page 17.</p>	<p>607744</p>	<p>51.50</p>

	Component	Part code	Weight [kg]
	Plank Deck 240	607766	35.61
	Uni Mesh Panel 120	607955	9.69
	Uni Mesh Panel 180	607985	13.28
	Uni Mesh Panel 240	607940	16.88
	Uni Mesh Panel 270	607945	18.59
	Refer to page 21.		
	PROTECTO Cross-Railing	607665	8.85
	Provides side protection at the ends of the platform. Can be opened and locked into place. Refer to page 23.		
	PROTECTO Uni Retainer	605860	0.69
	Secures the Uni Mesh Panel vertically to the bottom of the PROTECTO Railing Posts Refer to page 19.		
	Uni Formwork Platform Ladder	604433	23.85
	Extendable ladder for accessing the formwork platform. Refer to page 44.		

	Component	Part code	Weight [kg]
	<p>RASTO Lifting Device</p> <p>For lifting RASTO formwork with platform system attached. Can be fastened to horizontally as well as vertically aligned formwork elements.</p> <p>Always consult the separate operating instructions for the RASTO Lifting Device Refer to page 36.</p>	<p>607650</p>	<p>21.02</p>
	<p>RASTO Bracing Tube</p> <p>For bracing 2no. RASTO Lifting Devices. Refer to page 36.</p>	<p>605595</p>	<p>4.07</p>
	<p>PLATINUM 100 Lifting Device</p> <p>For raising PLATINUM 100 or MANTO formwork with the platform attached, from lying on the ground to an upright position. Can be attached to vertically aligned formwork elements.</p> <p>Always consult the separate operating instructions for the PLATINUM 100 Lifting Device.</p>	<p>606920</p>	<p>27.99</p>

	Component	Part code	Weight [kg]
	<p>PROTECTO Railing Post Refer to page 20.</p>	<p>601225</p>	<p>3.67</p>
	<p>Uni Formwork Platform Crane Suspension For moving the formwork platform and the formwork with the formwork platform attached with a crane. Compensates the weight of the formwork platform and ensures that the formwork hangs vertically from the crane. Refer to page 42. Use the small suspension link to transport a single formwork platform. Use the large suspension link to transport the formwork when the formwork platform is attached. Always consult the separate operating instructions for the Crane Suspension.</p>	<p>605279</p>	<p>1.56</p>
	<p>Euro Trolley Used to manually manoeuvre approved Hünnebeck transport equipment. The Euro Trolley has two lockable swivel castors. Working load: 1300 kg. Refer to page 111.</p>	<p>607610</p>	<p>39.57</p>
	<p>Uni Mesh Panel Rack Rack used to store and transport by crane up to 50no. Uni Mesh Panels. Can be moved using the Euro Trolley. Working load: 1050 kg. Refer to page 111.</p>	<p>605558</p>	<p>65.74</p>
	<p>Euro Lattice Box Used to store and transport small items. Can be moved using the Euro Trolley. Working load: 1200 kg.</p>	<p>548480</p>	<p>68.76</p>

4 Assembling formwork platform

The formwork platform can be attached to formwork lying on the ground, or it can be assembled separately and later attached to the upright formwork using a crane. Assembly is mostly the same, but there are a few points that differ.

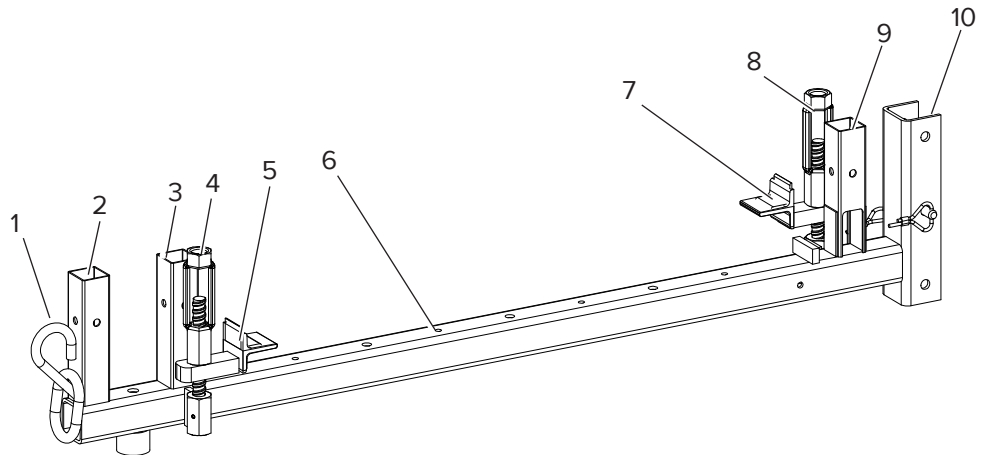
Another way in which assembly differs is whether the formwork platform is connected to the top edge profile of the formwork element or to an H-rib or panel joint.

The following section describes separate assembly. Then the special aspects of attaching the platform to formwork lying on the ground will be described.

4.1 Important components

4.1.1 Platform Bracket

The Platform Bracket is the foundation of the platform system. Two brackets support each formwork platform. The planks are placed on the brackets. The Platform Bracket also holds the side protection in place. The Platform Bracket is secured to the formwork elements with the aid of the Bracket Adapter.



- 1 Lifting eye
- 2 Park position for PROTECTO Railing Post
- 3 Foot for outer PROTECTO Railing Post
- 4 Screw to secure Outer Plank Retainer
- 5 Outer Plank Retainer
- 6 Holes for securing the plank to the Platform Bracket; for pre-assembled units
- 7 Inner Plank Retainer
- 8 Screw to secure Inner Plank Retainer
- 9 Foot for inner PROTECTO Railing Post
- 10 Fitting for Bracket Adapter

4.1.2 Bracket Adapter RASTO Edge / Bracket Adapter MANTO Edge

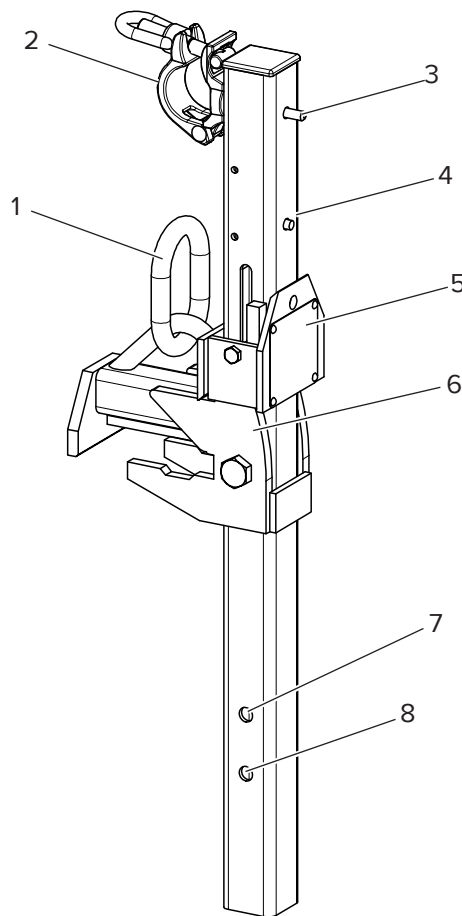
The Bracket Adapters Edge is used to connect the formwork platform to the upper edge profile of a formwork element. This Bracket Adapter can be attached to vertically and horizontally aligned formwork elements.



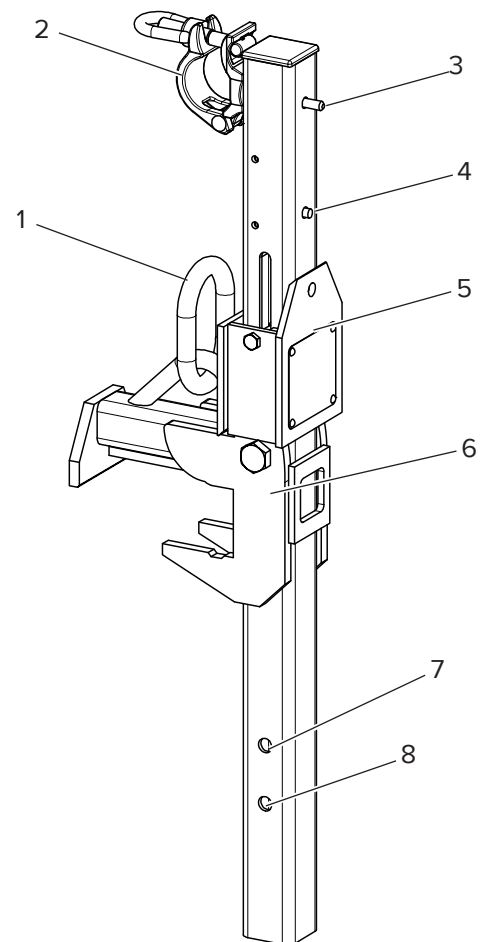
The Bracket Adapters RASTO Edge and MANTO Edge as well as the Uni Formwork Platform Crane Suspension are lifting accessories.

Always follow the operating instructions included with the lifting accessories. These documents explain in detail the permitted attachment points and loads.

Bracket Adapter RASTO Edge



Bracket Adapter MANTO Edge



- 1 Lifting eye for transporting by crane
- 2 Coupler for scaffold tube
- 3 Operating pin
- 4 Locking pin
- 5 Cage
- 6 Profile lock
- 7 Hole for attaching to Platform Bracket; overlap position
- 8 Hole for attaching to Platform Bracket; standard position

Unlocking Bracket Adapter RASTO Edge / MANTO Edge

The Bracket Adapter RASTO Edge or MANTO Edge has to be unlocked before it can be mounted on a panel. The following steps explain the procedure for the Bracket Adapter RASTO Edge. The procedure is the same for the Bracket Adapter MANTO Edge.

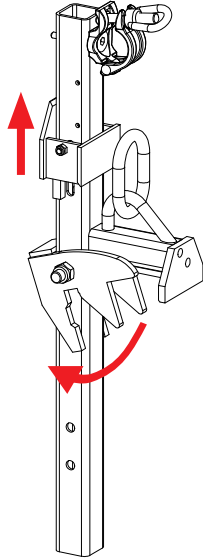


CAUTION

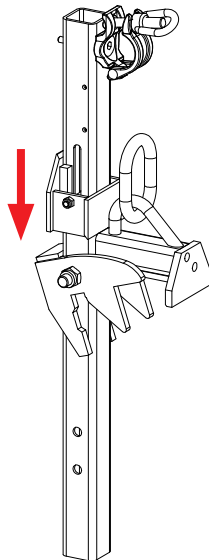
Risk of crushing!

The Bracket Adapter cage is spring-loaded and can drop quickly. This can crush your fingers. Keep hands out of the range of motion of the cage. Always hold onto the Bracket Adapter below the profile lock.

Step 1 Slide the cage far enough up that the profile lock is free. The profile lock opens.



Step 2 Slide the cage down again. The Bracket Adapter is now unlocked and can be attached to a panel.

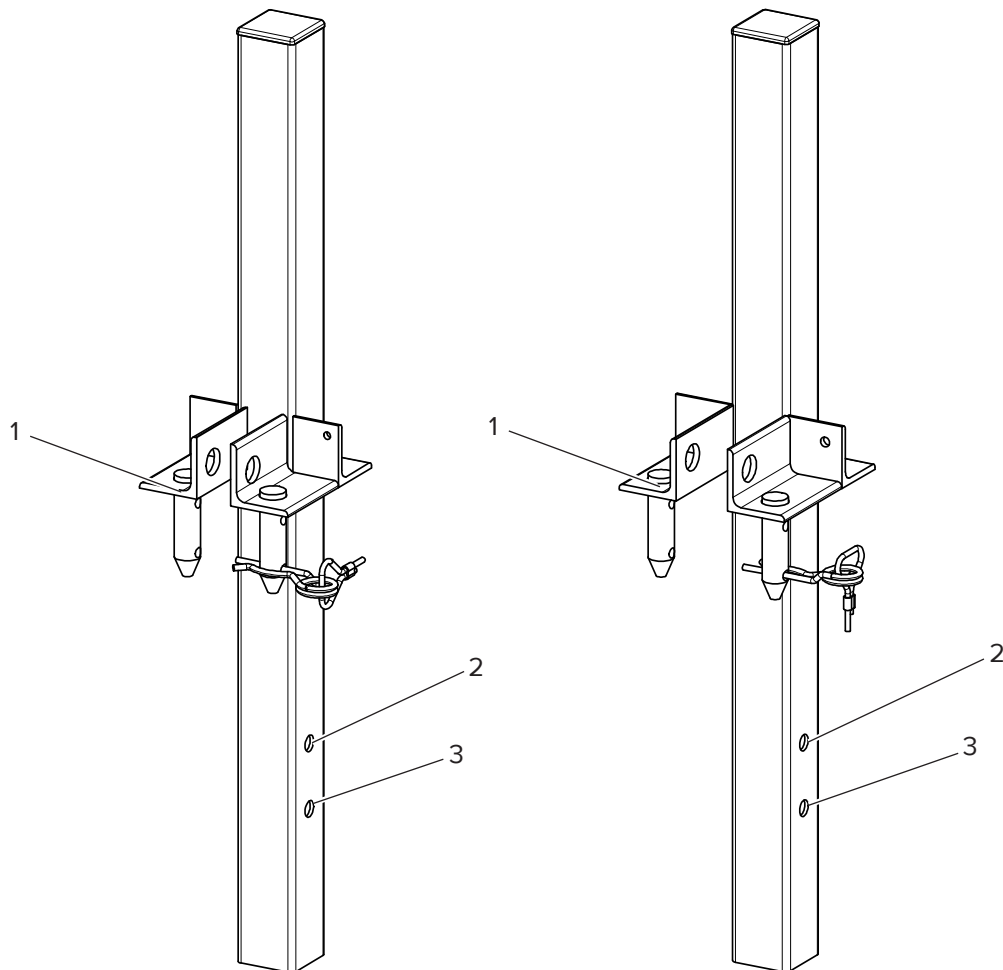


4.1.3 Bracket Adapter RASTO Rib / Bracket Adapter MANTO Rib

The Bracket Adapter Rib is used to connect the formwork platform to an H-rib of a formwork element. This Bracket Adapter Rib can be attached to vertically aligned formwork elements. And with the aid of a Waler Bolt D20, it can also be attached to horizontally aligned formwork elements.

Bracket Adapter RASTO Rib

Bracket Adapter MANTO Rib



- 1** Bolt with spring pin for attaching to the H-rib on a formwork element
- 2** Hole for attaching to Platform Bracket; overlap position
- 3** Hole for attaching to Platform Bracket; standard position

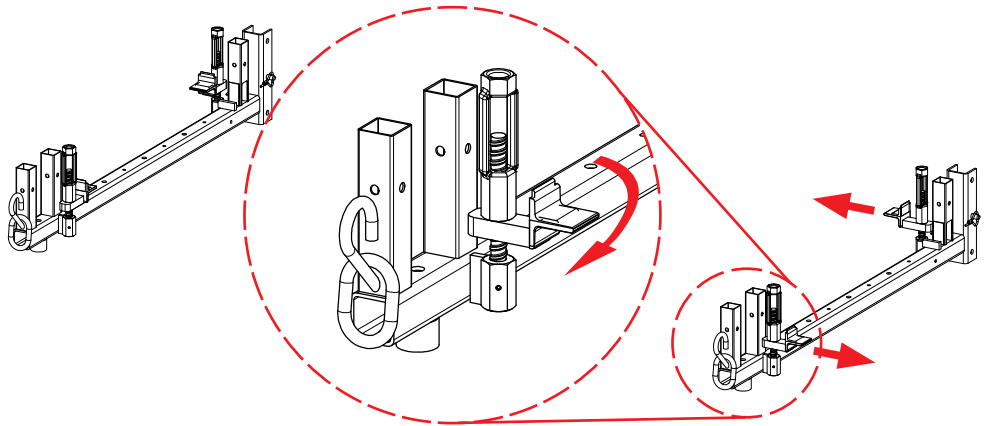
4.2 Assembling formwork platform separately

To assemble the formwork platform separately, first determine the spacing of the Bracket Adapters that will be needed later to attach the platform to the formwork element.

Step 1 Place the brackets on a flat surface at a suitable distance apart.



Step 2 Release both screws on the Plank Retainers of one of the Platform Brackets. Turn the Outer Plank Retainers outward. Turn the Inner Plank Retainers inward.

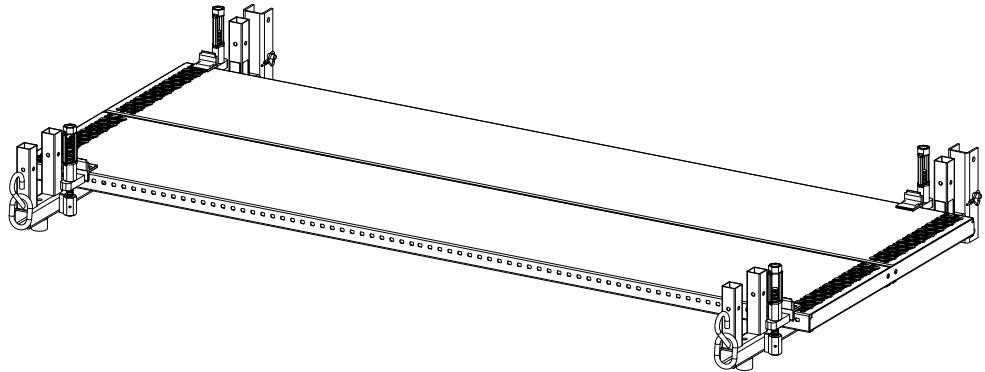


Step 3 Release and turn both Plank Retainers on the other Platform Bracket in the same way.



Assembling formwork platform

- Step 4** Place the plank on top of the Platform Bracket. Rotate all 4no. Plank Retainers so that they secure the plank.



WARNING

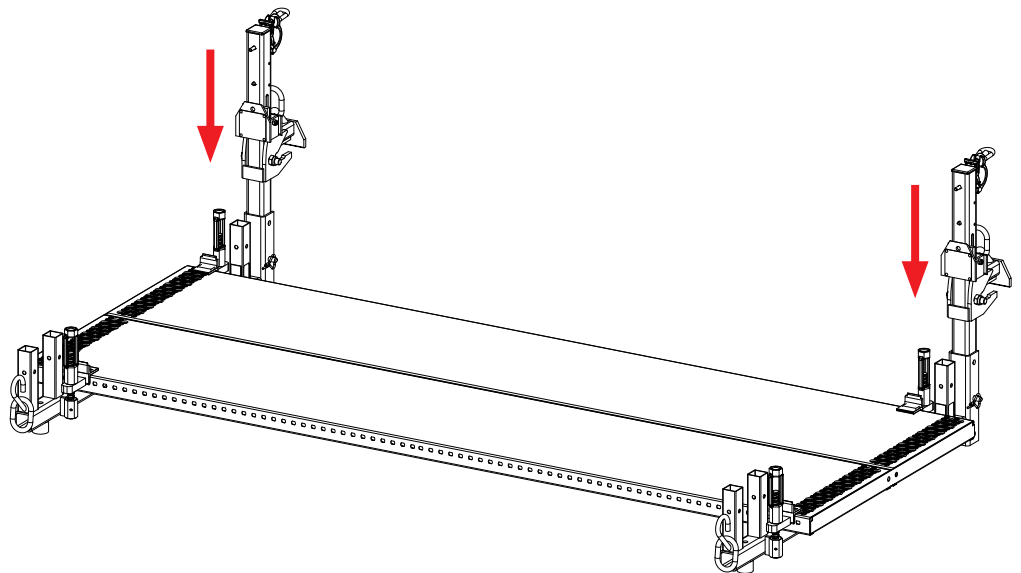
Risk of fall! Comply with maximum overhang permitted!

If the plank extends too far beyond the brackets, the plank can fail when subjected to load. Persons can fall off and sustain serious injury or die!

Maximum overhang for planks 270/240: 60 cm!

Maximum overhang for planks 120: 30 cm!

- Step 5** First tighten the Plank Retainers only slightly, one after the other, using e.g. the tip of a roofing hammer or a spanner w.a.f. 30.
- Step 6** Then tighten the Plank Retainers all the way. Make sure that the Platform Brackets do not turn out of place as the Plank Retainers are tightened.
- Step 7** Insert 1no. suitable Bracket Adapter in each Fitting for Bracket Adapter and secure in the standard position with the bolt $\varnothing 12$ mm (Refer to page 14 and 16). Secure the Pins with the Spring Cotter Pins.



4.3 Installing side protection

Once the formwork platform is assembled, side protection can be added. Complete side protection for a formwork platform is made up of the following components:

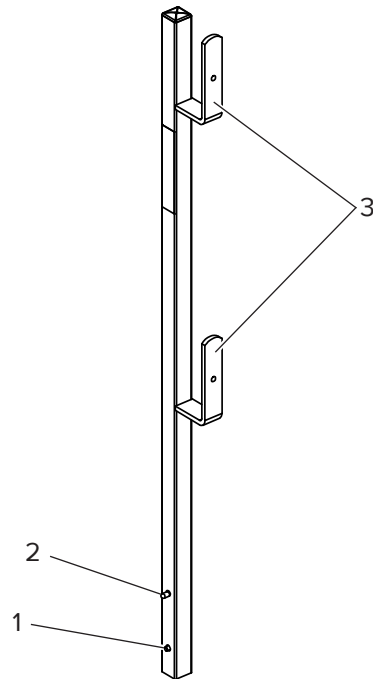
- 4no. PROTECTO Railing Posts
- 2no. Uni Mesh Panels
- 2no. PROTECTO Cross-Railings
- 4no. PROTECTO Uni Retainers

Depending on the position of the formwork platform, it may not be necessary to install side protection on all four sides. In such cases fewer components are needed.



Reading the instructions in the separate user guide for the PROTECTO system is essential!

PROTECTO Railing Post

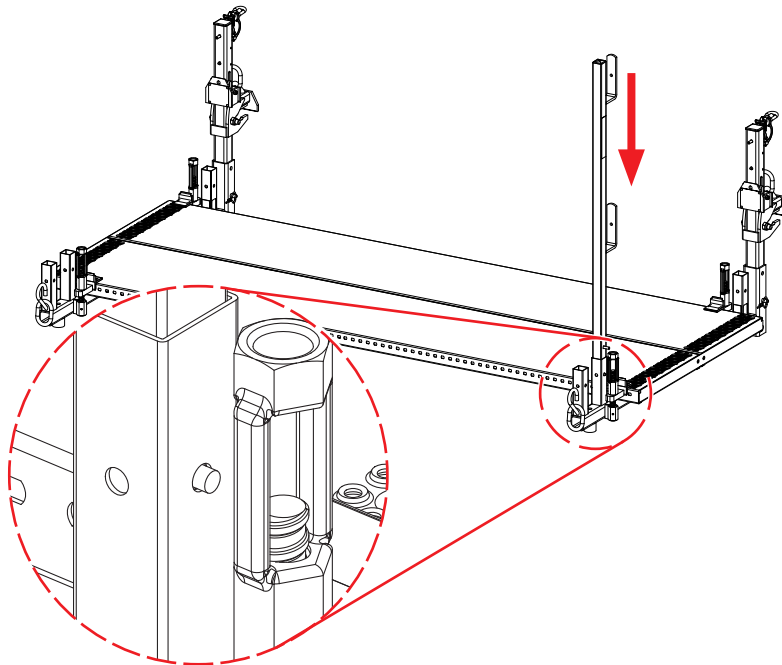


- 1 Locking pin; locks the post in the base
- 2 Operating pin; press to release the post from the base
- 3 Hook to hold Uni Mesh Panel

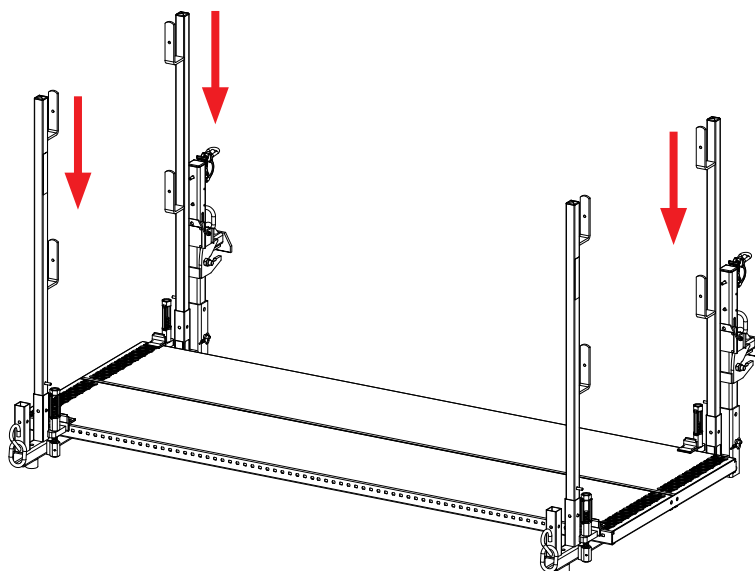
Assembling formwork platform

4.3.1 Attaching PROTECTO Railing Post

Step 1 Press the operating pin on the PROTECTO Railing Post and insert the PROTECTO Railing Post in the base for PROTECTO Railing Posts. Verify that the hooks face the deck. The locking pin on the PROTECTO Railing Post has to engage in the corresponding hole in the Platform Bracket.



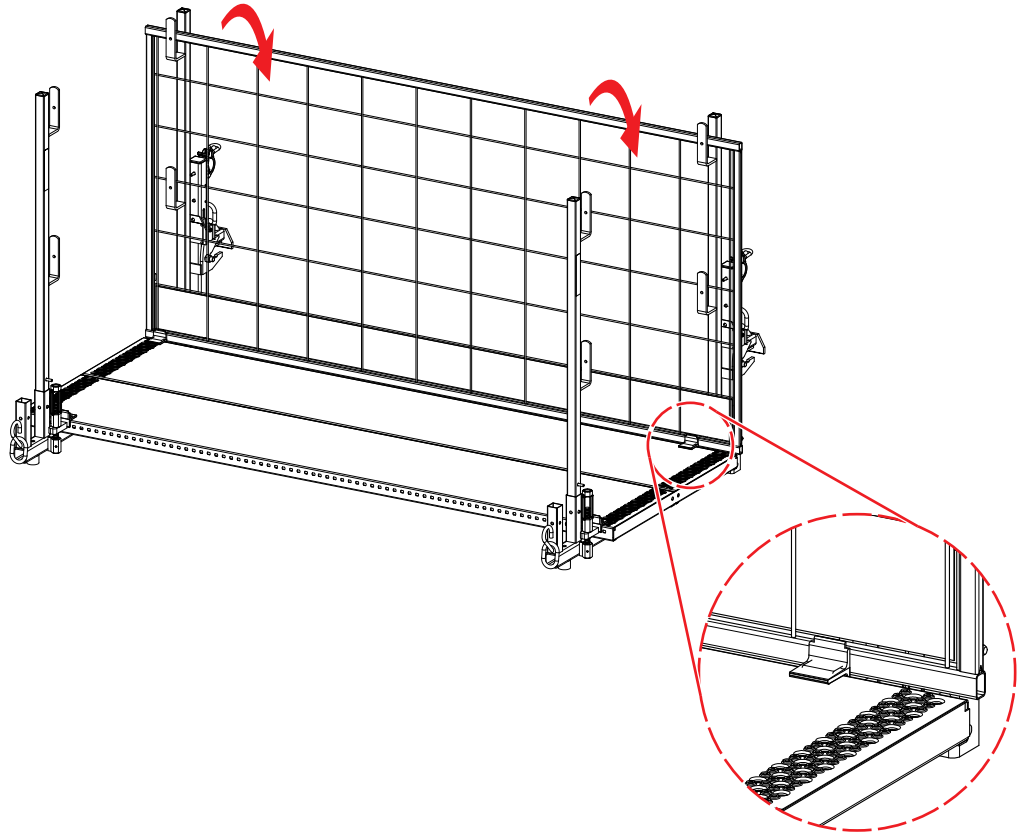
Step 2 Attach the other 3no. PROTECTO Railing Posts to the formwork platform in the same way. All of the hooks have to face the deck.



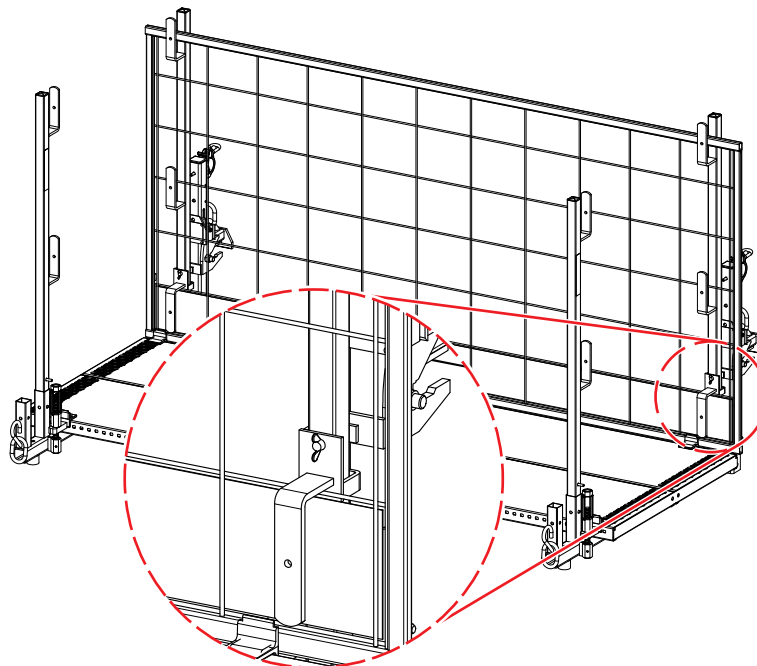
4.3.2 Attaching Uni Mesh Panel

Side protection along the long sides on the formwork platform consists of Uni Mesh Panels. Simply hang the Uni Mesh Panels on the PROTECTO Railing Posts.

- Step 1** Hang the Uni Mesh Panels on the hooks on the inner (closest to the formwork) PROTECTO Railing Posts. Verify that the lower edge of the Uni Mesh Panel is behind the angles on the Plank Retainer.

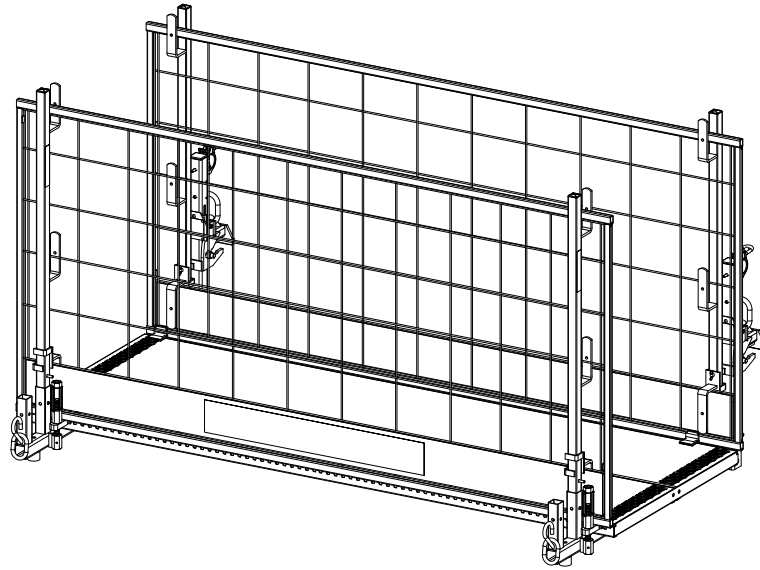


- Step 2** Secure the Uni Mesh Panel with 1no. PROTECTO Uni Retainer on each of the PROTECTO Railing Posts.



Assembling formwork platform

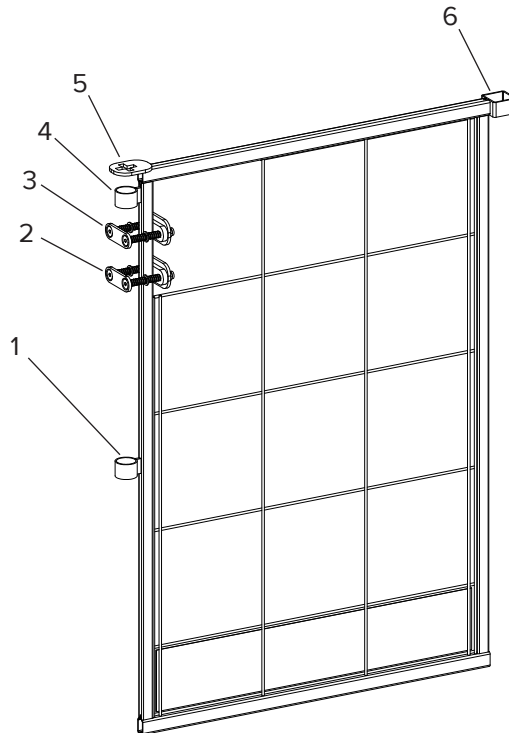
- Step 3** Hang the Uni Mesh Panels on the hooks on the outer (farthest from the formwork) PROTECTO Railing Posts. Secure the Uni Mesh Panel with 1no. PROTECTO Uni Retainer on each of the PROTECTO Railing Posts.



4.3.3 Attaching PROTECTO Cross-Railings

Side protection along the short sides on the formwork platform consists of PROTECTO Cross-Railings. Hang the PROTECTO Cross-Railing on the PROTECTO Railing Posts. The PROTECTO Cross-Railing is initially installed such that it is closed. It can later be unlocked and opened like a door, e.g. to access an adjacent formwork platform.

PROTECTO Cross-Railing



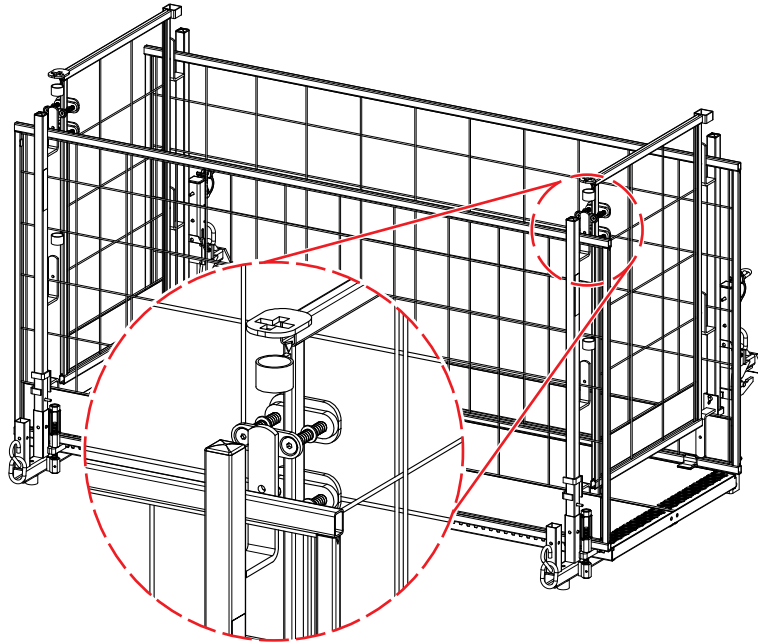
- 1 Ring for lower hook on outer PROTECTO Railing Post
- 2 Lower locking bar for installing and removing PROTECTO Cross-Railing
- 3 Upper locking bar for pivoting the PROTECTO Cross-Railing
- 4 Ring for upper hook on outer PROTECTO Railing Post
- 5 Flat ring to lock the PROTECTO Cross-Railing in the open or closed position in steps of 90°
- 6 Ring for upper hook on inner PROTECTO Railing Post



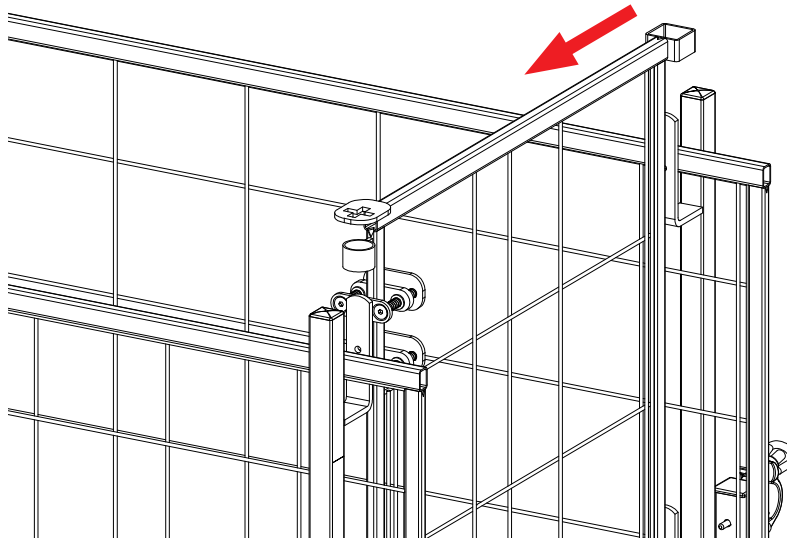
Always attach the PROTECTO Cross-Railing such that the flat ring is mounted to the outer PROTECTO Railing Post. This allows the inner Uni Mesh Panels to easily be removed when required, e.g. once the opposing formwork has been equipped with fall protection.

Assembling formwork platform

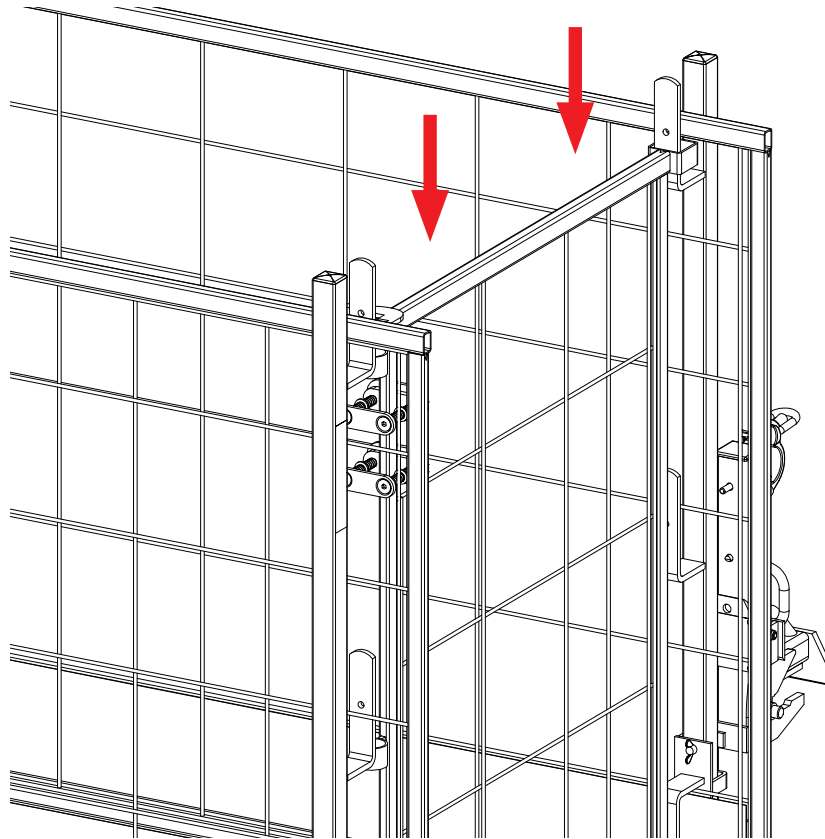
- Step 1** Position the PROTECTO Cross-Railing such that both locking bars touch the upper hook on the outer PROTECTO Railing Post.



- Step 2** Press the PROTECTO Cross-Railing against the hook until the locking bars are pushed all the way in.



Step 3 Lower the PROTECTO Cross-Railing. Ensure that all 3no. hooks on the 2no. PROTECTO Railing Posts are in the rings on the PROTECTO Cross-Railing.



Step 4 Attach another PROTECTO Cross-Railing to the opposite side in the same way. The formwork platform is now completely assembled and can be hung on the formwork using a crane (Refer to section 6 on page 41).

4.4 Assembling formwork platform on formwork lying on the ground

The formwork platform and side protection can be completely assembled and attached to the formwork. The formwork and formwork platform can then be erected with a crane. If the formwork platform is attached to the upper edge of a panel, a Transport Hook cannot be used to align the panel. In this case 2no. RASTO or PLATINUM 100 Lifting Devices - depending on the formwork system - have to be used. It is advisable to attach the Lifting Devices to the formwork before assembling and mounting the formwork platform.



WARNING

Formwork elements can drop!

If the Lifting Devices are operated incorrectly, formwork elements can drop! This can cause personal injury or death!

Refer to the separate operating instructions for the Lifting Devices!

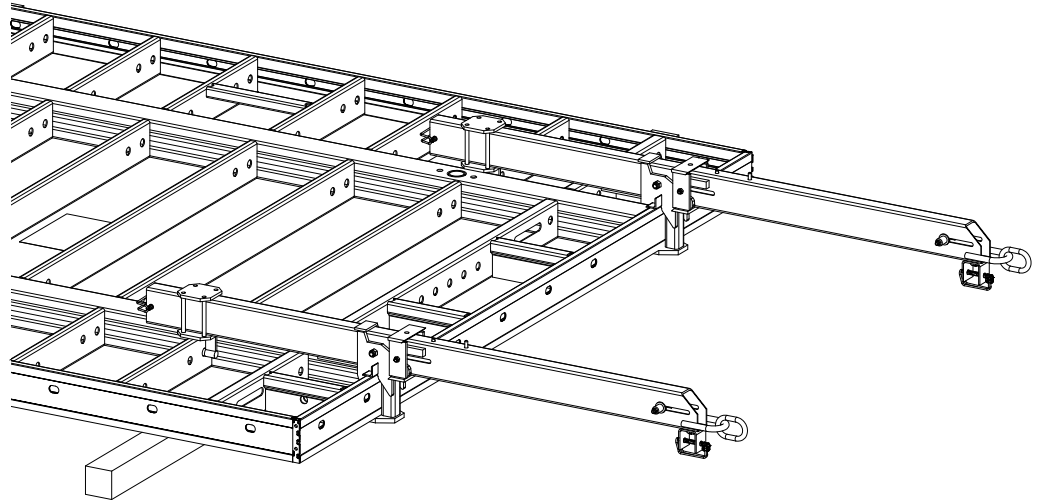


The following section shows the procedure with RASTO components. The procedure is the same for MANTO components. Then the lifting devices and Bracket Adapters just have to be selected for MANTO formwork.

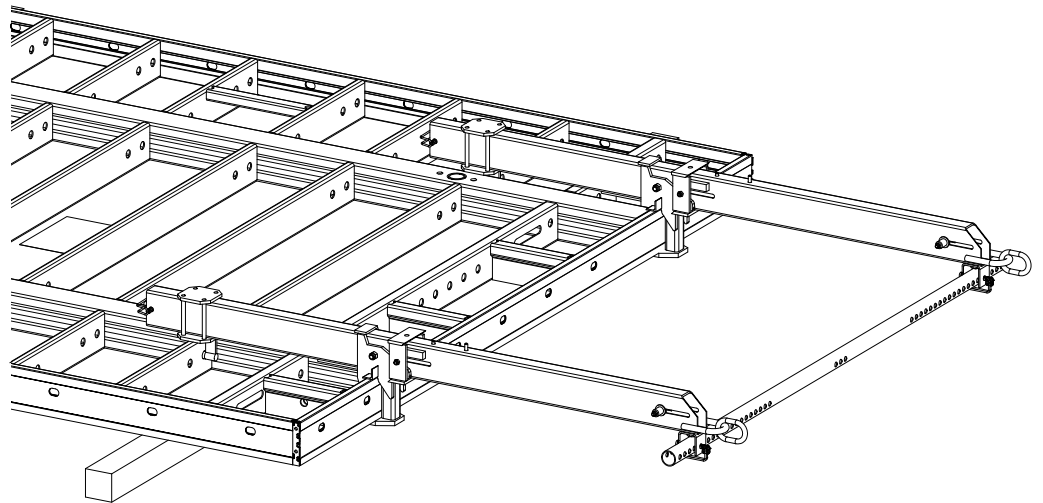
Assembling formwork platform

4.4.1 Attaching formwork platform to upper edge of panel

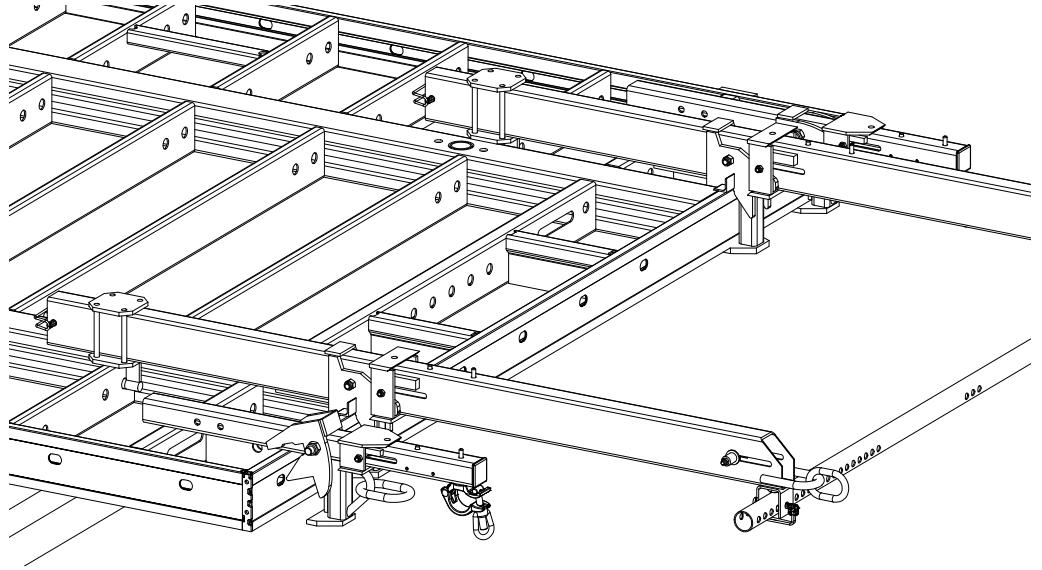
Step 1 Mount the RASTO Lifting Devices on the formwork as described in the separate operating instructions for the Lifting Devices.



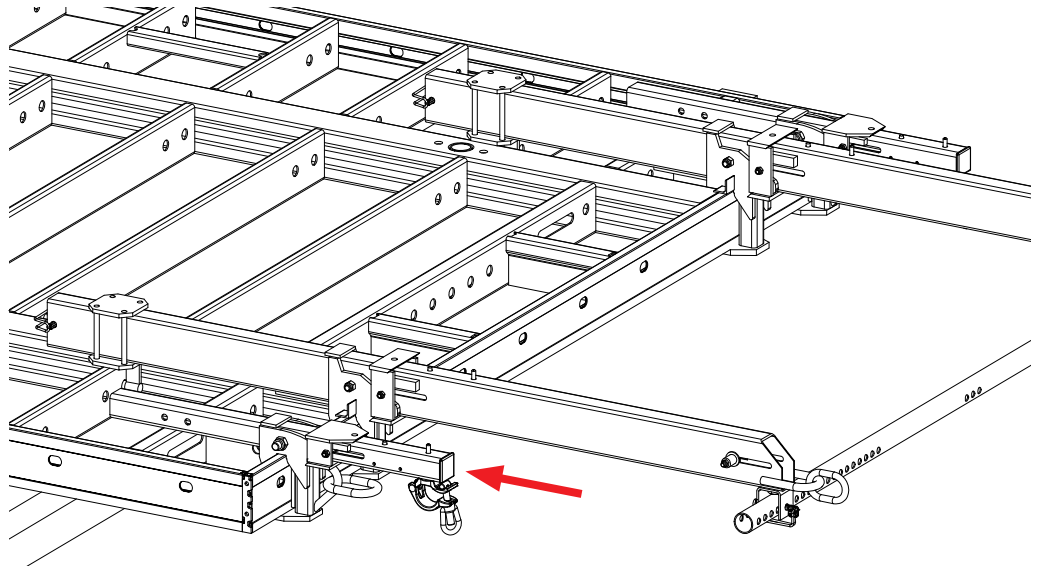
Step 2 Brace the Lifting Devices as described in the separate operating instructions for the Lifting Devices.



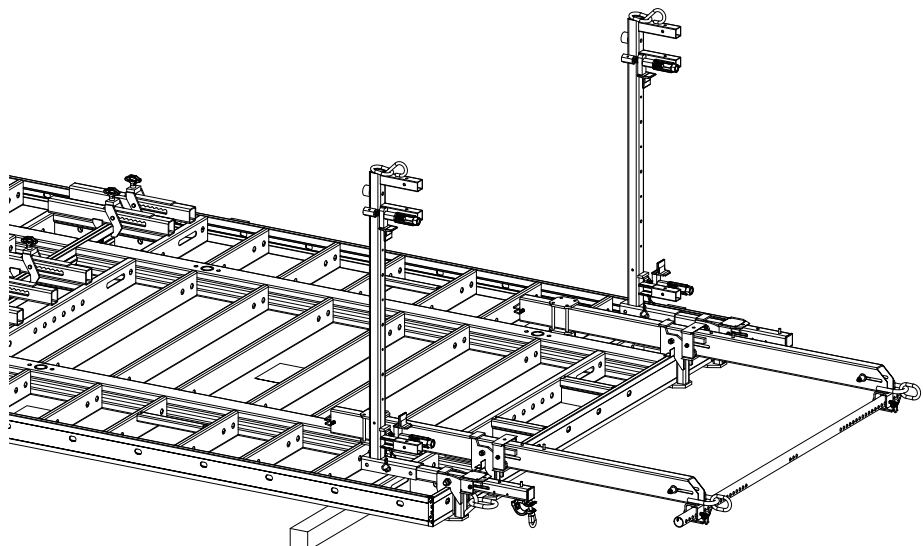
Step 3 Unlock both Bracket Adapters RASTO Edge as described on page 15 and place them on the formwork.



Step 4 Lock the Bracket Adapters onto the formwork.

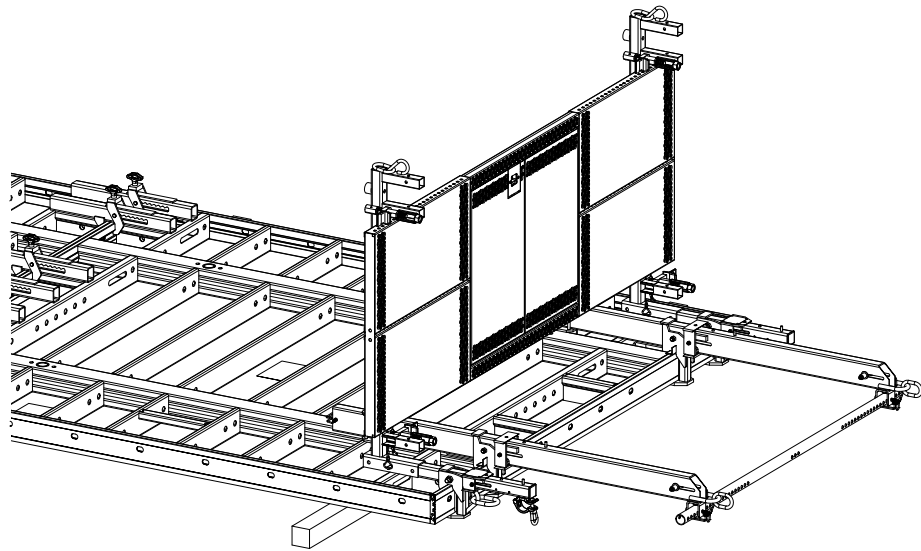


Step 5 Place the 2no. Uni Platform Brackets on top of the Bracket Adapters and secure them with the integrated bolts. Secure the bolts with the spring pins.

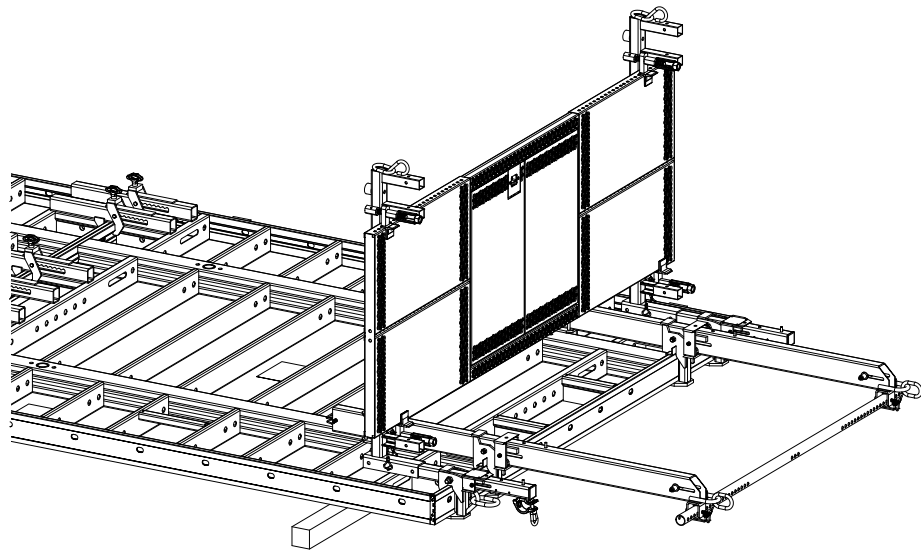


Assembling formwork platform

- Step 6** Release all 4no. Plank Retainers on the Platform Brackets as described on page 17. Turn the Inner Plank Retainers inward and the Outer Plank Retainers to the side. Place the deck on the Platform Bracket.



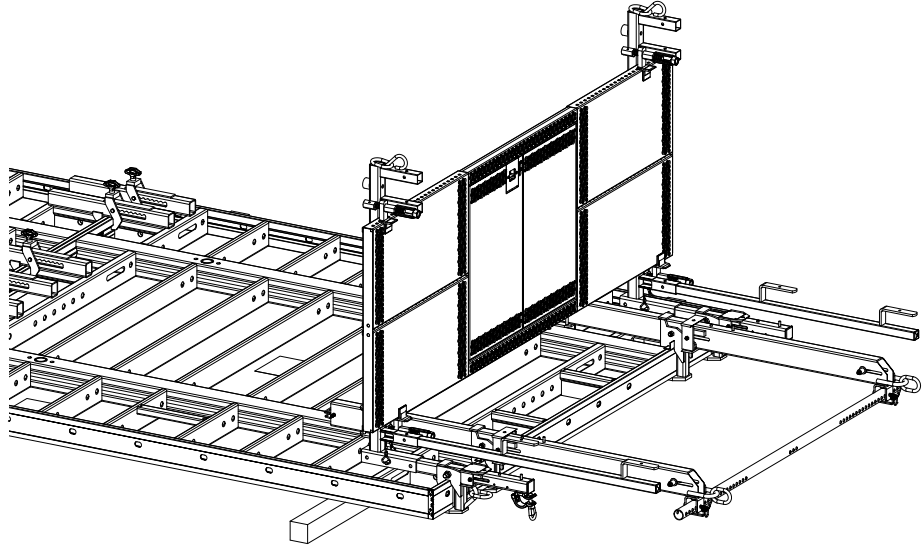
- Step 7** Turn all 4no. Plank Retainers inward such that they protrude over the deck.



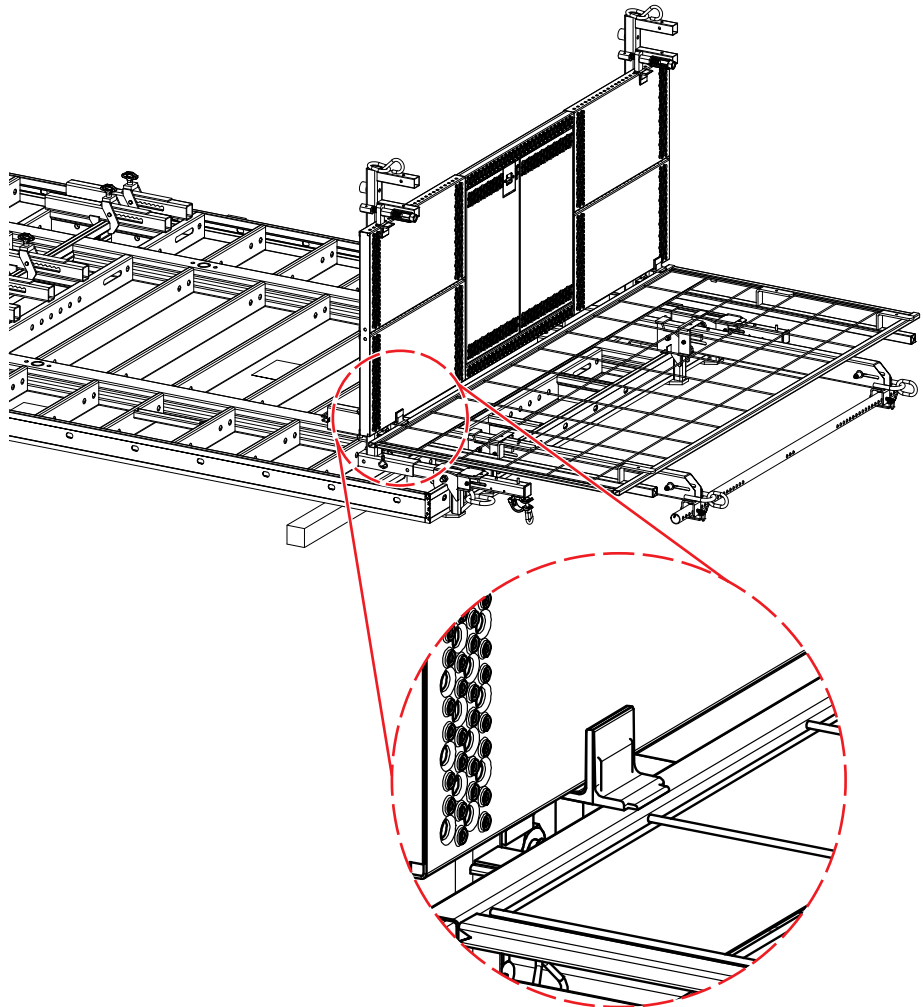
- Step 8** First tighten the Plank Retainers only slightly, one after the other, using e.g. the tip of a roofing hammer or a spanner w.a.f. 30.
- Step 9** Then tighten the Plank Retainers all the way. Make sure that the Platform Brackets do not turn out of place as the Plank Retainers are tightened.

4.4.2 Attaching side protection to formwork platform

Step 1 Insert the 2no. inner PROTECTO Railing Posts into the receptacles for PROTECTO Railing Posts. Ensure that the hooks for the Uni Mesh Panel face up.

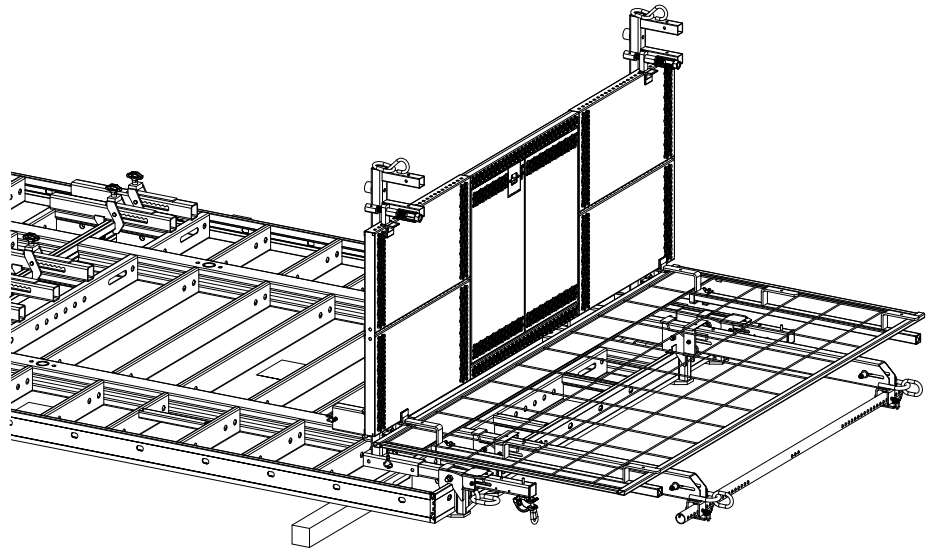


Step 2 Place the Uni Mesh Panel in the hooks on the PROTECTO Railing Posts.

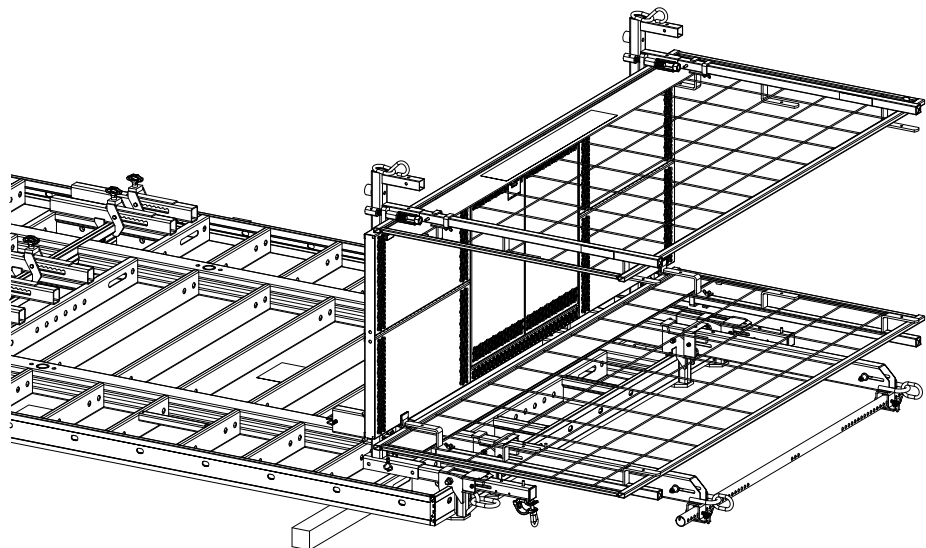


Assembling formwork platform

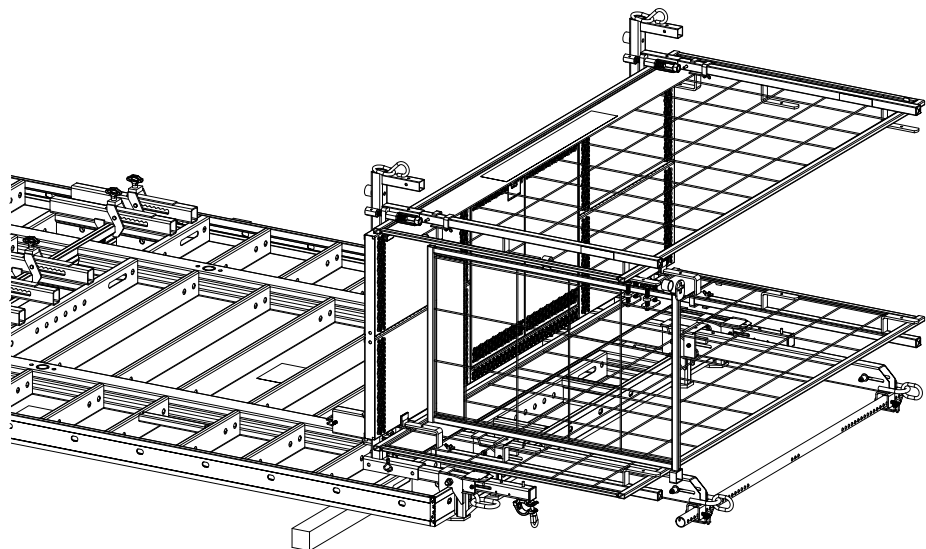
Step 3 Attach a PROTECTO Uni Retainer to each PROTECTO Railing Post.



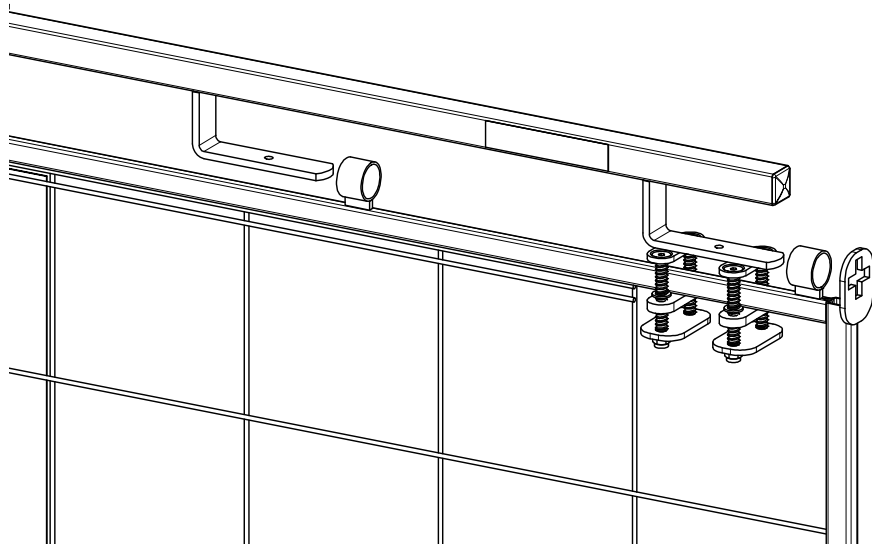
Step 4 Attach the Uni Mesh Panel with PROTECTO Railing Posts and PROTECTO Uni Retainers to the opposite side in the same way.



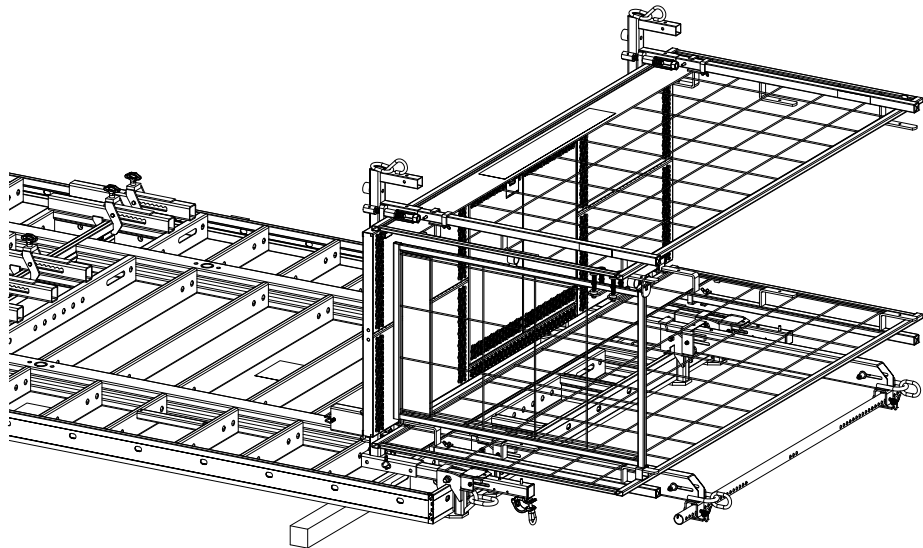
Step 5 Position the PROTECTO Cross-Railings such that both locking bars touch the upper hook on the upper PROTECTO Railing Post (Also refer to page 24).



- Step 6** Press the PROTECTO Cross-Railing with the locking bars against the hook. Continue to press until the ring on the PROTECTO Cross-Railing fits over the hook in the PROTECTO Railing Post.



- Step 7** Slide the PROTECTO Cross-Railing towards the deck. The flat ring and the lower ring on the PROTECTO Cross-Railing catch into the hook on the PROTECTO Railing Post. The locking bars lock automatically.



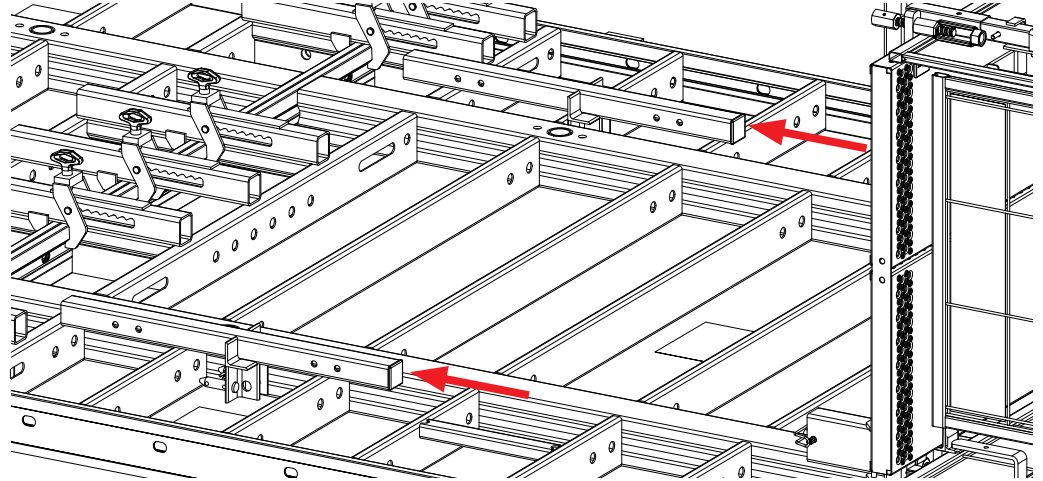
- Step 8** Attach a PROTECTO Cross-Railing to the other side of the formwork platform in the same way.

Assembling formwork platform

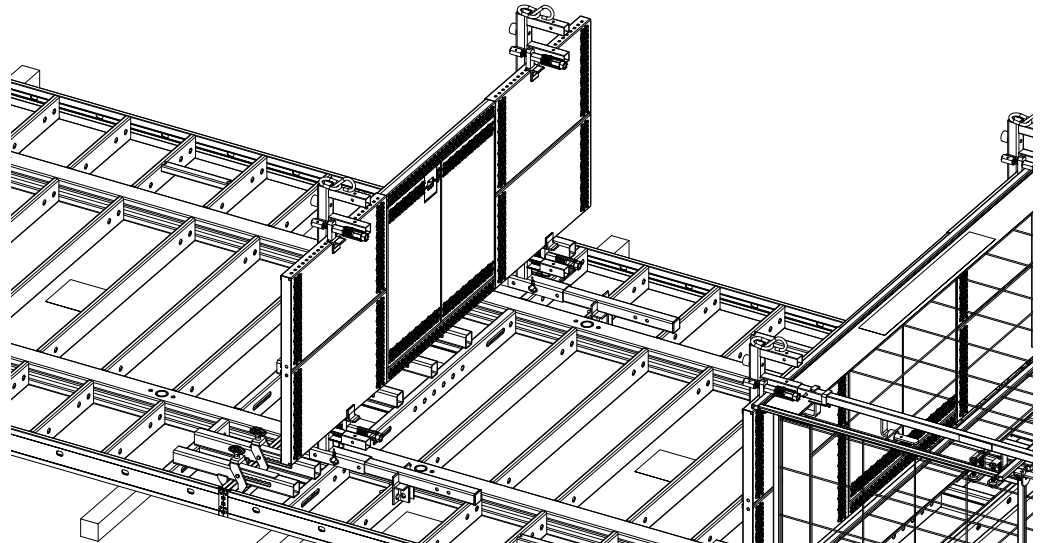
4.4.3 Attaching the formwork platform to the middle of a panel

When formwork is higher or if the formwork platform cannot be attached to the upper edge of the panel, e.g. when wooden extensions in height are used on site, the formwork platform can also be attached to the middle of a panel. The following example shows how a formwork platform is attached to higher formwork.

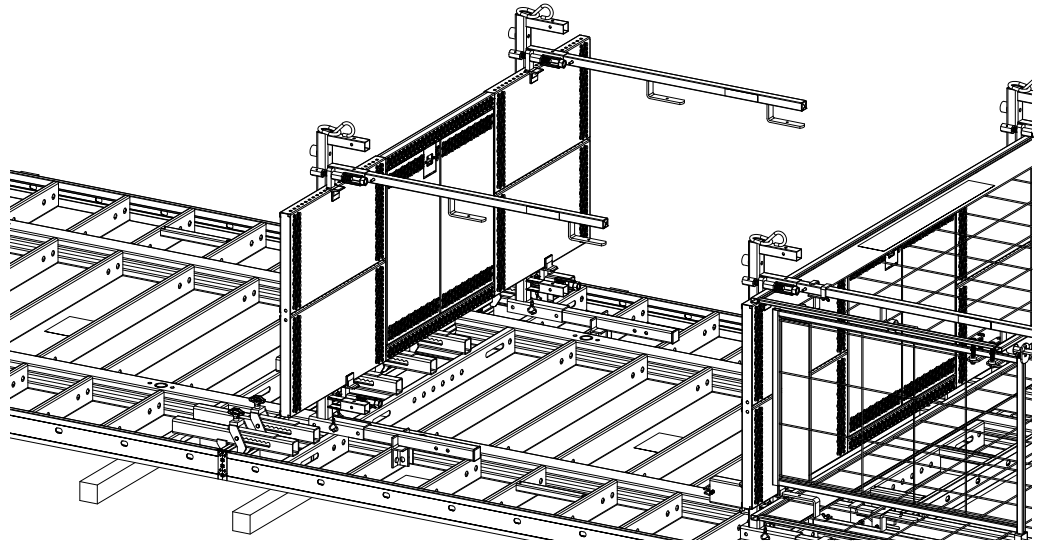
Step 1 Use the bolts to attach 2no. Bracket Adapters RASTO Rib to an H-rib, spaced at the proper distance apart. Secure the Pins with the Spring Cotter Pins.



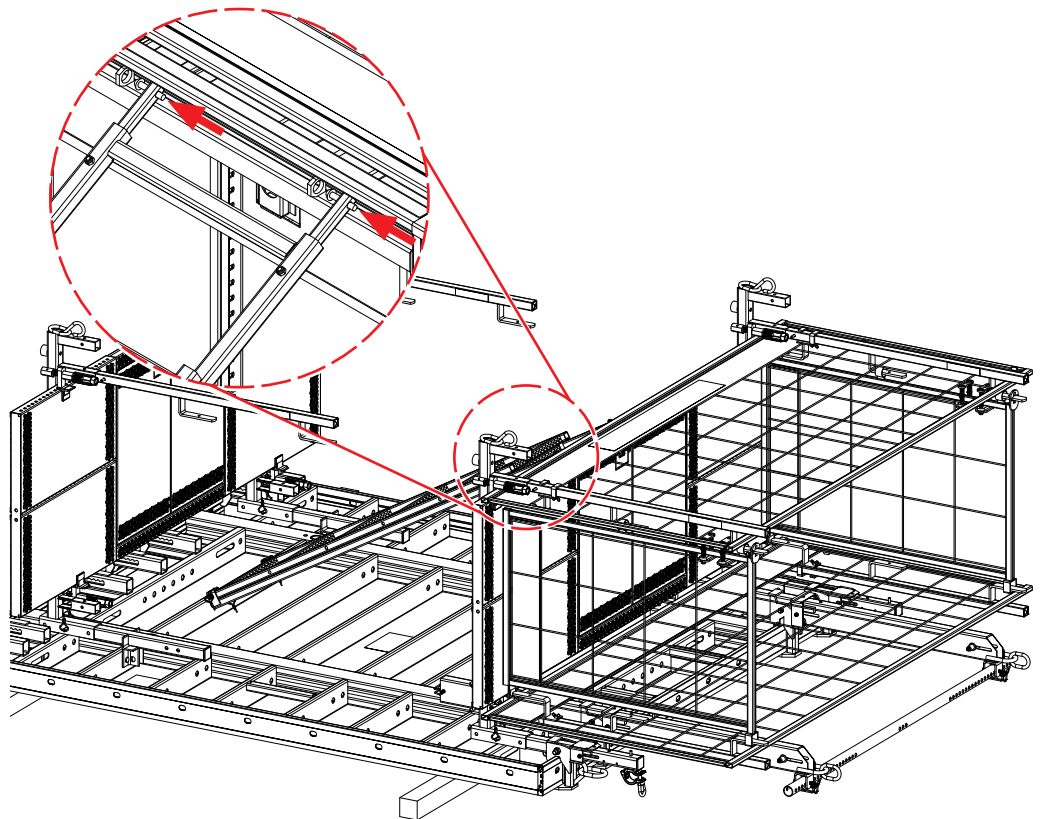
Step 2 Install the Uni Platform Brackets and deck as described on page 27.



Step 3 Insert the 2no. outer PROTECTO Railing Posts into the receptacles for PROTECTO Railing Posts. Verify that the hooks face inward.

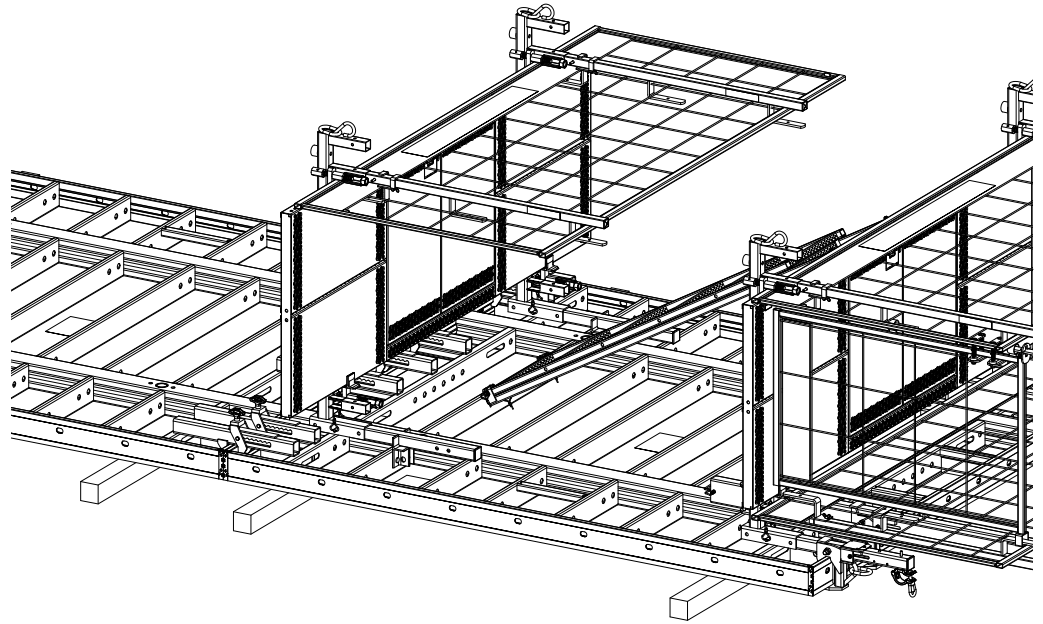


Step 4 Hang the Uni Formwork Platform Ladder leading to the upper formwork platform in the fitting. Rest the ladder on the formwork.

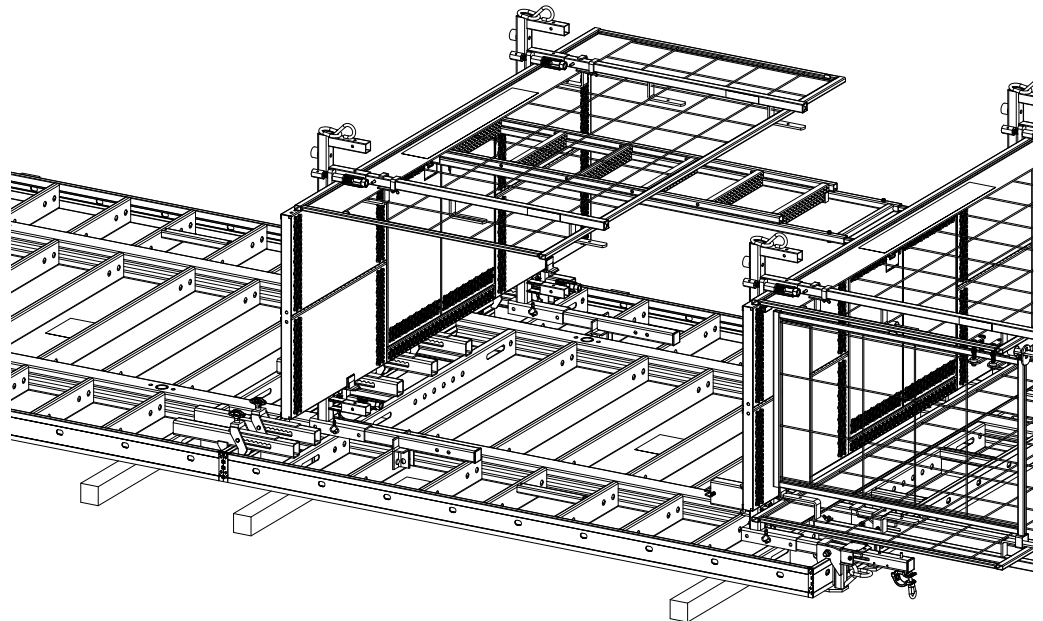


Assembling formwork platform

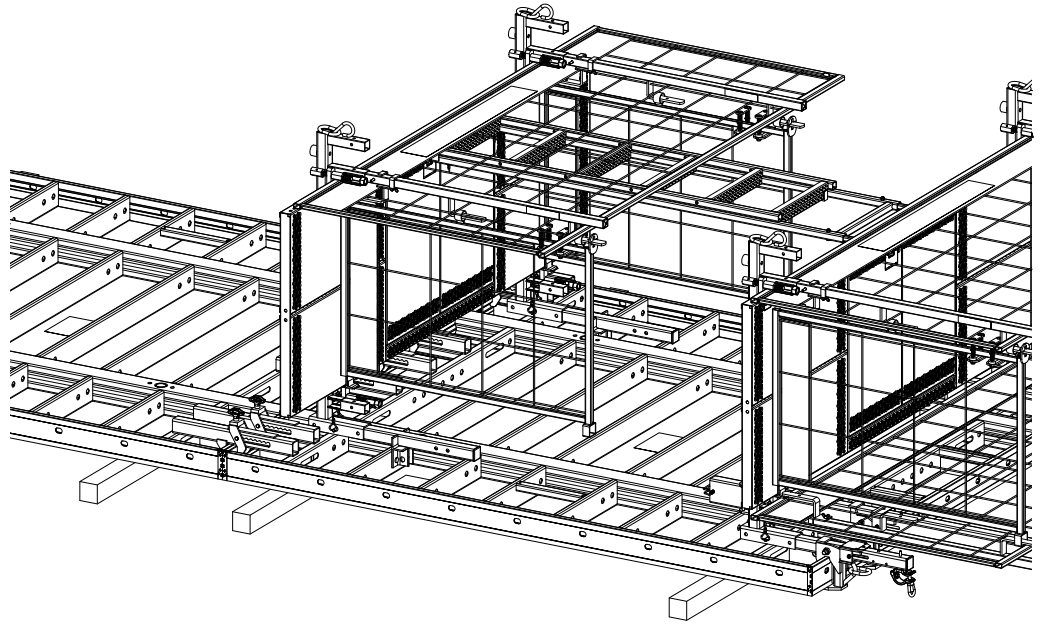
- Step 5** Place the outer Uni Mesh Panel in the hooks on the PROTECTO Railing Posts. Use 2no. PROTECTO Uni Retainers to secure the Uni Mesh Panel.



- Step 6** To make further assembly easier, lift the Uni Formwork Platform Ladder and secure it to the outer Uni Mesh Panel with suitable fasteners.



Step 7 Attach both PROTECTO Cross-Railings to the formwork platform as described on page 30.



5 Raising formwork with platforms attached

Formwork with platforms attached to it can be raised and brought into position with the aid of a crane and the RASTO Lifting Device (for RASTO formwork) or the PLATINUM 100 Lifting Device (for MANTO and PLATINUM 100 formwork).

Refer to the respective lifting device operating instructions for information on how to attach the lifting devices.

To lift and set up stacked panels, a larger quantity of connectors is needed at the horizontal joints between the panels. The following illustrations show examples of possible combinations. In many cases smaller panels than those shown can be used. Horizontally arranged extended panels are an exception. In this case only 90 cm high panels may be used.

All components have to be mounted in exactly the positions indicated.



WARNING

Formwork panels can drop!

When panel assemblies are to be raised or lowered to the ground (in both cases with the form sheet facing down), always hook the crane to the lifting eyes on the lifting devices. Otherwise the connectors will be overloaded and can fail during lifting! This can cause personal injury or death!

When placing panel assemblies on the ground for cleaning or raising them again (in both cases with the form sheet facing up), always hook the crane to the lifting eyes on the Bracket Adapters! Never hook the crane to the Platform Brackets in this case! A Transport Hook suitable for the formwork can be used as an alternative.

If the panel assemblies are only to be moved, a 4-strand suspension and 2no. Uni Formwork Platform Crane Suspensions have to be attached to both Bracket Adapters and to the Platform Brackets (Also refer to page 51)!



WARNING

Formwork panels can drop!

If panels less than 90 cm wide are used for extensions, the connectors can be overloaded when the structure is raised with the lifting device! The formwork will collapse, which can result in injury or death!

Use only 90 cm formwork elements for extensions (panels placed horizontally)!



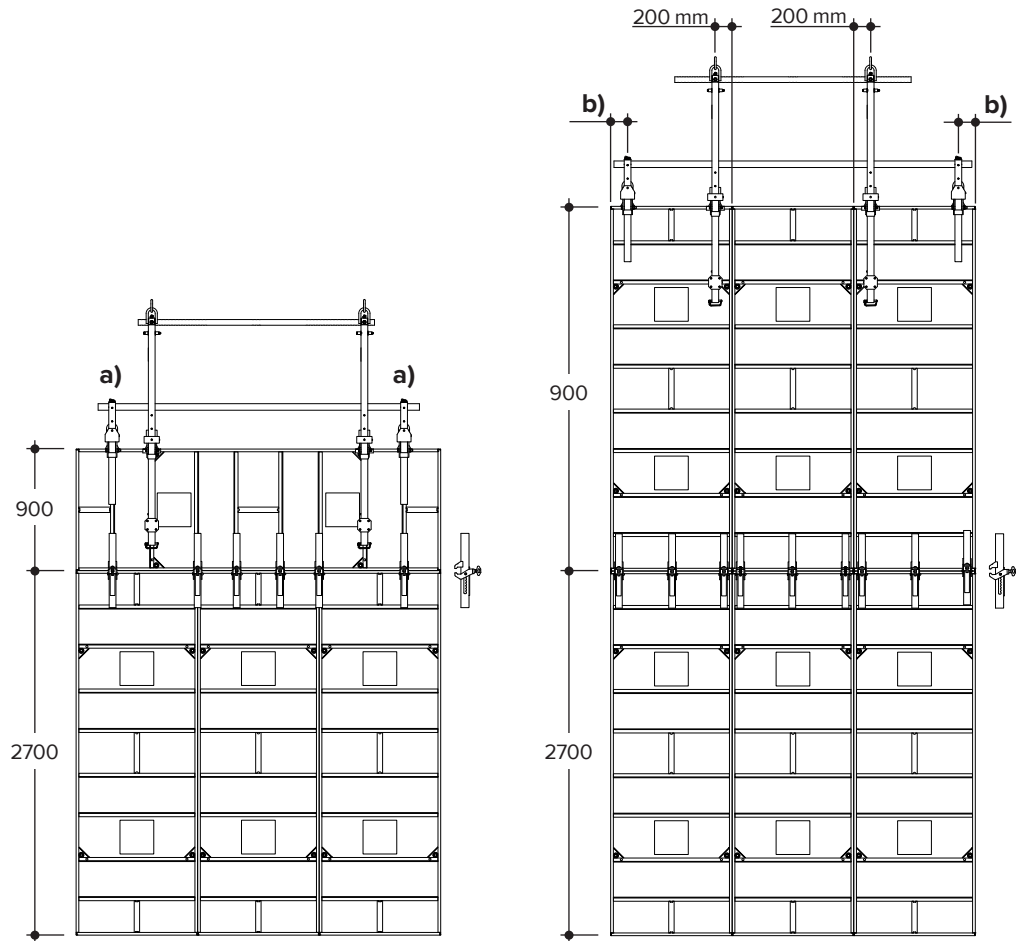
CAUTION

Components can be damaged!

When panel assemblies with extended, horizontal panels are moved, the Bracket Adapters Edge always have to be placed above an H-rib. Otherwise the Bracket Adapters or panels will be damaged.

5.1 RASTO formwork

The following illustrations apply to raising the formwork, resting it on the platform and moving it vertically. The formwork platforms have been omitted for clarity.



3no. panels 90/270 +
1no. panel 90/270 stacked
horizontally
Connectors:
6no. RASTO Adjustable
Aligning Clamps
1no. Formwork Platform

Total weight: approx. 450 kg

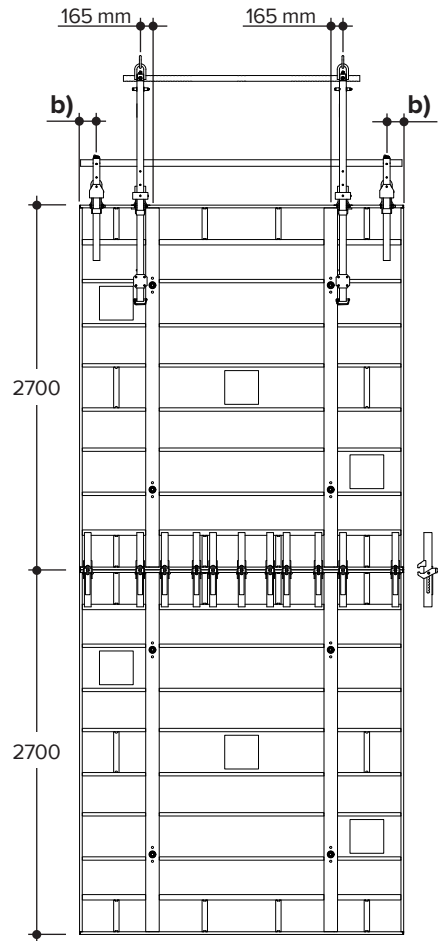
a) Attach the Bracket
Adapter above the H-rib

3no. panels 90/270 +
3no. panels 90/270 stacked
Connectors:
9no. RASTO Adjustable
Aligning Clamps
2no. Formwork Platforms

Total weight: approx. 745 kg

b) Refer to the Bracket Adapter
RASTO Edge operating
instructions!

Raising formwork with platforms attached



1no. panel XXL +
1no. panel XXL stacked
Connectors:
11no. RASTO Adjustable Aligning Clamps

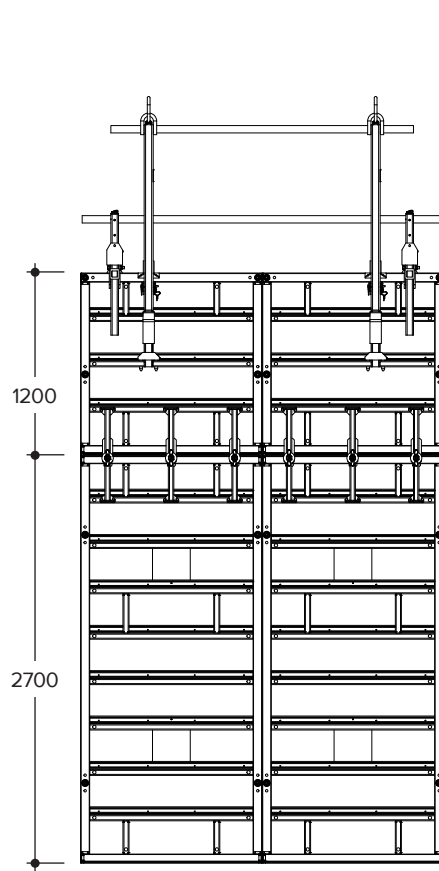
2no. Formwork Platforms

Total weight: approx. 900 kg

b) Refer to the Bracket Adapter RASTO
Edge operating instructions!

5.2 MANTO formwork

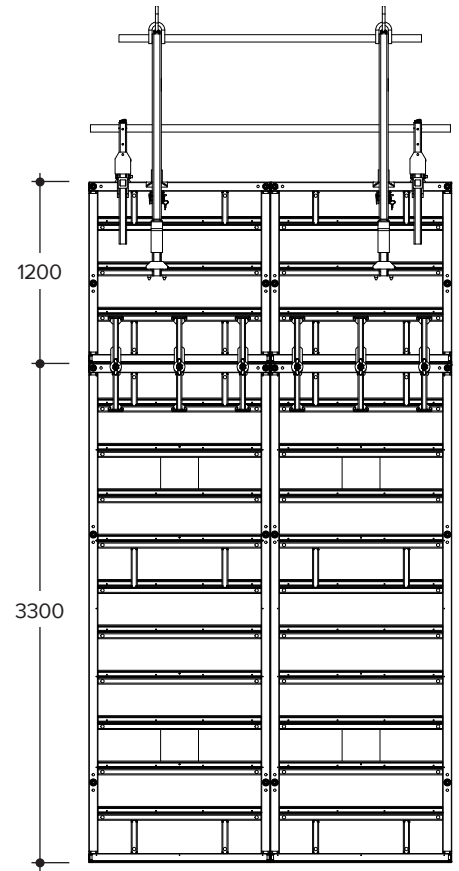
The following illustrations apply to raising the formwork, resting it on the platform and moving it vertically. The formwork platforms have been omitted for clarity.



2no. panels 120 × 270 +
2no. panels 120 × 120 stacked
Connectors:
6no. MANTO Aligning Panel Clamps

2no. Formwork Platforms

Total weight: approx. 870 kg

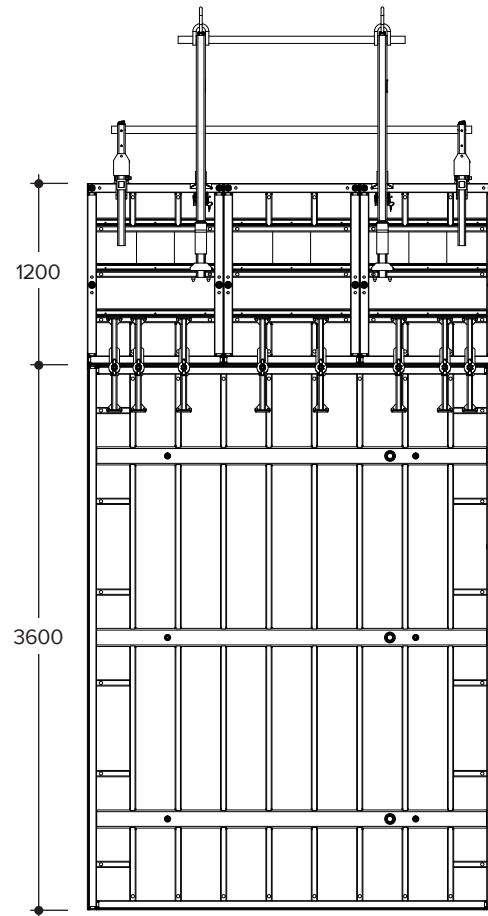


2no. panels 120 × 330 +
2no. panels 120 × 120 stacked
Connectors:
6no. MANTO Aligning Panel Clamps

2no. Formwork Platforms

Total weight: approx. 880 kg

Raising formwork with platforms attached



1no. panel 360 × 270 XL +
3no. panels 90 × 120 stacked

Connectors:

8no. MANTO Aligning Panel
Clamps

2no. Formwork Platforms

Total weight: approx. 1150 kg

6 Attaching formwork platform to upright formwork using a crane

A single formwork platform can be hung on the upper edge profile of a panel or a panel assembly. To be able to do this, the Bracket Adapters have to be properly prepared and the formwork hung on the crane with the Uni Formwork Platform Crane Suspension.



The Bracket Adapters RASTO Edge and MANTO Edge as well as the Uni Formwork Platform Crane Suspension are lifting accessories.

Always follow the operating instructions included with the lifting accessories. These documents explain in detail the permitted attachment points and loads.

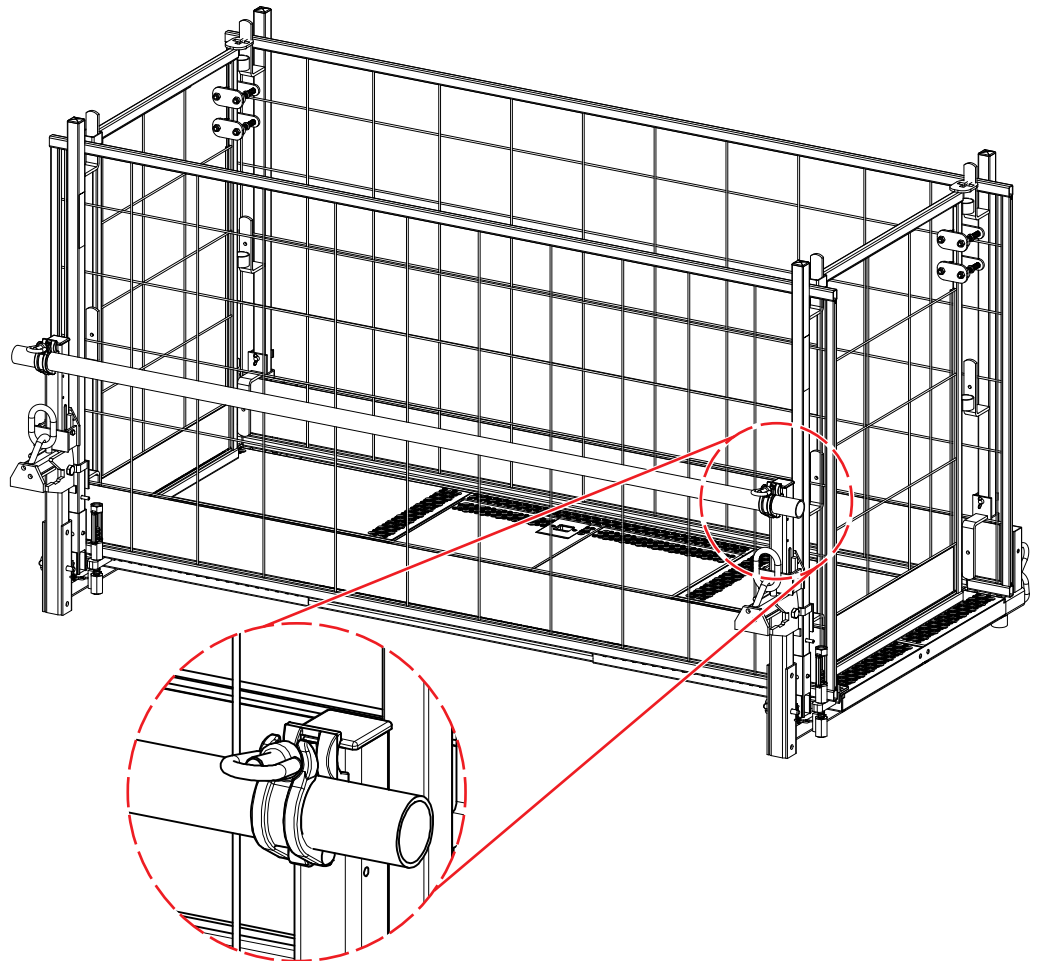


The following section shows the procedure with RASTO components. The procedure is the same for MANTO components. Then the lifting devices and Bracket Adapters just have to be selected for MANTO formwork.

6.1 Bracing Bracket Adapters

Before the platform and Bracket Adapters can be suspended from the crane, the Bracket Adapters have to be braced with a scaffold tube of a suitable length. There is a coupler at the top of each Bracket Adapter for this purpose.

- Step 1** Align the Bracket Adapters perpendicular to the formwork platform deck.
- Step 2** Connect both Bracket Adapters to the scaffold tube. Use the couplers on the Bracket Adapters to do this.



Attaching formwork platform to upright formwork using a crane

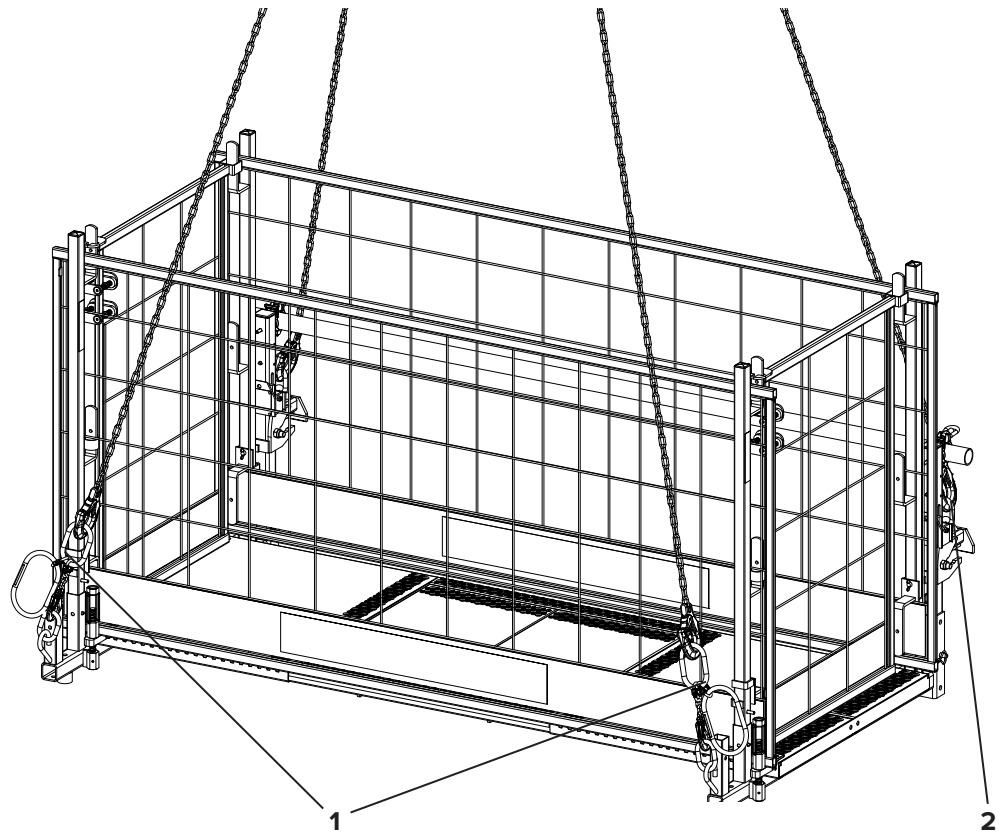
6.2 Preparing Bracket Adapters

Unlock both Bracket Adapters and lock them again with the profile lock open (Refer to page 15). When the formwork platform approaches the edge profile of the formwork, the profile lock on the edge profile clicks into place and locks automatically.

Step 1 Unlock the Bracket Adapters.

6.3 Attaching formwork platform to crane

Use a suitable 4-strand suspension to attach the formwork platform to the crane. The lifting points on the formwork platform are located on the Bracket Adapters and on the Platform Brackets. The 4-strand suspension can be attached directly to the Platform Brackets. Use the Uni Formwork Platform Crane Suspension to compensate the differences in height between the Platform Brackets and the Bracket Adapters. Attach 2no. Crane Suspensions to the lifting points on the brackets. Then attach the 4-strand suspension to the smaller lifting eyes on the Crane Suspension.

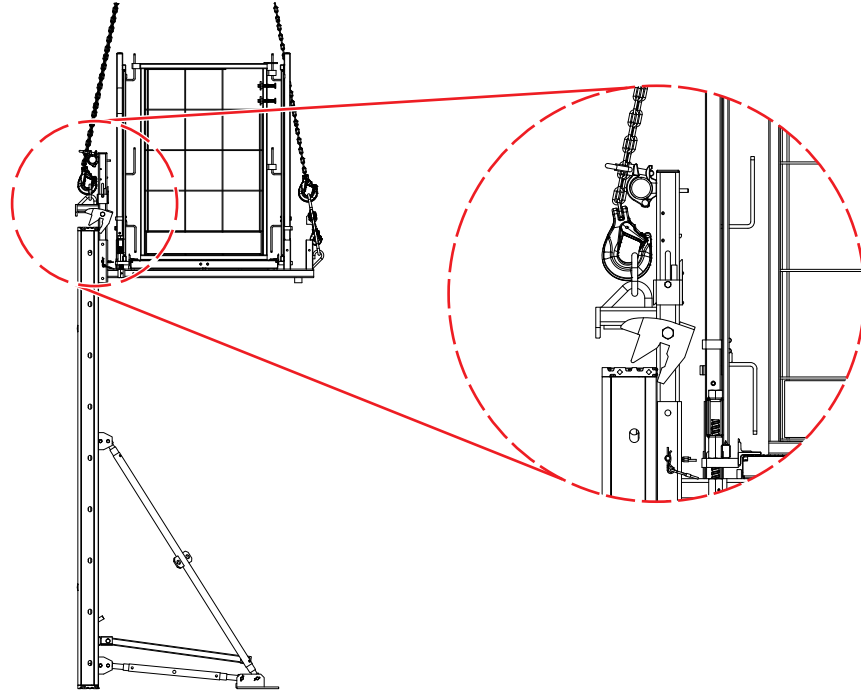


- 1 Use the Crane Suspension to attach the chain sling to the Platform Bracket
- 2 Attach the chain sling to the Bracket Adapter

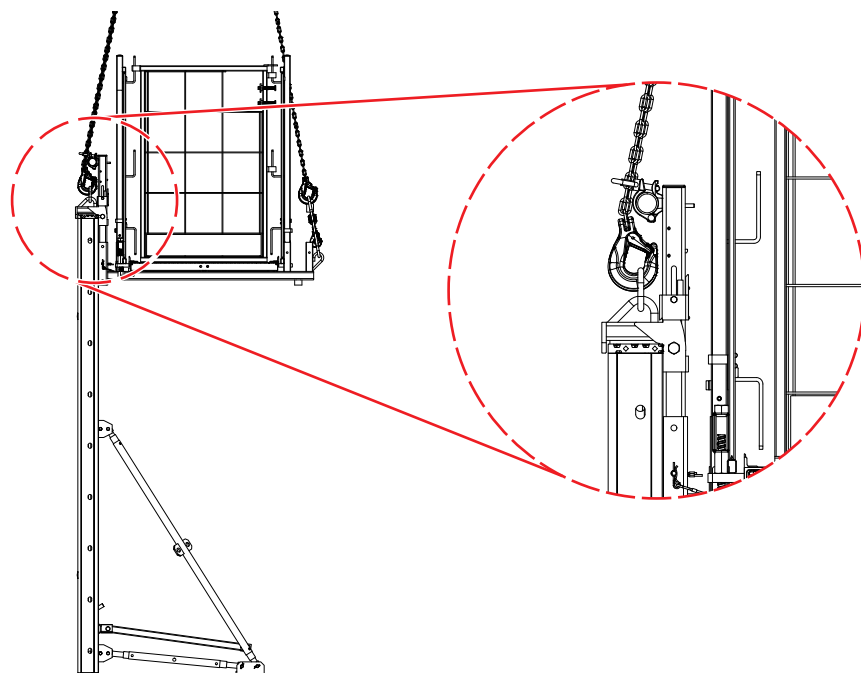
6.4 Hanging formwork platform on formwork

Once the Bracket Adapters have been prepared and the formwork platform is suspended from the crane, the formwork platform can be attached to the formwork. The Bracket Adapters have to approach the formwork such that the lower parts of the Bracket Adapters rest on the top edge profile of the panel. Then slowly lower the formwork platform. The profile locks on the Bracket Adapters snap onto the edge profile of the formwork. The formwork platform is suspended securely on the formwork.

Step 1 Move the formwork platform towards the formwork such that the Bracket Adapters rest on the edge profile of the formwork.



Step 2 Slowly lower the formwork platform. The profile locks snap onto the edge profile of the formwork.



Verify that the Bracket Adapters are locked onto the edge profile correctly!

7 Using the formwork platform

The Uni Formwork Platform Ladder has to be attached before the formwork platform can be accessed. The ladder can be hung on the formwork platform either from the ground or from a formwork platform below the one to be accessed. Then you can ascend to the formwork platform, which is completely protected on all sides.

You can then move from the formwork platform to an adjacent formwork platform, e.g. to detach the formwork platform from the crane.



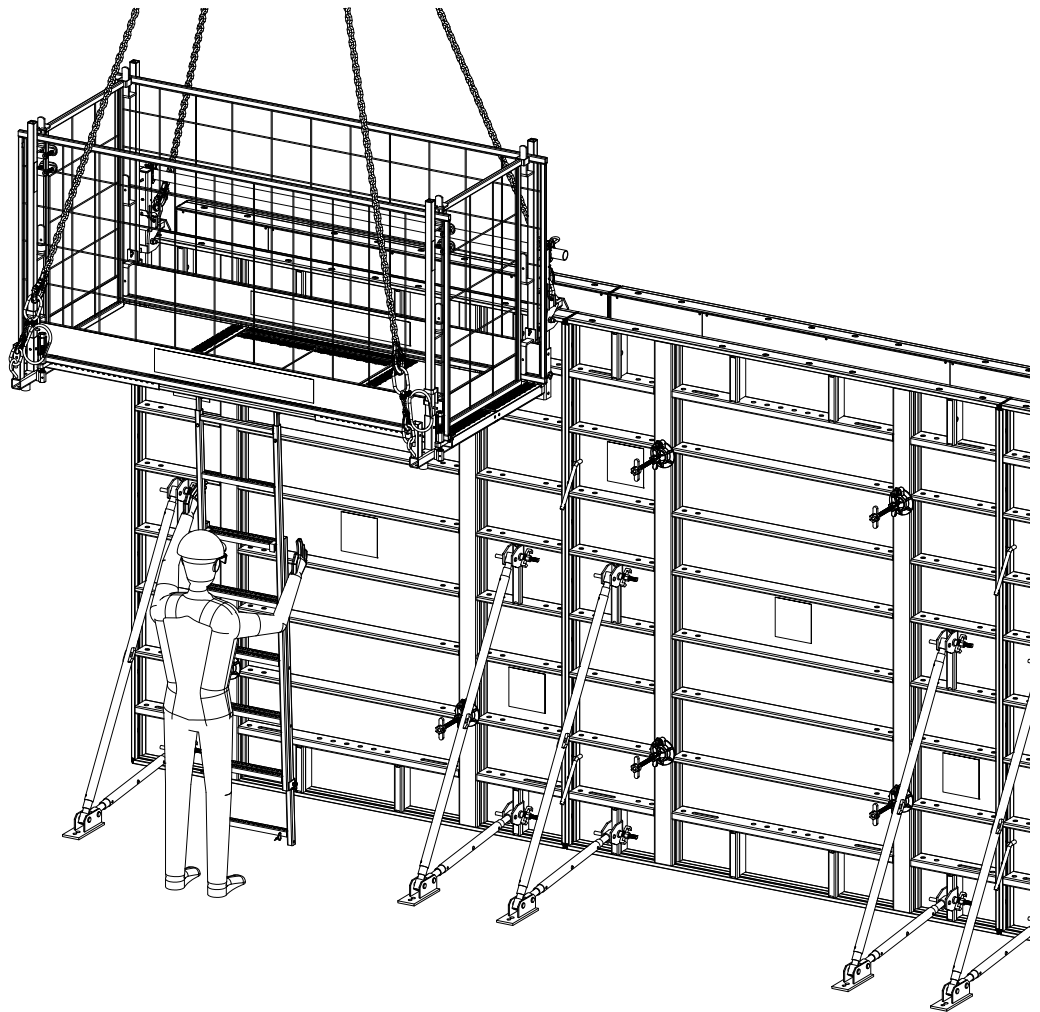
The Bracket Adapters RASTO Edge and MANTO Edge as well as the Uni Formwork Platform Crane Suspension are lifting accessories.

Always follow the operating instructions included with the lifting accessories. These documents explain in detail the permitted attachment points and loads.

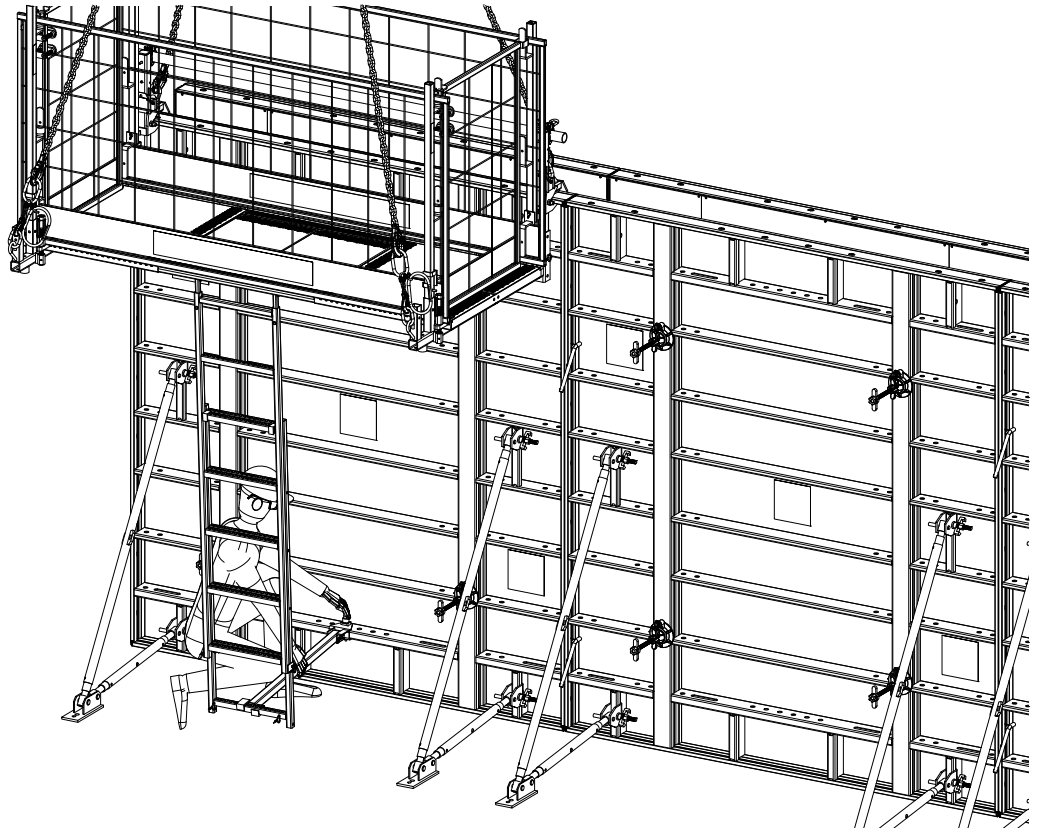


The following section shows the procedure with RASTO components. The procedure is the same for MANTO components. Then the lifting devices and Bracket Adapters just have to be selected for MANTO formwork.

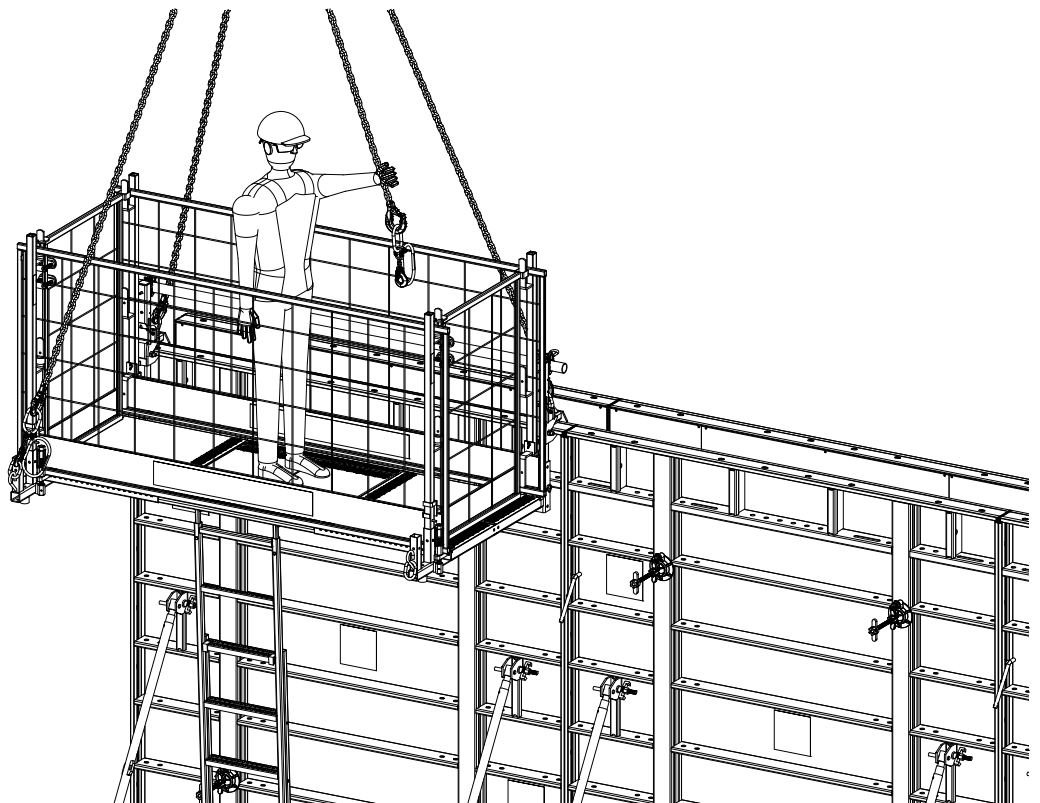
Step 1 Hang the Uni Formwork Platform Ladder on the Hatch Deck.



Step 2 Use a Ladder Lock to secure the ladder to the panel.

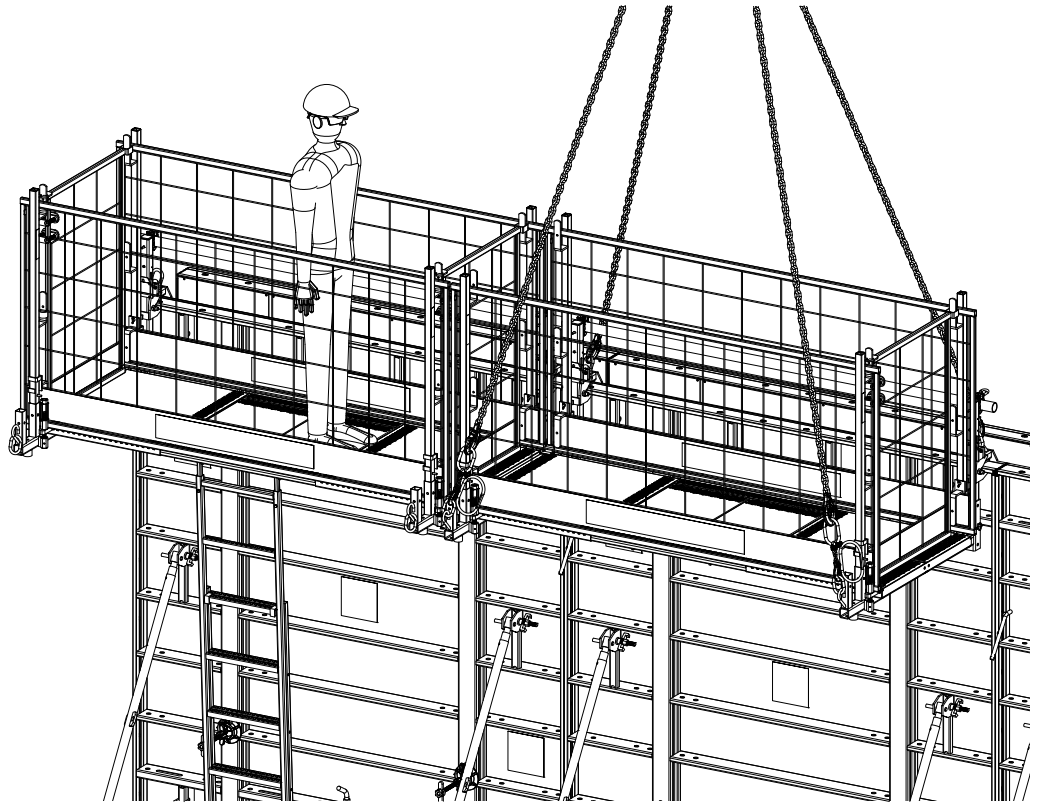


Step 3 Ascend to the formwork platform, close the hatch and release the connection to the crane.



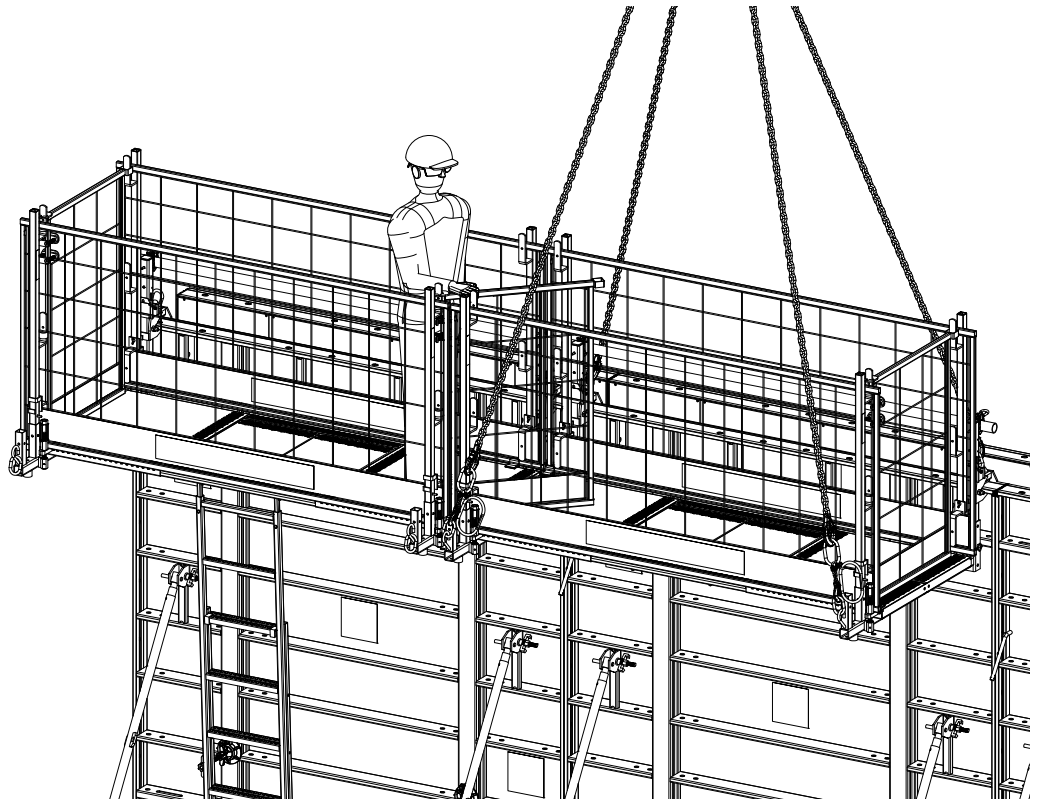
Using the formwork platform

Step 4 Working with the crane, attach the adjacent formwork platform to the formwork.

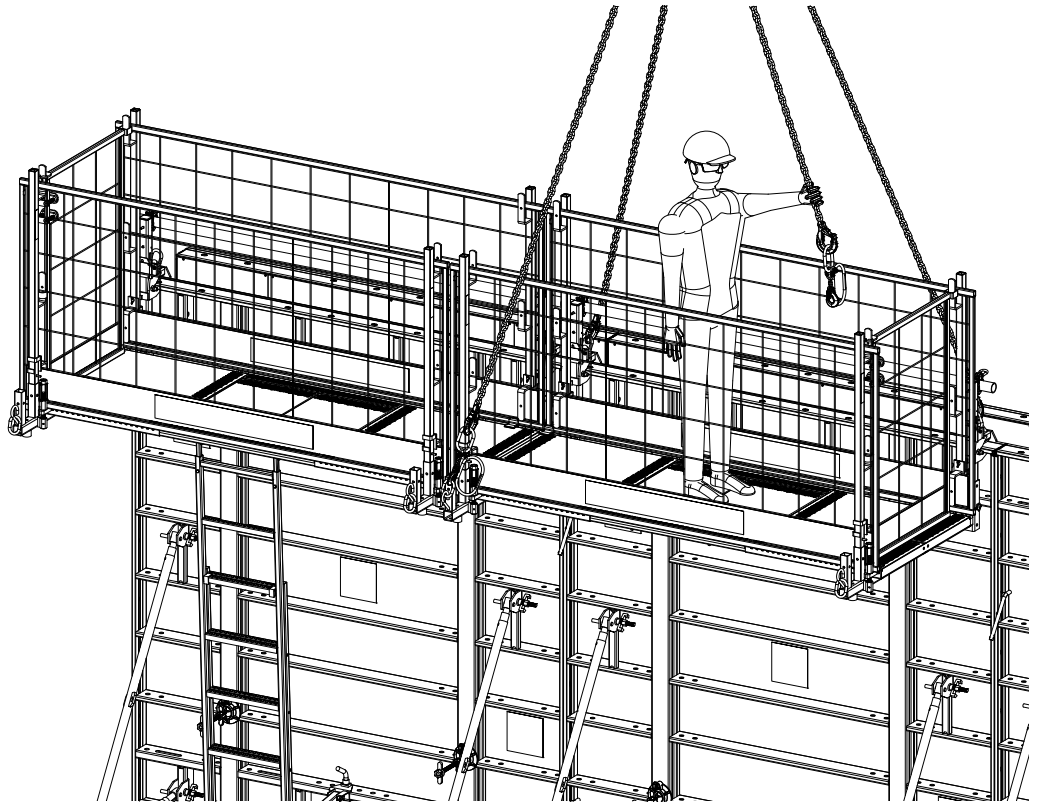


Verify that the Bracket Adapters are locked onto the edge profile correctly!

Step 5 Open the PROTECTO Cross-Railing by lifting it.



Step 6 Step onto the adjacent formwork platform and release the connection to the crane.



7.1 Moving interior Uni Mesh Panel to park position

To perform work on the formwork, e.g. to pour concrete or reinforce the structure, the interior Uni Mesh Panel can be removed. The Uni Mesh Panel can be placed in the park position on the exterior side of the formwork platform. This avoids having to move the Uni Mesh Panel off of the formwork platform, and this way it is always readily available to be put back into place.

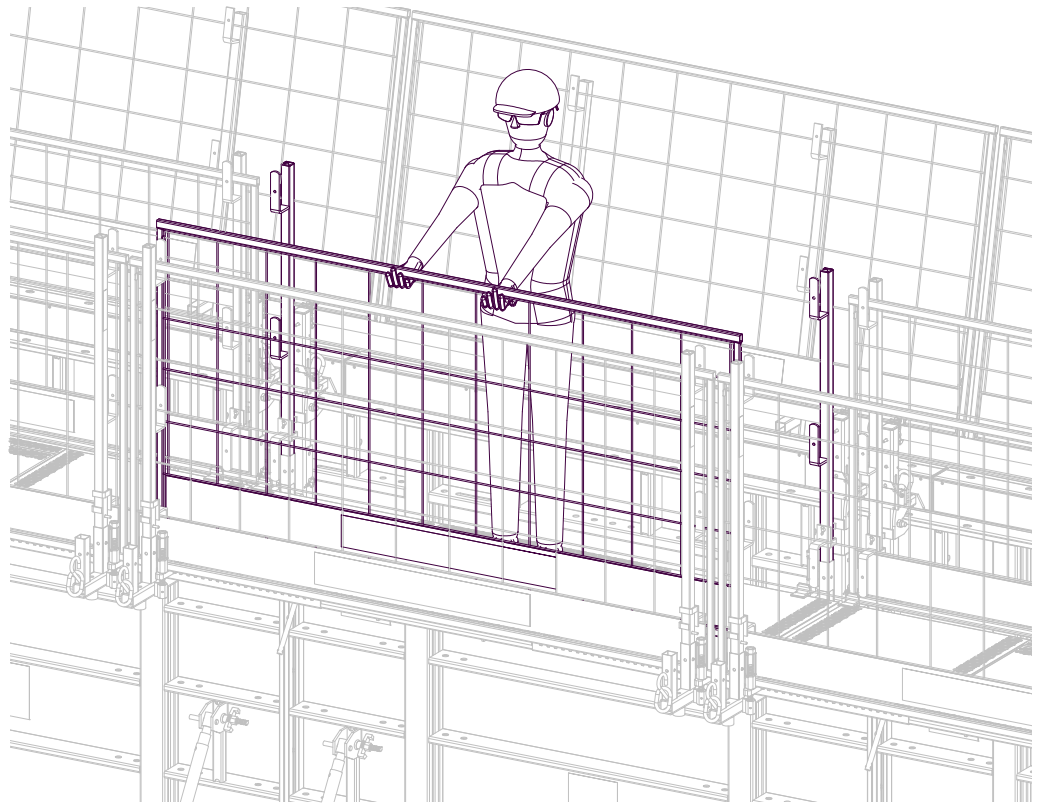


WARNING

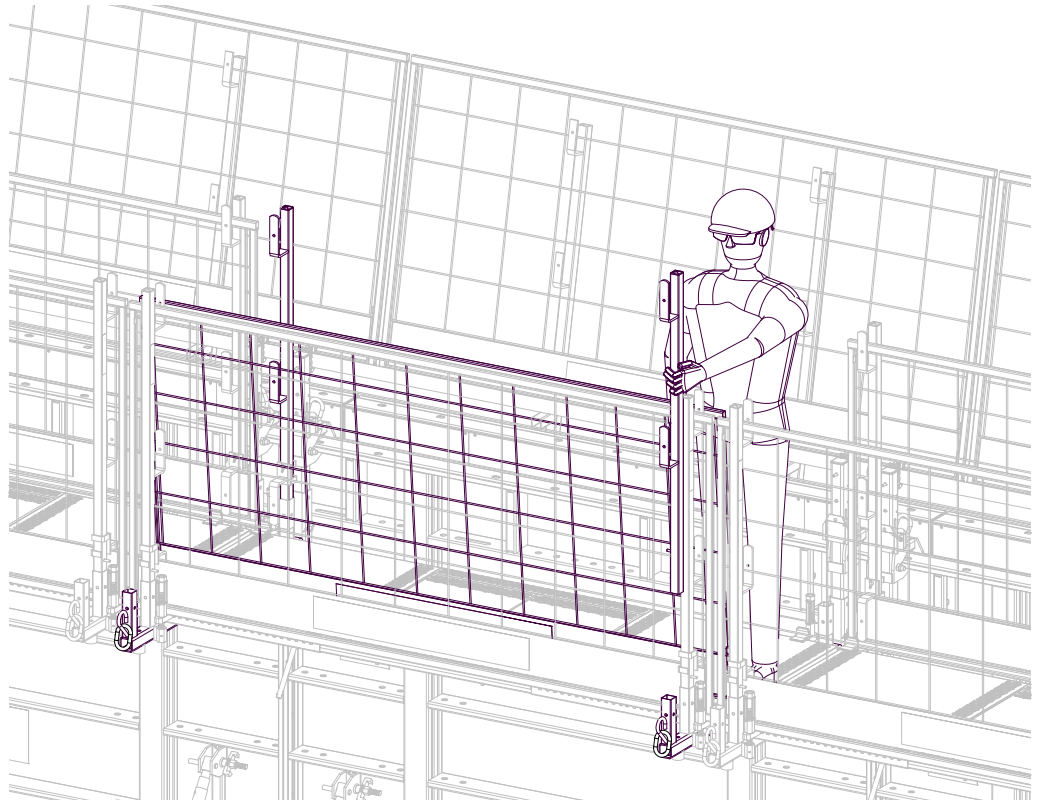
Risk of fall!

When the Uni Mesh Panel is removed, there is a risk of falling from the formwork platform! This can cause serious injury or death! Do not remove the Uni Mesh Panel unless the work area is secured with some other type of suitable protective panels! This could consist of e.g. Counter Posts and mesh panels on the opposite side of the formwork.

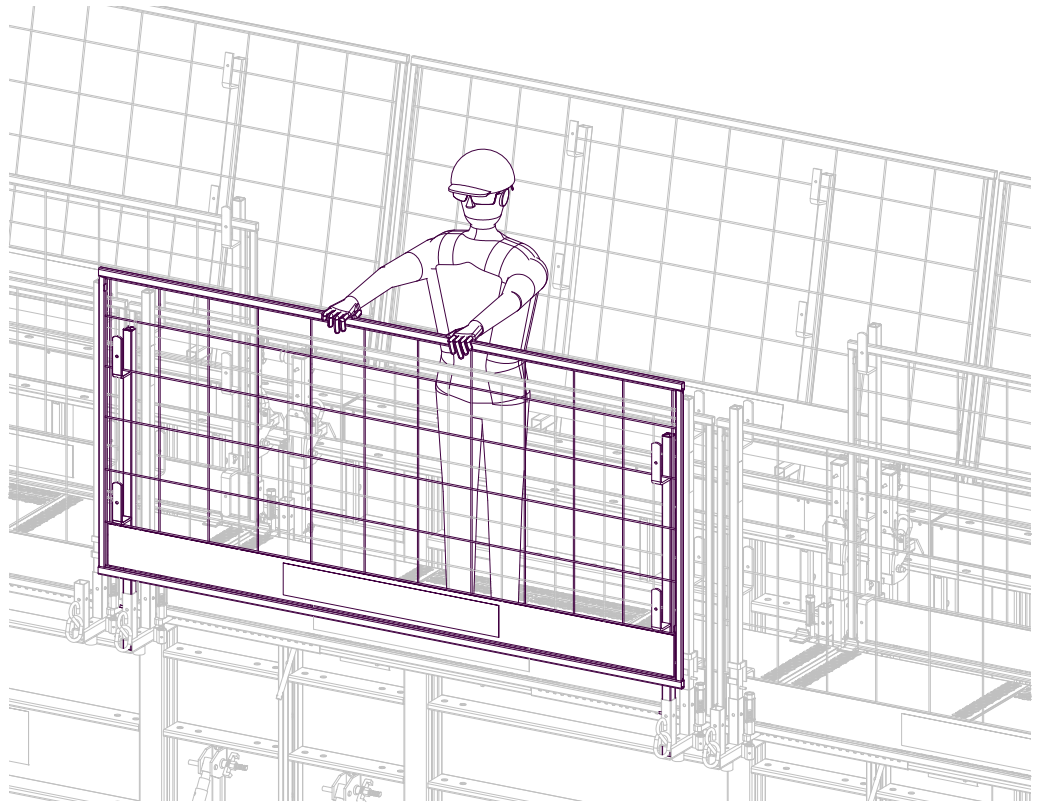
- Step 1** Remove both PROTECTO Uni Retainers from the interior Uni Mesh Panel.
- Step 2** Lift the interior Uni Mesh Panel out of the hooks on the PROTECTO Railing Posts and place it on the formwork platform.



Step 3 Lift both interior PROTECTO Railing Posts out of the receptacles and place them in the receptacles for the park position. Verify that the hooks face outward.



Step 4 Move the Uni Mesh Panel to the park position.



8 Creating compensation areas

Compensation areas, e.g. in corners, can be created with the 2no. holes in the Bracket Adapters for attaching the Platform Brackets (Refer to illustration of Bracket Adapter on page 14ff.). The holes are at different heights, allowing the decks on the Platform Brackets to overlap.

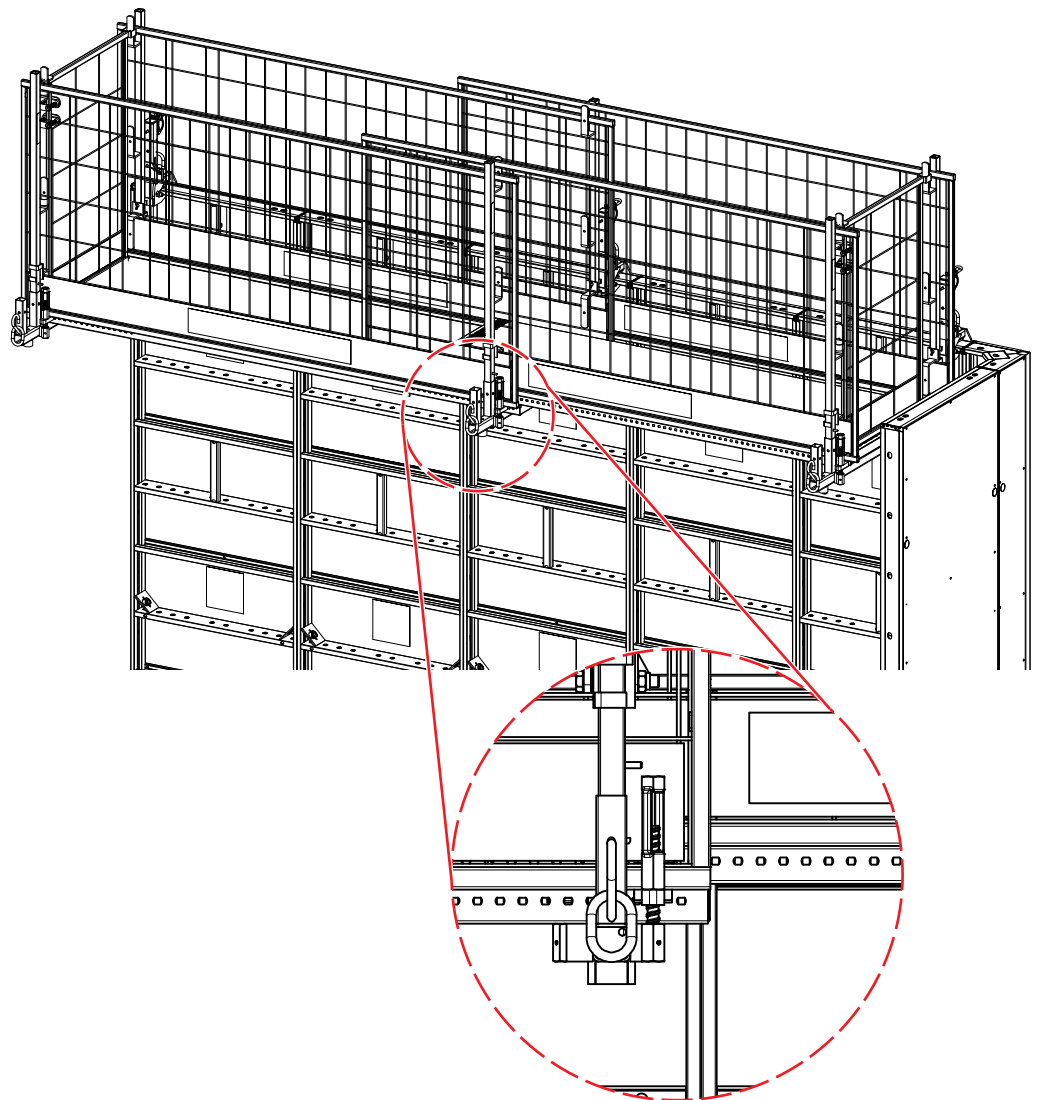
A formwork platform with an adjacent adjustable platform can be constructed using only 3no. Platform Brackets with Bracket Adapters. The centre Platform Bracket supports the overlapping decks from the 2no. platforms.

The Bracket Adapters of the whole formwork platform are connected to the Platform Brackets in the standard position.

The Bracket Adapter of the compensation platform is attached in the compensation position. The Platform Bracket is then higher, so the overlapping deck is still horizontal.



The following section shows the procedure with RASTO components. The procedure is the same for MANTO components. Then the lifting devices and Bracket Adapters just have to be selected for MANTO formwork.



9 Moving by crane formwork with platforms attached

Formwork with platforms attached can be moved with a crane. Attach the crane to the lifting eyes on the Bracket Adapter and the Platform Brackets (Refer to Section *Attaching formwork platform to crane* on page 42). Use a 4-strand suspension and 2no. Crane Suspensions. This ensures that the formwork hangs vertically from the crane. Attach the 4-strand suspension to the larger lifting eyes on the Crane Suspension.

Always comply with panel combinations that can be moved with a crane. The panels have to be joined with a greater quantity of Adjustable Aligning Clamps (Refer to Section *Raising formwork with platforms attached* on page 36).



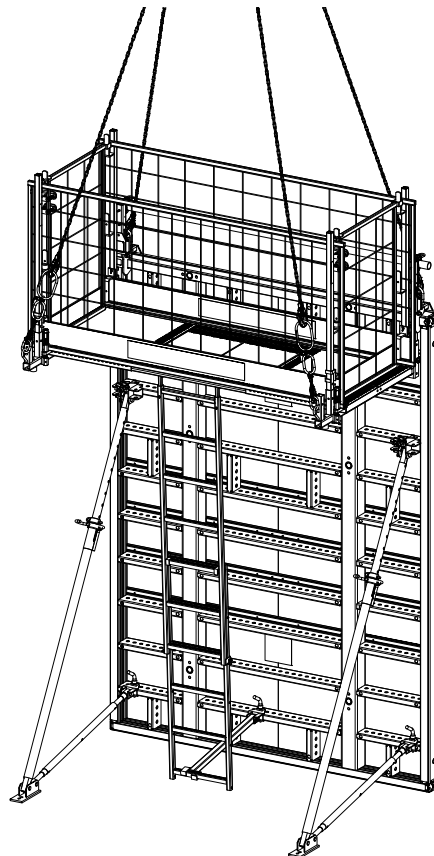
The Bracket Adapters RASTO Edge and MANTO Edge as well as the Uni Formwork Platform Crane Suspension are lifting accessories.

Always follow the operating instructions included with the lifting accessories. These documents explain in detail the permitted attachment points and loads.



The following section shows the procedure with RASTO components. The procedure is the same for MANTO components. Then the lifting devices and Bracket Adapters just have to be selected for MANTO formwork.

- Step 1** Ascend to the formwork platform and attach the crane's 4-strand suspension to the formwork platform using 2no. Crane Suspensions. Attach the crane slings to the larger lifting eyes on the Crane Suspension.
- Step 2** Leave the formwork platform and remove any materials from the platform.
- Step 3** Lift the formwork platform vertically with the crane.



10 Lowering formwork to clean form sheet

To clean the form sheet, the formwork, with the Uni Formwork Platform attached, can be rested on the formwork platform. Only the Bracket Adapters can be hooked to the crane in this case!

Formwork panels with formwork platforms positioned one above the other may not be rested on the formwork platforms.



The Bracket Adapters RASTO Edge and MANTO Edge as well as the Uni Formwork Platform Crane Suspension are lifting accessories.

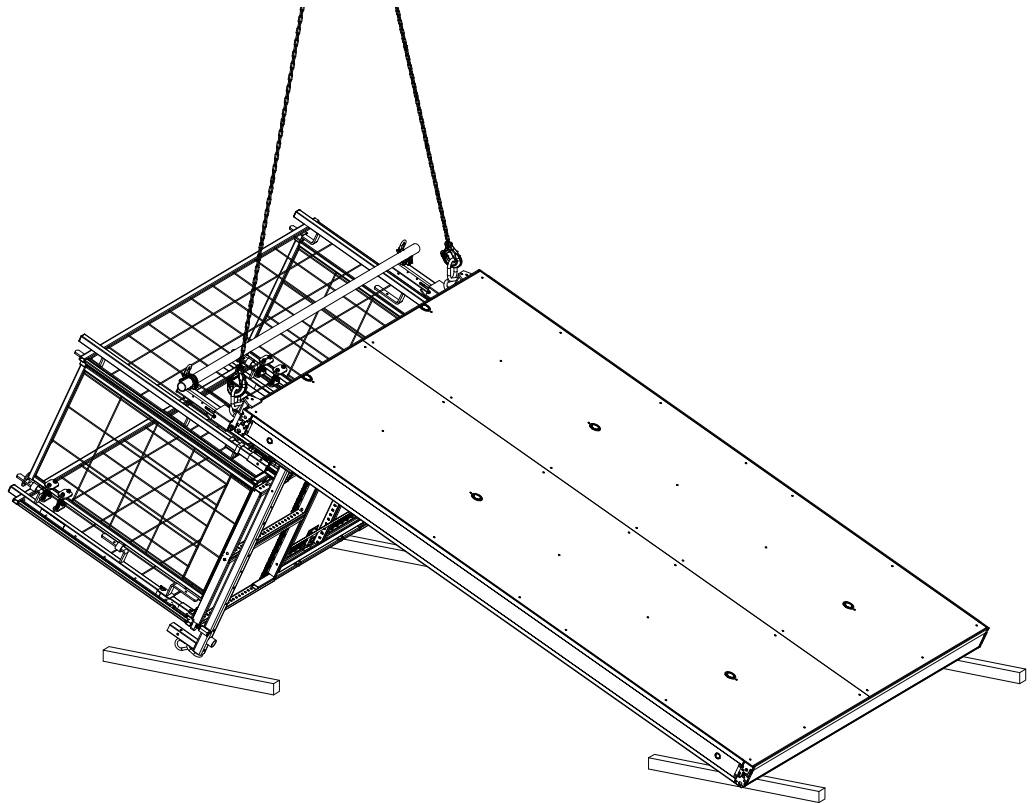
Always follow the operating instructions included with the lifting accessories. These documents explain in detail the permitted attachment points and loads.



The following section shows the procedure with RASTO components. The procedure is the same for MANTO components. Then the lifting devices and Bracket Adapters just have to be selected for MANTO formwork.

Step 1 Attach the Bracket Adapter to the crane.

Step 2 Lift the formwork and rest it on the formwork platform.



Step 3 Clean the form sheet.

11 Removing formwork platform from panel with a crane

Before the formwork platform can be removed from the formwork, it has to be attached to the crane. Use a 4-strand suspension and the Crane Suspension. Attach the 4-strand suspension to the smaller lifting eyes on the Crane Suspension. Then the Bracket Adapters have to be unlocked.



The Bracket Adapters RASTO Edge and MANTO Edge as well as the Uni Formwork Platform Crane Suspension are lifting accessories.

Always follow the operating instructions included with the lifting accessories. These documents explain in detail the permitted attachment points and loads.



The following section shows the procedure with RASTO components. The procedure is the same for MANTO components. Then the lifting devices and Bracket Adapters just have to be selected for MANTO formwork.

- Step 1** Ascend to the formwork platform and attach the crane's 4-strand suspension to the formwork platform using 2no. Crane Suspensions.
- Step 2** Unlock both Bracket Adapters on the formwork platform.
- Step 3** Leave the formwork platform and remove any materials from the platform.
- Step 4** Lift the formwork platform vertically with the crane. The profile locks on the Bracket Adapters open and the formwork platform is suspended from the crane.

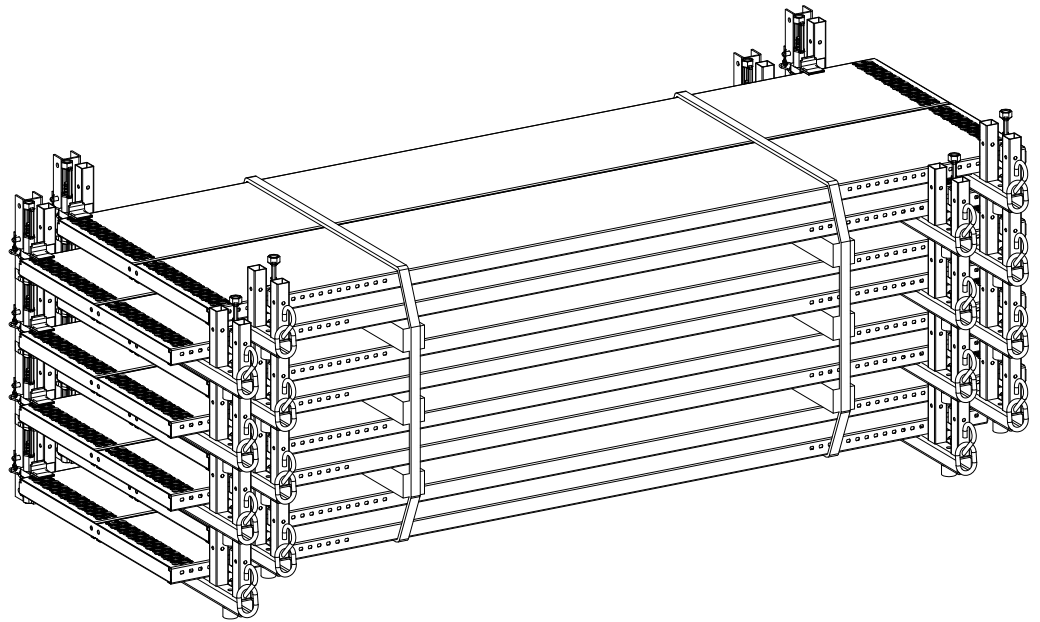
12 Disassembling formwork platform

The disassembly process depends on whether the formwork platform is to be disassembled from formwork lying on the ground or the formwork platform is separate. Disassembly of the formwork platform is always performed in the opposite order of assembly (Refer to Section *Assembling formwork platform separately* on page 17 or Section *Assembling formwork platform on formwork lying on the ground* on page 25).

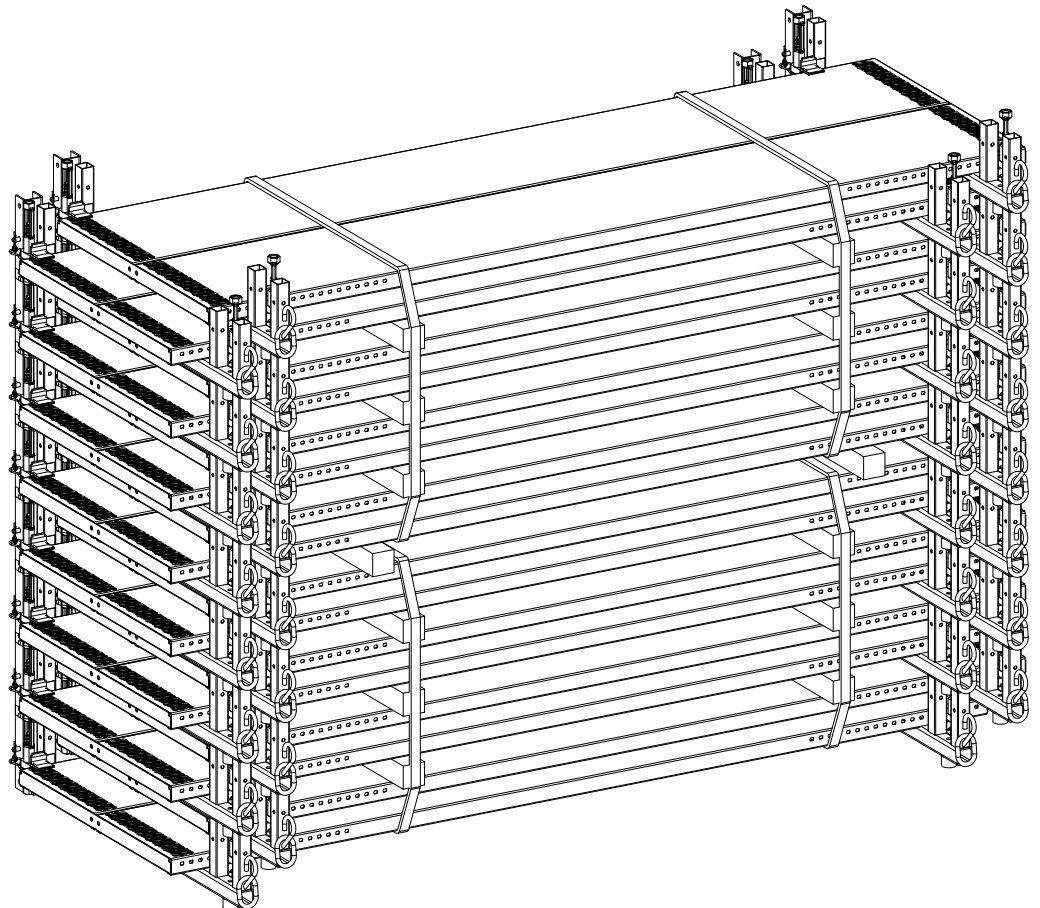
13 Storage and transportation

13.1 Uni Mesh Panel brackets

No more than 8no. brackets or assembled side protection elements can be stacked on top of one another. Before the brackets can be transported, they have to be lashed with suitable equipment. 2no. 60 mm square timbers have to be placed on every second bracket as spacers.



No more than 2no. stacks can be placed on top of one another. Before 2no. stacks can be transported, they have to be lashed with suitable equipment.

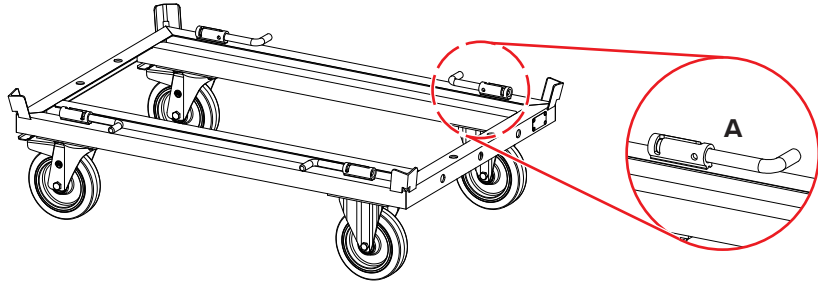


13.2 Other components

All of the components should be stored in the proper transport equipment. Most of the transport equipment can be moved with the Euro Trolley (code:607610) and transported with the crane on site.



Always follow the directions in the Euro Trolley operating instructions. Always use the latch (A, shown opened here) on the Euro Trolley to secure the transport equipment.



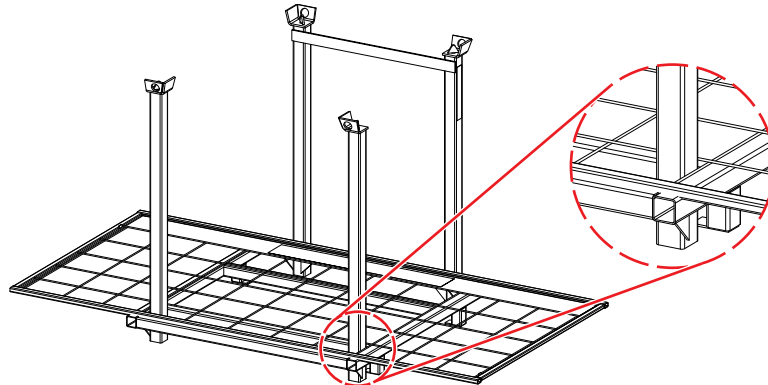
13.2.1 Components < 1.00 m long and loose parts

Components < 1.00 m long and loose parts should be stored in the Euro Lattice Box (code:548480). The Euro Lattice Box can be moved with the Euro Trolley.

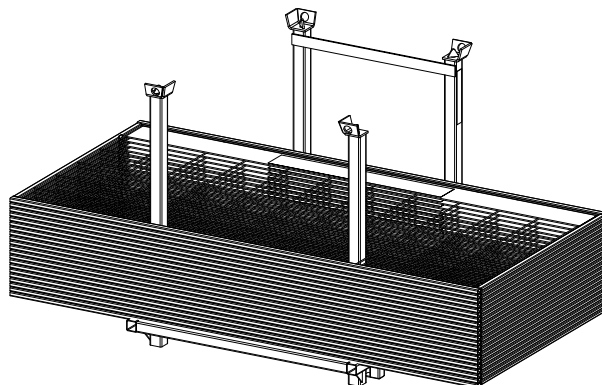
13.2.2 Uni Mesh Panel

Uni mesh panels should be stored and transported in the Uni Mesh Panel Rack (code:605558). The Uni mesh panels are secured in the rack to prevent them from slipping. The Uni Mesh Panel Rack can be moved with the Euro Trolley.

Step 1 Place the first Uni mesh panel in the Uni Mesh Panel Rack as shown in the illustration.



Step 2 Place additional Uni mesh panels (up to 50 panels, depending on the size) in the Uni Mesh Panel Rack.



Do not stack more than 2no. Uni Mesh Panel Racks on top of one another.
Always use a four-strand chain sling to transport by crane!

14 Chronology

Changes since edition 2019-12		
Change	Page	Date
Illustrations updated	39	2021-09
Section Transport updated	55	2021-09

**Hünnebeck
Deutschland GmbH**
Rehhecke 80
D-40885 Ratingen
+49 2102 9371
info_de@huennebeck.com
www.huennebeck.de

The contents of this document, including without limitation, the products, design, images, text, trademarks, service marks and logos contained herein, are protected by copyright and other intellectual property rights. No rights or licences are granted.

The contents of this document are not to be reproduced mechanically, electronically or otherwise, including for distribution, sale or display without our written permission.

The illustrations, processes, materials and/or information in this document are for general information only on the basis that conditions and procedures may differ. No representation, warranty or guarantee is made or implied, including in relation to the fitness or suitability. Overviews and diagrams are for illustrative purposes only.

Specifications may vary and BrandSafway reserves its rights to vary specifications, procedures, and materials due to continuous development, or when required to comply with new regulations, other safety guidance's or industry advancements. The processes set out in the documents should only be undertaken by qualified authorised personnel. The information contained in this document is for use for the applicable product, obtained directly from us.

We may also issue safety notes on products or packaging where required. These notices may affect the manner in which products are used and should therefore be adhered to. The most recent publication is applicable.

Performance, procedures and results may differ based on actual site conditions.

The aforementioned statements do not seek to limit our liability for fraud, or for personal injury or death caused by our negligence. However, we will not be liable for any damage to property, personal injury or any losses caused by failure to follow the instructions contained in our material. It remains the responsibility of the user to comply with the applicable regulations.

Supply of this product is subject to our terms and conditions. For more information, including on the specification, our terms and conditions/terms of business and for installation and dismantling procedures, please contact us.

© 2021 Hünnebeck GmbH. All rights reserved.

Last modified: September 2021
Keep for later use!