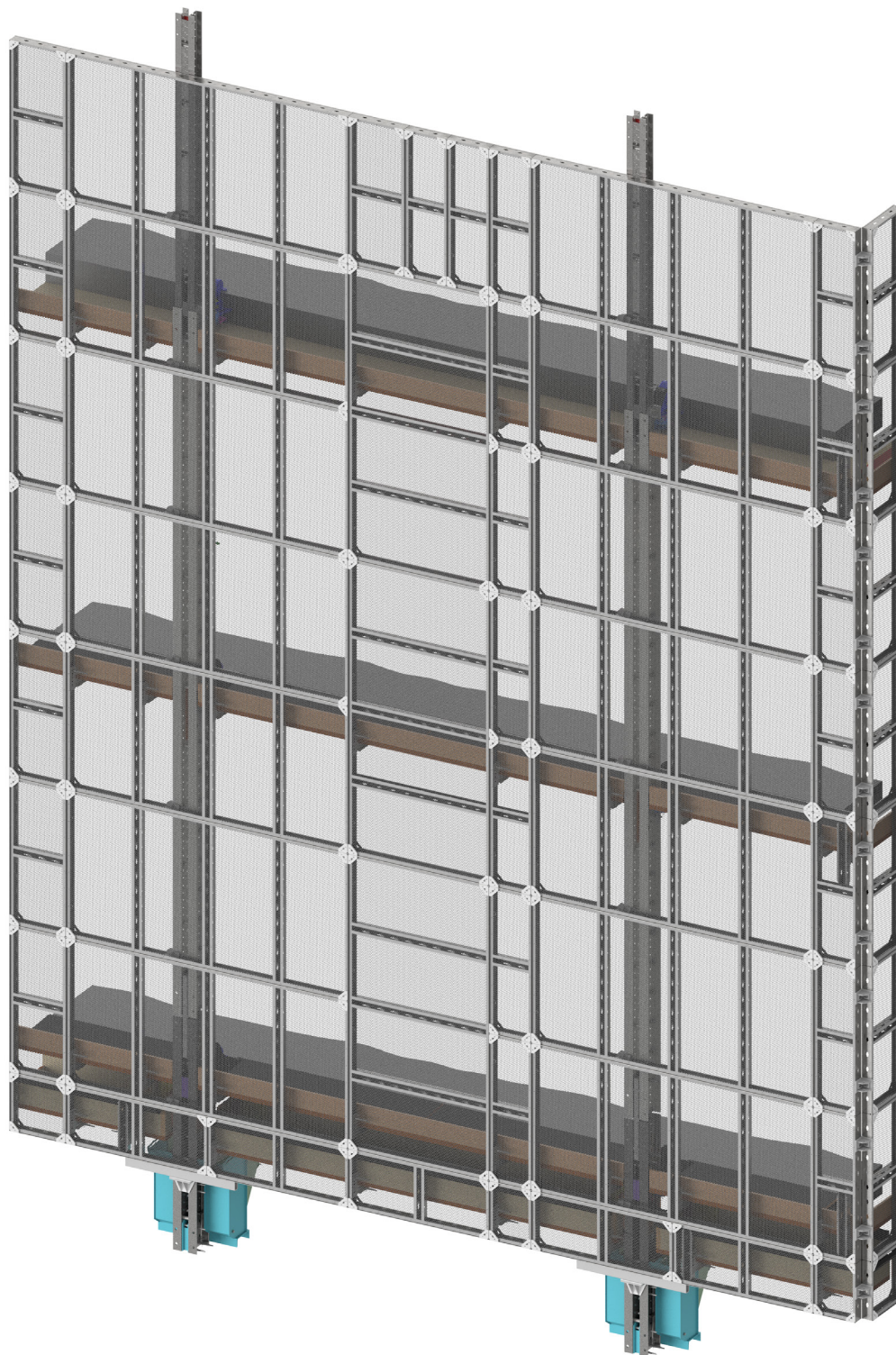


SAFESCREEN G2

Perimeter climbing screen system

User Guide



HÜNNEBECK 

BY BRAND  SAFWAY

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1 Product features

1.1 Introduction

SAFESCREEN G2 is a suspended, self-climbing system that offers access and full edge protection to a number of levels. It is designed to be used in line with the construction of concrete slabs; however, it is independent of formwork and falsework equipment. The shuttering work on tall structures can be carried out without the need of a scaffold or crane and with reduced input of manpower and materials. The system provides a safe working environment for the site personnel against adverse weather conditions, falls from height and also provides protection to local services and public areas against danger of falling objects and pollution from site.

Typically, the system climbs vertically, following the newly constructed levels, and can be used on inclined facade (maximum inclination is $\pm 5^\circ$) or irregular buildings.

The hydraulic climbing power pack ensures smooth climbing, irrespective of the loading of the individual brackets.

SAFESCREEN G2 can be assembled on site or where there are working area restrictions, pre-assembled and delivered. Units can be assembled together with re-usable bolted modular components.

SAFESCREEN G2 units can either be single rail or truss units, with platforms for access and typically covered with panels for protection. The platforms provide access areas for safe concreting, re-bar installation and protection of falling of people, objects and debris. The distance between the support brackets and the width of the SAFESCREEN unit depend mainly on the building's geometry, height and site conditions. Additionally, units can be adjusted on the structure to accommodate irregular structure shapes.

Principles:

- Wind protection
- Edge fall protection
- Prevention of dropping tools and materials
- Provides edge protection for slab formwork

Available features:

- Several cladding types available.
- Adjustable cladding panels
- Folding platforms
- Self-climbing
- Simple to assemble and install
- Configurable for standard transport (in accordance with relevant road regulations)
- Used on reinforced concrete, post-tension and pre-cast slabs

1.2 Intended use

The SAFESCREEN G2 system is intended to provide a collective means of edge protection on concrete slab's leading edges. It is used to prevent falls from height and **it must not be used as an attachment point for harnesses.**

2 General information

This user guide for assembly and use contains important information regarding the assembly and use of the SAFESCREEN G2 system. These instructions are created to support effective working processes on site when using the SAFESCREEN G2 system, therefore carefully read this user guide before assembly and use of the system, always keep it at hand and archive it for future reference.

2.1 Safety instructions

It is the responsibility of the site Management / Supervisors to ensure that all operatives involved in the assembly of the SAFESCREEN G2 system have been made aware of this document and that they understand the drawings (if supplied) and the function of the various components. The Contractor is also responsible for drawing up a comprehensive risk assessment and a set of installation instructions. The latter is not usually identical to the assembling instructions.

Risk assessment

The Contractor is responsible for the compilation, 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 assembly instructions are an integral component of the SAFESCREEN G2 construction and are a part of the installation instructions. They comprise safety guidelines, details of standard configurations and intended use as well as the system's description.

The functional instructions (standard configuration) contained in the assembly instructions are to be complied with as stated. Enhancements, deviations or changes represent a risk and therefore require separate verification with the help of a risk assessment or a set of instructions which comply with the relevant laws, standards and safety regulations. The same also applies in those cases where components are provided by the Contractor.

Availability of the assembly instructions

The Contractor has to ensure that the assembly instructions provided by the manufacturer or supplier are available at the place of use. Site personnel are to be informed of this before assembly and use takes place and that they are available at all times.

Detailed assembly

The method of erection / dismantling detailed is intended to be used as a general guide to inform the user about the product's details to enable safe use. It must not be used as a substitute for a contractor's specific risk assessment and method statement, and all relevant health and safety regulations must be adhered to. Due to the variety of possible configurations of temporary work systems, the method of erection or parts of it may differ from that shown. Additionally, alternative methods of erection may be preferred or developed in which case it is imperative that all relevant health and safety legislation is adhered to.

Adverse wind and temperature conditions

The Customer is responsible for monitoring the weather forecast / wind conditions and take the required preventive measures. This includes but is not limited to installation of additional safety measures. Aggregation of snow, water or ice on the system and especially on the cladding and on the safety boxes has to be removed immediately to prevent overloading the system.

2.2 Method statement guidelines

Hünnebeck can provide further guidance and on-site assistance on any issues contained in this document that are not clear. Further information can be found in the product's data sheets. IF IN DOUBT ASK.

Design Risk Assessment

Where relevant site-specific design schemes are produced, they will generally be to a recognised standard arrangement otherwise calculations will be done to verify the design.

The Design Risk Assessment is an integral part of Hünnebeck's design process. The designer will assess the hazards and risks associated with erection, use and dismantling of the temporary works at an early stage of the design process. Hünnebeck will communicate where risks to health and safety remain by including a "Residual Risk Note" on the drawing. This note will be clearly visible and marked by the familiar black exclamation mark on a yellow triangle. The statement will be brief but clear to enable appropriate action by a competent contractor.

Hünnebeck draws attention to the following Health and Safety legislation:

- The Construction (Health, Safety and Welfare) Regulations 1996 (CHSW Regs);
- Construction (Design and Management) Regulations 2015 (CDM Regs);
- Lifting Operations and Lifting Equipment Regulations 1998 (LOLER);
- Work at Height Regulations 2005 (WaH Regs);
- Manual Handling Operations Regulations 1992 (MHO Regs).
- The Personal Protective Equipment at Work Regulations 1992 (PPE Regs)

Other local regulations may be relevant and must always be considered.

Work at Height Regulations - Hierarchy of Controls Avoiding Work at Height

Work at height can be reduced / eliminated by considering the method of assembly and use:

- Walkways that are designed to be re-used reduce the amount of time and effort dismantling and re-erecting;
- Walkways that can be pre-assembled on the ground and then raised by crane to an elevated position will remove some of the work at height;
- Installing completed walkways when the walkway is on the ground will remove work at height associated with the construction later on.

Preventing Falls - The use of guardrails and other collective measures

The use of PPE / Safety Harnesses.

Suitable PPE MUST be used at all times during assembly and dismantling of this equipment. Lanyards MUST always be secured to a suitable part of the structure. Always consider the attachment level and deployment (extension) of the lanyard when under load.

2.3 Equipment information

Material check

Material deliveries are to be checked on arrival at the construction site / place of destination, as well as before each use, to ensure it's in serviceable condition and functions correctly. Changes to the material are not permitted.

On-site preparations

The Contractor must ensure the appropriate environment and conditions for storage and the particular application of the system(s) supplied.

Storage and transportation

The special requirements of the SAFESCREEN G2 system either as individual components and / or as pre-assembled parts regarding storage and transportation procedures must be complied with. This applies not only to and from the site but also to the movement of individual components and / or pre-assembled parts on the construction site / place of use.

Lifting

When applicable, the lifting requirements of the individual components and / or pre-assembled parts must be followed. Suitable spreader beams must be used where required

Genuine components

The information provided assumes that any product combinations will be between genuine Hünnebeck products or products supplied by Hünnebeck unless otherwise stated.

Combining components from different manufacturers carries certain risks. They are to be individually verified and a separate set of instructions for the installation of the equipment may be required.

Any unauthorised use in relation to third party products could give rise to a risk of collapse, damage, injury or death.

Spare parts and repairs

Only original components may be used as spare parts. Repairs are to be carried out by the manufacturer or by authorised facilities only.








2.4 Document information

Representations

The representations shown in the assembly instructions are in part, situations of assembly and not always complete in terms of safety considerations. The safety installations which have possibly not been included in these representations must be available and must be in accordance with the latest regulations. Overviews and diagrams are for illustrative purposes only and whilst we endeavour to ensure accuracy, we are not responsible for omissions or errors.

Safety symbols

Individual safety symbols are to be complied with. Examples:

| | |
|---|--|
|  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. |
| NOTICE | Notice! NOTICE indicates a hazardous situation that, if not avoided, can cause property damage. |
|  | This note indicates that an additional check, visual or otherwise, is required. |
|  | This note shares practical experience with the user, e.g. how to more easily or quickly perform a task. |
|  | This note draws the user's attention to particularly important information, e.g. that a pre-requisite must 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. |

Instructions

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.

Brand names

The following brand names are the property of Hünnebeck. The symbol indicating registered trademark is omitted throughout the document.

- Hünnebeck®
- SAFESCREEN®
- INFRA-KIT®
- DU-AL®
- Aluma beams®

Other relevant documents

This user guide should be read in conjunction with the following documents:

- INFRA-KIT User Guide
- DU-AL User Guide
- Powerpack Operating Instructions and hoses documentation

User guide compliance

Hünnebeck will not be liable for any damage to property, personal injury or any losses caused by failure to follow the instructions contained in this guide. It remains the responsibility of the Customer to comply with the applicable legislation.

2.5 Other information

This guide provides an overview of the SAFESCREEN G2 system's instructions for assembly and use. More specific component data sheets are available upon request for some product lines. Hünnebeck reviews and updates its product guidance from time to time. Due to continuous development, it is important that only current documents are used.

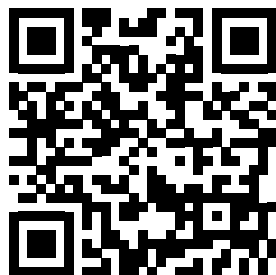
Hünnebeck reserves the right to alter or amend, without notice, the design and / or specifications of products in the interests of improvement or when required to comply with new regulations, other safety guidances or industry advancements.

Hünnebeck also issues safety notes on its 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 published notice should prevail.

All information in this guide is correct at the time of going to press and / or other publication media.

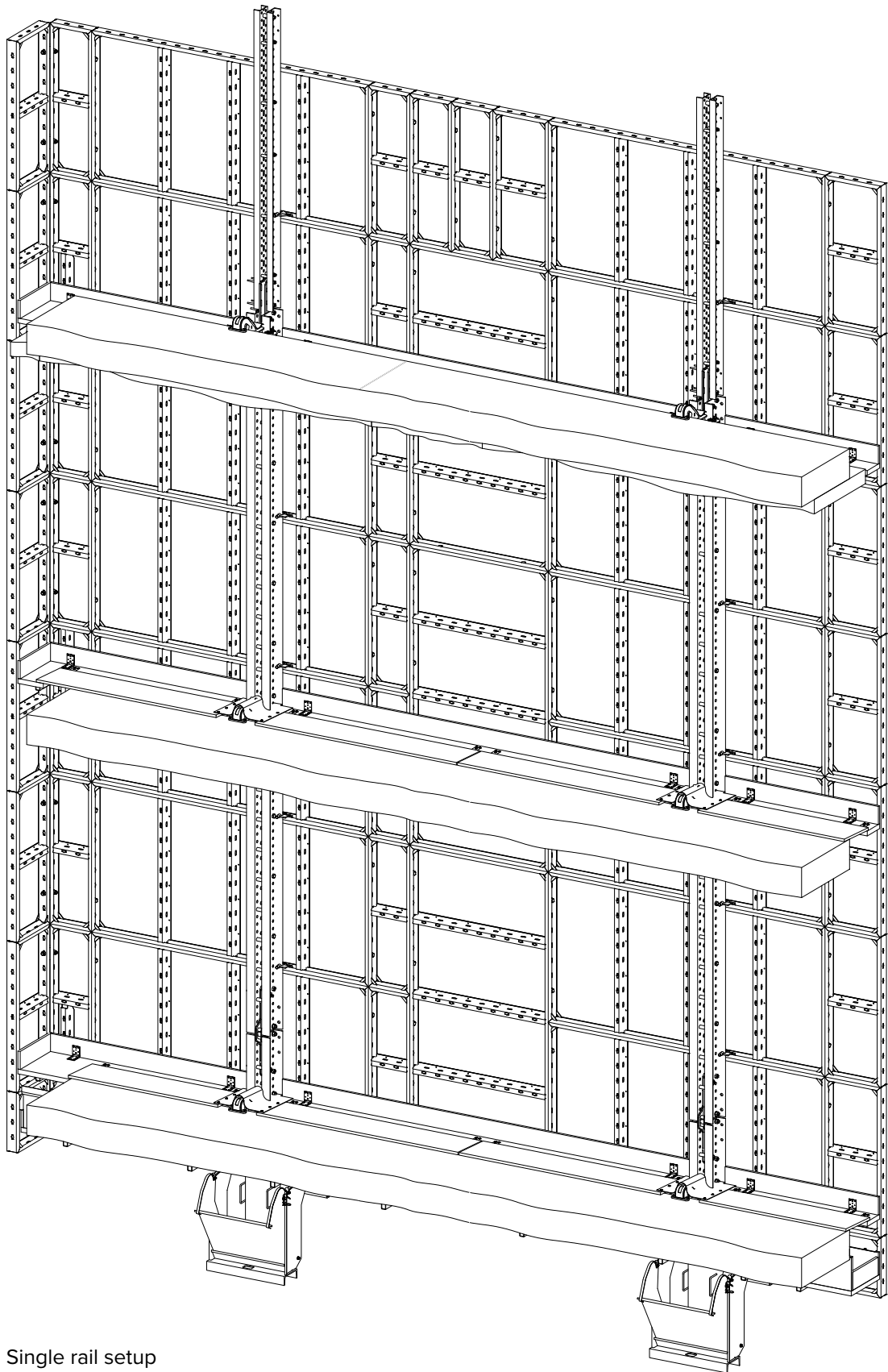
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<http://huennebeck.com/downloads>

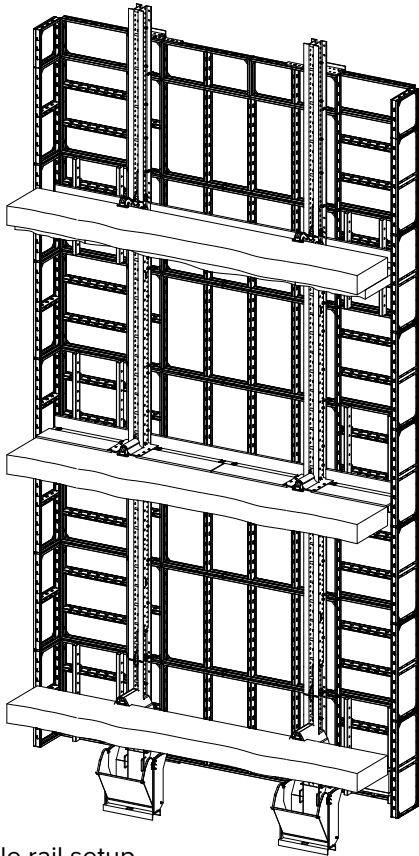


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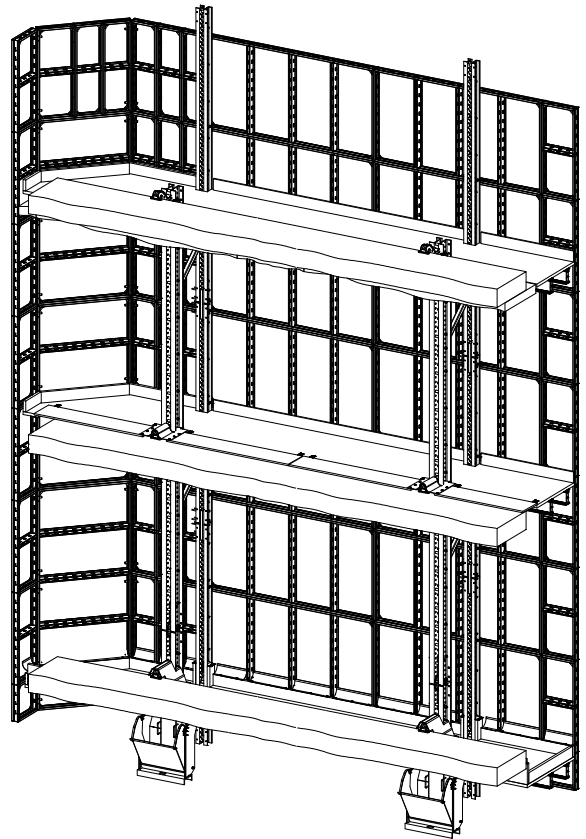
3 Overview



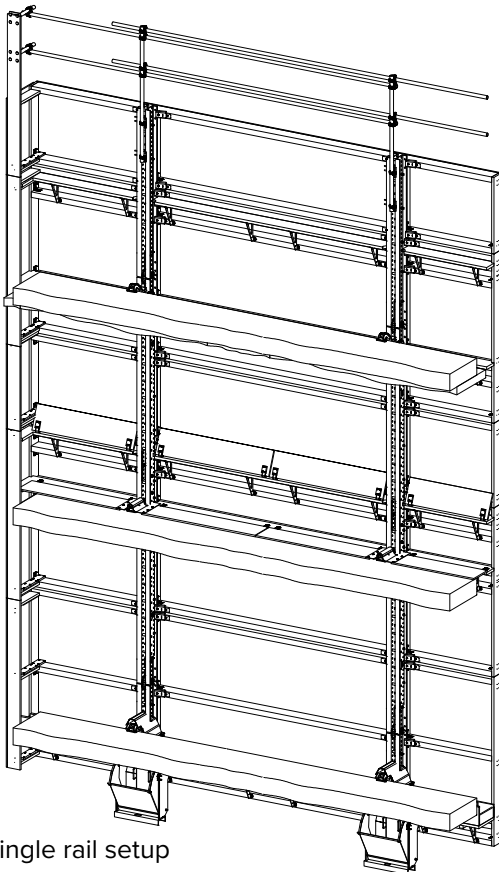
Single rail setup
Fixed width unit
Cladding made of rentable cladding panels



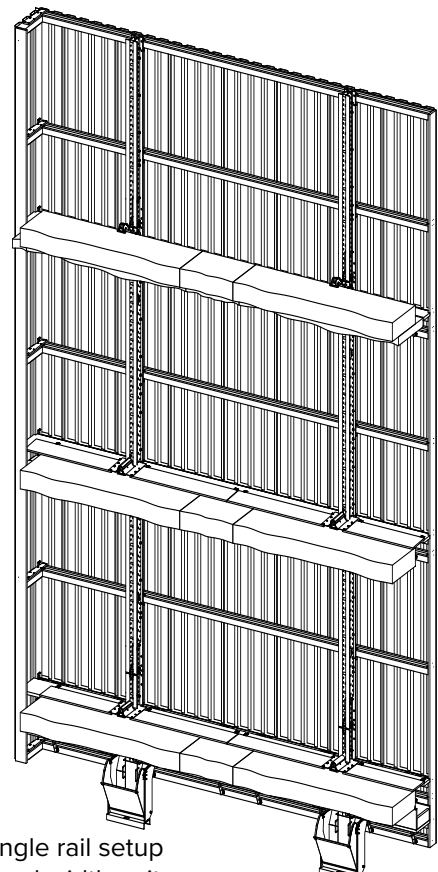
Single rail setup
Extendable width unit
Cladding made of rentable cladding panels
(see page 102)



Truss setup
Fixed width unit
Cladding made of rentable cladding panels
(see page 101)



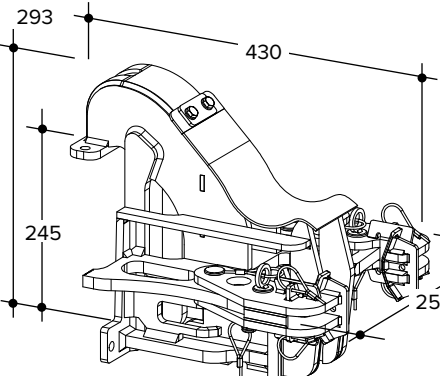
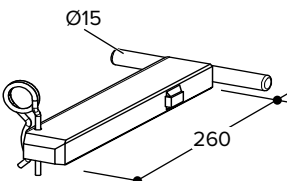
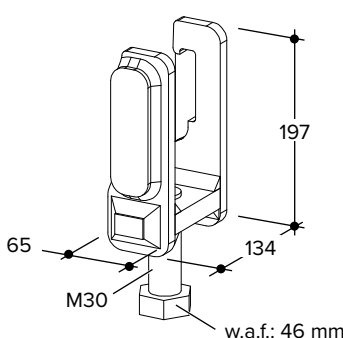
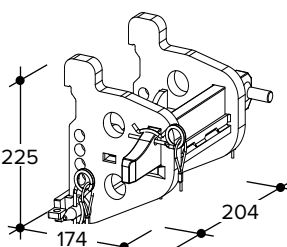
Single rail setup
Fixed width unit
Cladding made of rentable timber panels with
height extension (see page 103)

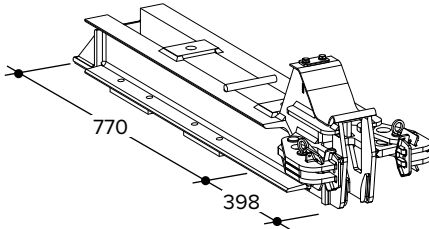
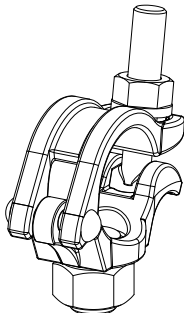
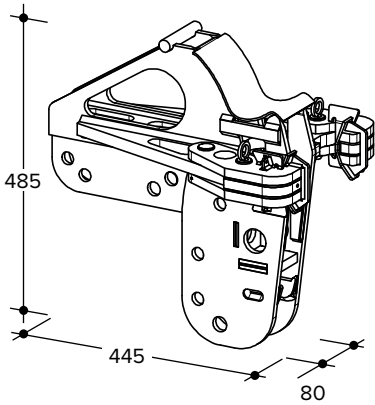
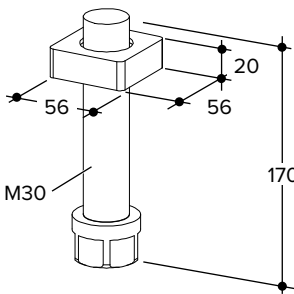


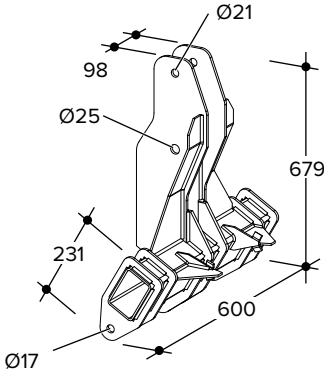
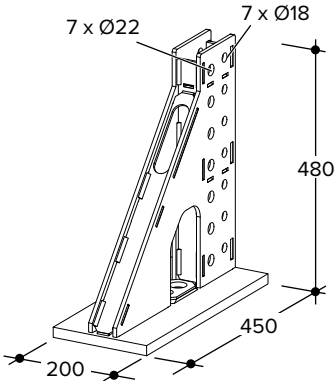
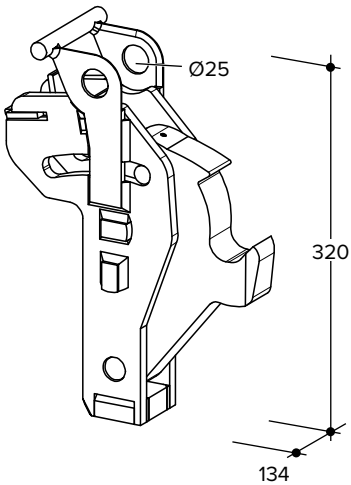
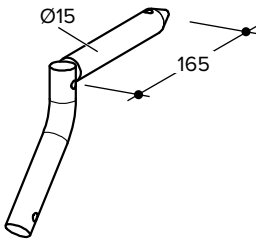
Single rail setup
Fixed width unit
Cladding made of rentable timber + corrugated
sheet (see page 104)

4 Components

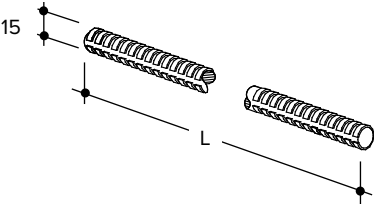
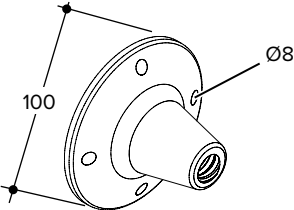
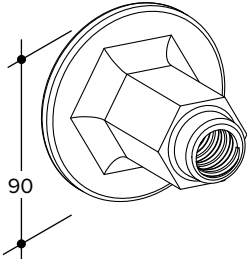
4.1 Climbing brackets and anchors

| Component | Part code | Weight [kg] |
|---|---------------|--------------|
| <div></div> <div>SCR Slab Edge Bracket Used on concrete slab edges, these brackets are connected to the Anchor Block M24. The Bracket Claw Unit is inserted into the SCR Slab Edge Bracket and together they support the SAFESCREEN unit. The brackets transfer vertical and horizontal loads to the permanent structure. Minimum slab thickness is 250 mm. See page 47.</div> | 611170 | 24.89 |
| <div></div> <div>SCR Slab Edge Bracket Securing Bar Inserted into the SCR Slab Edge Bracket to prevent accidental uplift (the Anchor Bolt M24x100-10.9 will act as a stopper against the SCR Slab Edge Bracket Securing Bar). It's also used to secure the SCR Slab Edge Bracket Support in place. See page 47.</div> | 611230 | 2.64 |
| <div></div> <div>SCR Slab Bracket Height Adjustment Used with the SCR Slab Edge Bracket and the SCR Slab Top Bracket to vertically adjust the position of the Bracket Claw Unit. Adjustment range is 40 mm. See page 49.</div> | 611205 | 4.56 |
| <div></div> <div>SCR Slab Edge Bracket Support Used to increase the vertical load capacity of the SCR Slab Edge Bracket. Used in conjunction with the SCR Slab Edge Bracket Securing Bar. Minimum slab thickness >280 mm. See page 50.</div> | 611725 | 13.77 |

| Component | Part code | Weight [kg] |
|---|---------------|--------------|
| SCR Slab Top Bracket Used on the top face of concrete slab edges, these brackets are anchored into the concrete using a suitable M24 anchor. The Bracket Claw Unit is inserted into the SCR Slab Top Bracket and together they support the SAFESCREEN unit. The brackets transfer vertical and horizontal loads to the permanent structure. See page 51. | 611510 | 51.58 |
|  | | |
| Half Coupler 48/M20x30 SW22/SW30 Used in conjunction with the SCR Slab Top Brackets to attach horizontal restraint. W.a.f.: 22/30. | 002488 | |
|  | | |
| SCR IK Waler Bracket To be used in conjunction with an IK Waler L or an IK Waler M for special anchoring positions. It is attached to an IK Waler L or an IK Waler M (ordered separately). See page 51. | 611710 | 32.54 |
|  | | |
| SCF 60 Wall Bracket Height Adjustment Used with the SCR IK Waler Bracket to vertically adjust the position of the Bracket Claw Unit. Thread not shown. Adjustment range is 40 mm. See page 57. | 611210 | 1.43 |
|  | | |

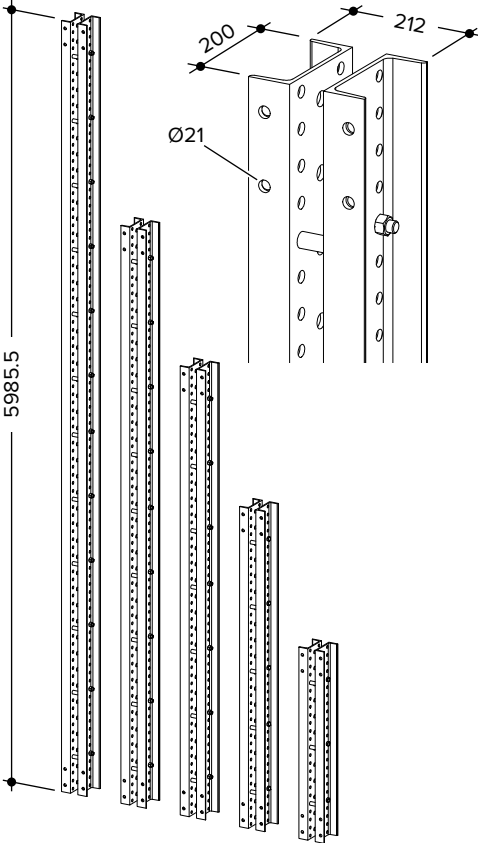
| | Component | Part code | Weight [kg] |
|---|---|---------------|--------------|
|  | SCR IK Waler Bracket Support Allows struts to be attached from the slab below, enabling the SCR IK Waler Bracket to be supported in situations where the IK Waler cannot be fully supported vertically by the permanent structure, e.g. cantilevered walers. See page 55. | 611730 | 29.86 |
|  | IK Waler Support Used to anchor an IK Waler to a concrete slab. See page 56 | 611740 | 21.63 |
|  | Bracket Claw Unit Inserted into a SCR Slab Edge Bracket, a SCR Slab Top Bracket or a SCR IK Waler Bracket. The Bracket Claw Unit is made primarily of a main body, a spring loaded mechanism to secure the unit to a bracket, and the spring loaded retractable claw to connect to the Bolt Sleeve Ø30 on the rail of the SAFESCREEN unit. See page 54. | 611115 | 8.97 |
|  | Bracket Claw Lock Used to lock the claw of the Bracket Claw Unit in position to prevent accidental uplift. See page 54. | 611380 | 0.45 |

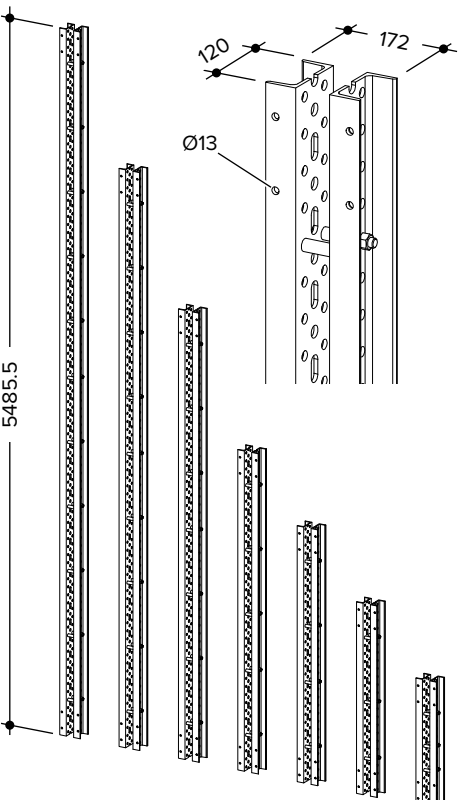
| | Component | Part code | Weight [kg] |
|--|---|---------------|-------------|
| | Anchor Block M24 Used to connect the Anchor cone M24/DW15 to the climbing brackets. The Anchor Block M24 is attached to the Anchor cone M24/DW15 using the Anchor Bolt M24x100-10.9. See page 43. | 611220 | 2.98 |
| | Anchor Cone M24/DW15¹⁾ Re-usable part. Cast into the concrete, the cones will provide anchoring points for the SAFESCREEN units. The outer connection provides an M24 thread and the inner connection provides a DW15 thread to connect to a lost anchor in the concrete. See page 43. | 496664 | 0.65 |
| | Anchor Cone M24/DW20¹⁾ Re-usable part. Cast into the concrete, the cones will provide anchoring points for the SAFESCREEN units. The outer connection provides an M24 thread and the inner connection provides a DW20 thread to connect to a lost anchor in the concrete. | 611860 | 1.13 |
| | Anchor Bolt M24x100-10.9 Used with the Anchor cone M24/DW15. The Anchor Bolt M24x100-10.9 is grade 10.9 and galvanised to ISO 4762. See page 43. | 611218 | 0.50 |
| | Fit bolt M24 x 70 Z 8.8 Used to fix the advancing cone to the plywood of the slab edge formwork. Requires drilling a Ø26 hole through the plywood. | 185635 | 0.47 |
| | Cylinder Head Bolt M24 x 70 10.9 Cylinder Head Bolt M24 x 80 10.9 | | |
| | Nailable Disk M24 Nailed to the plywood to secure the anchor cone during concrete pouring. A 14 mm Allen key is required for disassembly. | 515947 | 0.16 |

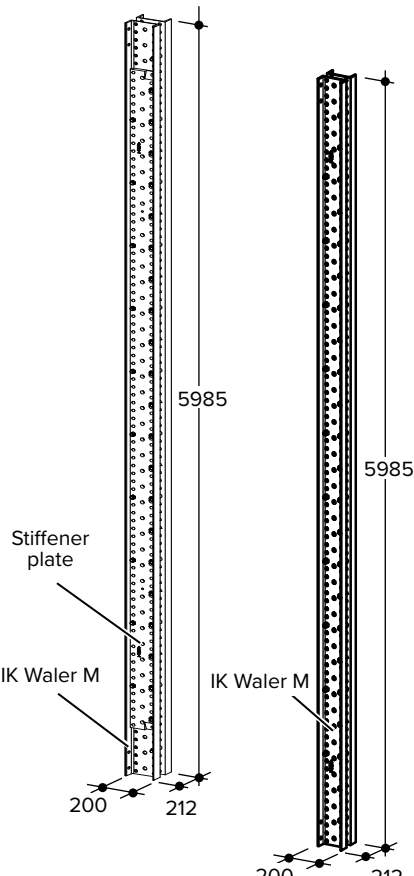
| | Component | Part code | Weight [kg] |
|--|---|---------------|-------------|
|  | Tie rod per meter (DW15) Lost anchoring part. It is cut to length on site and is embedded into the concrete together with the Collar Nut DW15 and the Anchor cone M24/DW15. See page 43. | 164811 | 1.44 |
|  | Collar Nut DW15 Lost anchoring part. Used with the tie rod as anchoring. See page 43. | 602091 | 0.90 |
|  | Collar Nut DW20 Lost anchoring part. Used with the tie rod as anchoring. | 611299 | 0.85 |

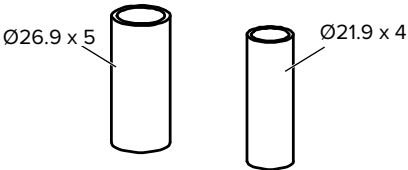
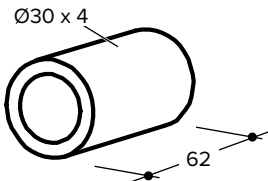
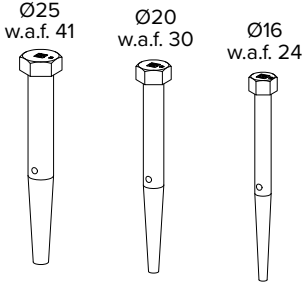

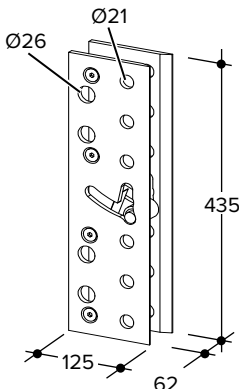
4.2 Rails, connectors and ancillaries

4.2.1 IK Walers and fasteners

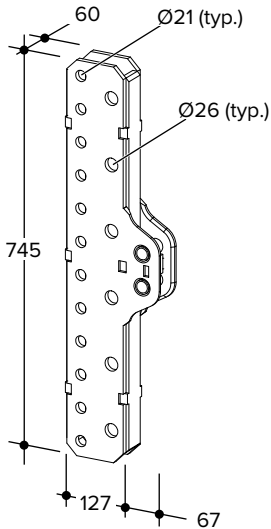
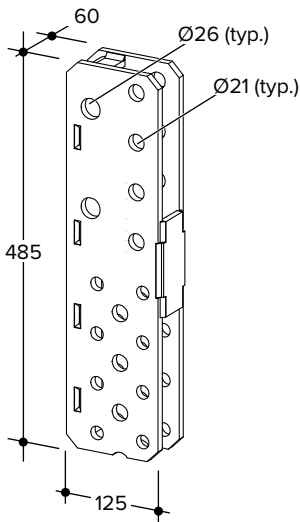
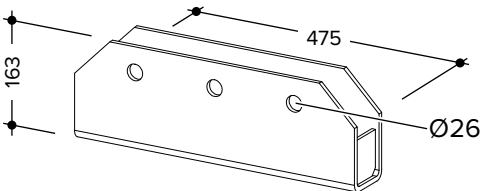
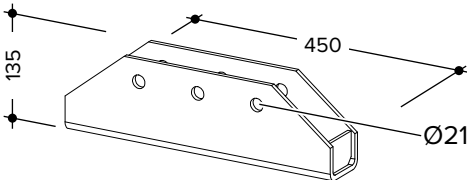
| | Component | Part code | Weight [kg] |
|---|---|---------------|---------------|
|  | IK Waler M 600 | 608660 | 298.31 |
| | IK Waler M 550 | 608655 | 267.69 |
| | IK Waler M 500 | 608650 | 248.41 |
| | IK Waler M 450 | 608645 | 223.46 |
| | IK Waler M 400 | 608640 | 198.52 |
| | IK Waler M 350 | 608635 | 173.57 |
| | IK Waler M 300 | 608630 | 148.63 |
| | IK Waler M 250 | 608625 | 123.68 |
| | IK Waler M 200 | 608620 | 98.74 |
| | IK Waler M 150 | 608615 | 73.79 |
| | Main component of the INFRA-KIT M system. The walers are used as structural members of the SAFESCREEN units. See page 59. | | |

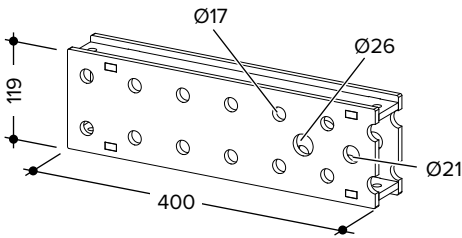
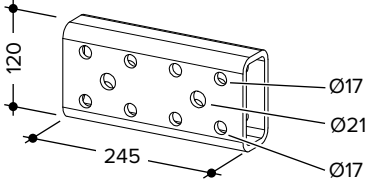
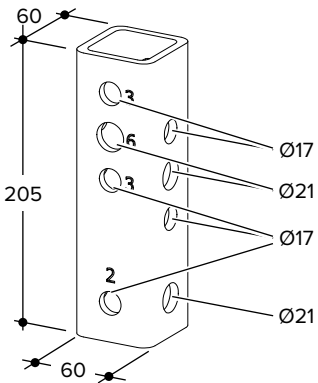
| | Component | Part code | Weight [kg] |
|--|--|-----------|-------------|
|  | IK Waler L 550 | 608755 | 140.75 |
| | IK Waler L 500 | 608750 | 127.92 |
| | IK Waler L 450 | 608745 | 115.09 |
| | IK Waler L 400 | 608740 | 102.25 |
| | IK Waler L 350 | 608735 | 89.42 |
| | IK Waler L 300 | 608730 | 76.58 |
| | IK Waler L 250 | 608725 | 63.75 |
| | IK Waler L 200 | 608720 | 50.91 |
| | IK Waler L 150 | 608715 | 38.08 |
| | IK Waler L 125 | 608712 | 31.73 |
| | IK Waler L 100 | 608700 | 25.39 |
| | IK Waler L 75 | 608688 | 18.90 |
| | IK Waler L 62,5 | 608658 | 15.72 |
| | Main component of the INFRA-KIT L system. | | |
| | The walers are used as structural members of the SAFESCREEN units. | | |
| | See page 59. | | |

| | | | |
|---|--|---------------|---------------|
|  | SCR Climbing Rail HD 6 m | 612205 | 675.77 |
| | SCR Climbing Rail 6 m | 612075 | 312.20 |
| | Pre-assembled structural member made of an IK Waler M. | | |
| | The SCR Climbing Rail HD 6 m has a bolted stiffener plate on both faces. | | |

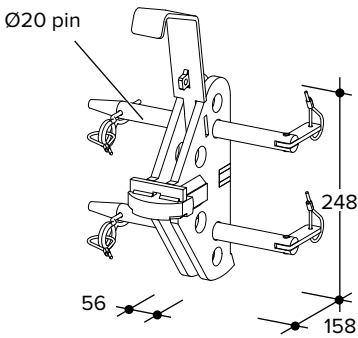
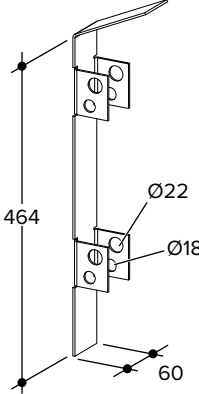
| | Component | Part code | Weight [kg] |
|---|--|---------------|-------------|
|  | Spacer Sleeve L-Waler ¹⁾ | 608496 | 0.05 |
| | Spacer Sleeve M-Waler ¹⁾ | 608498 | 0.10 |
|  | Bolt Sleeve Ø30 | 611720 | 0.17 |
| | <p>The Bolt Sleeve Ø30 is attached to the web of the IK Walers M and is used to provide a strengthened connection for both channels of the IK Waler M. It also serves as the main support point and lifting point for the SAFESCREEN unit.</p> <p>The Bolt Sleeve Ø30 is coloured red for visual identification.</p> | | |
|  | IK Bolt Ø16 | 608816 | 0.31 |
| | Pin Ø20 - Hex Type | 608820 | 0.49 |
| | IK Bolt Ø25 | 608825 | 0.78 |
| | <p>Used to connect some ancillary to the IK Walers.</p> <p>Always secure with Spring Cotter Pins.</p> <p>See page 59.</p> | | |
|  | Spring Cotter Pin Ø4 | 173776 | 0.02 |
| | <p>Used to secure IK Bolt Ø16 and Pin Ø20 - Hex Type.</p> | | |
| | Spring Pin Ø5 | 174553 | 0.04 |
|  | Movable Support Bobbin | 611820 | 6.56 |
| | <p>Attached to the IK Walers M and used to support the unit, the bobbin is pushed aside to allow for the SCR Wind Latch to be installed.</p> <p>See page 65.</p> | | |

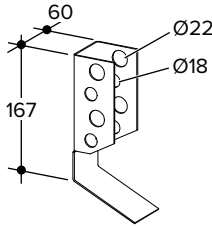
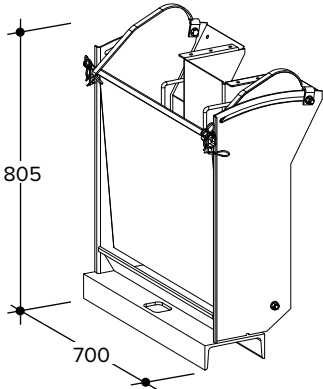
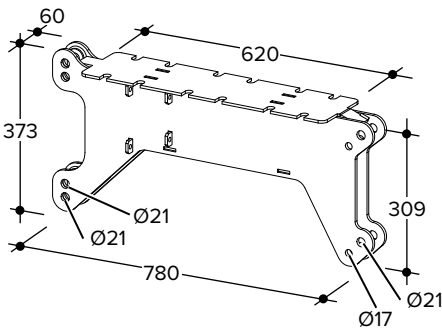
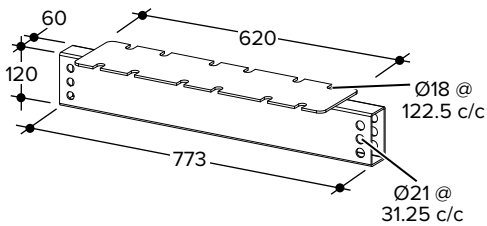
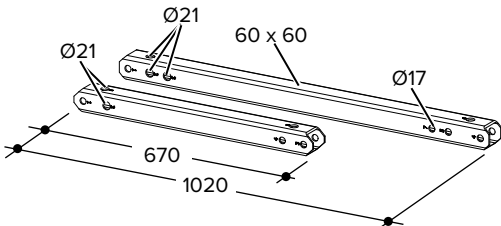
4.2.2 Connectors

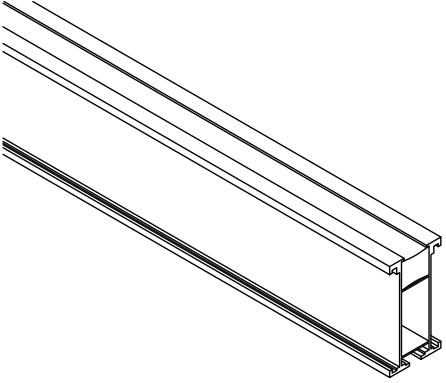
| | Component | Part code | Weight [kg] |
|---|--|---------------|--------------|
|  | SCR IK Rail Connector M Used to connect 2no. IK Walers M end-to-end. See page 63. | 611970 | 21.81 |
|  | IK Rail Connector M-L Used to connect IK Walers M to IK Walers L end-to-end. See page 64. | 611235 | 10.53 |
|  | IK Cross Connector M Allows IK Spindles to be attached to the web of the IK Waler M. | 608470 | 11.45 |
|  | IK Cross Connector L Allows IK Spindles to be attached to the web of an IK Waler L. | 608450 | 9.12 |

| | Component | Part code | Weight [kg] |
|--|---|---------------|-------------|
|  | IK Waler Connector Flex L Used to connect a loading platform to an IK Waler M. | 608490 | 8.16 |
|  | IK Waler Connector L 25 Used to connect a loading platform to an IK Waler L. | 608445 | 5.15 |
|  | SCF 60 Cross Connector L Used in the loading platform to connect 2no. IK Walers L crosswise or parallel, one on top of the other. | 612210 | 1.96 |

4.2.3 Ancillaries

| | Component | Part code | Weight [kg] |
|---|--|---------------|-------------|
|  | SCR Wind Latch Used to transfer high horizontal loads (normal to the facade) from the web of the IK Waler M into the climbing brackets. See page 68. | 611810 | 5.92 |
|  | SCR Waler Sealing Plate Long Used to close the space between the profiles of the IK Walers. The SCR Waler Sealing Plate Long guides debris to the SCR Safety Box. It is also used to prevent the over-climbing of the SAFESCREEN unit. | 611624 | 1.08 |

| | Component | Part code | Weight [kg] |
|---|--|--------------------------------|----------------------------|
|  | SCR Waler Sealing Plate Short Used to close the space between the profiles of the IK Walers. The SCR Waler Sealing Plate Short guides debris to the SCR Safety Box. | 611882 | 0.43 |
|  | SCR Safety Box The SCR Safety Box is placed at the bottom end of the rail and is designed to collect small debris falling through gaps near the rail. During climbing operations, the SCR Safety Box must be manually retracted to avoid contact with concrete slabs. See page 68. | 611450 | 67.66 |
|  | SCR Platform Beam 0.75m Rigid Used in the SAFESCREEN truss units to support decking. See page 71. | 612263 | 26.97 |
|  | SCR Platform Beam 0.75m Used in SAFESCREEN truss units to support decking. It usually requires the use of additional diagonals in the truss setup. | 612260 | 12.32 |
|  | SCF 60 Diagonal 75x75 SCF 60 Diagonal 50x50 Part of the SAFESCREEN truss units. Used to stiffen the assembly. The 75 x 75 and 50 x 50 dimensions refer to distance between the bolt connections (L x H). See page 72. | 612130 612125 | 6.89 4.40 |

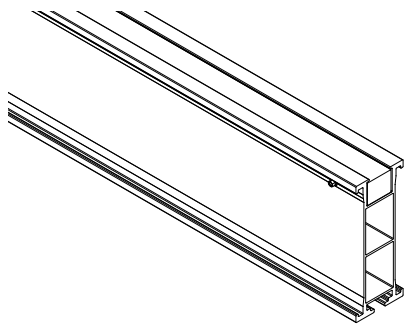
| | Component | Part code | Weight [kg] |
|--|--------------------------------------|-----------|-------------|
|  | T150 Secondary / Primary Beam 7.20 m | 717572 | 28.52 |
| | T150 Secondary / Primary Beam 6.40 m | 717564 | 25.40 |
| | T150 Secondary / Primary Beam 6.00 m | 717560 | 23.82 |
| | T150 Secondary / Primary Beam 5.40 m | 717554 | 29.69 |
| | T150 Secondary / Primary Beam 5.00 m | 717550 | 27.49 |
| | T150 Secondary / Primary Beam 4.80 m | 717548 | 26.39 |
| | T150 Secondary / Primary Beam 4.20 m | 717542 | 23.09 |
| | T150 Secondary / Primary Beam 3.90 m | 717539 | 21.44 |
| | T150 Secondary / Primary Beam 3.60 m | 717536 | 19.79 |
| | T150 Secondary / Primary Beam 3.00 m | 717530 | 16.49 |
| | T150 Secondary / Primary Beam 2.70 m | 717527 | 14.84 |
| | T150 Secondary / Primary Beam 2.50 m | 717525 | 13.74 |
| | T150 Secondary / Primary Beam 2.40 m | 717524 | 13.19 |
| | T150 Secondary / Primary Beam 1.80 m | 717518 | 9.89 |
| | T150 Secondary / Primary Beam 1.60 m | 717516 | 8.79 |

(a)

Used in truss rail SAFESCREEN units to support decking.

See page 104.

(a) Non-standard.

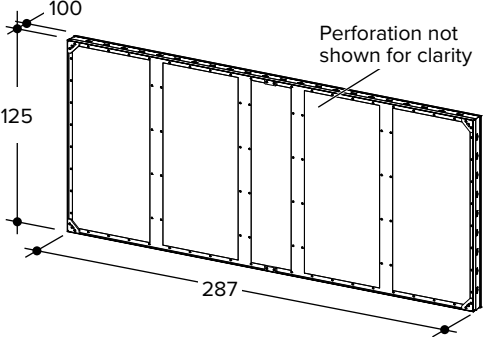
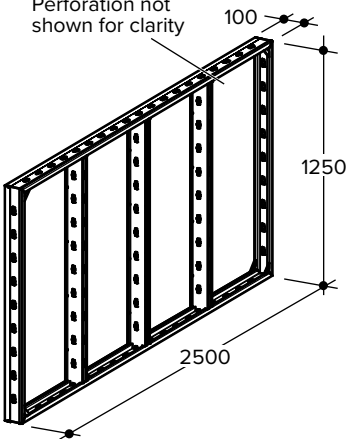
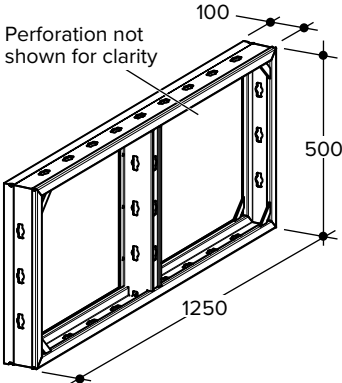
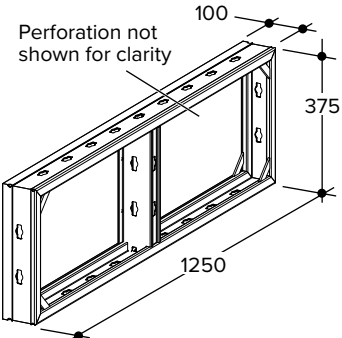
| | | | |
|---|-------------------------------------|--------|-------|
|  | T200 Secondary / Primary Beam 6.00m | 717260 | 45.41 |
| | T200 Secondary / Primary Beam 5.00m | 717250 | 37.84 |
| | T200 Secondary / Primary Beam 4.00m | 717240 | 30.28 |
| | T200 Secondary / Primary Beam 3.50m | 717235 | 26.50 |
| | T200 Secondary / Primary Beam 3.00m | 717230 | 22.71 |
| | T200 Secondary / Primary Beam 2.50m | 717225 | 18.93 |
| | T200 Secondary / Primary Beam 2.00m | 717220 | 15.15 |
| | T200 Secondary / Primary Beam 1.50m | 717215 | 11.37 |

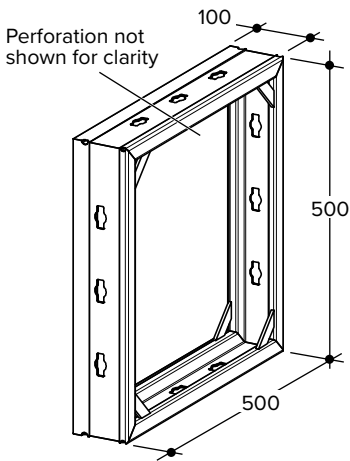
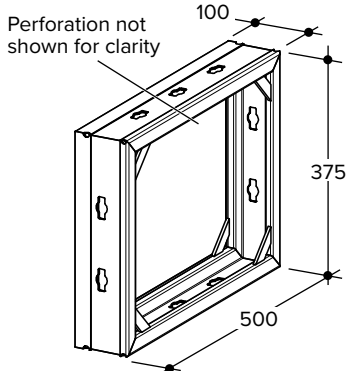
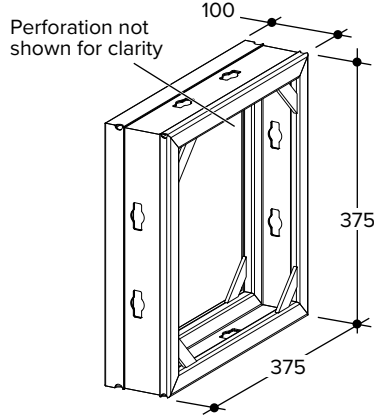
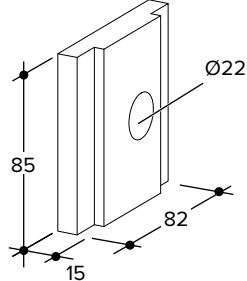
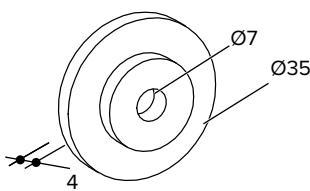
Used in truss rail SAFESCREEN units to support decking.

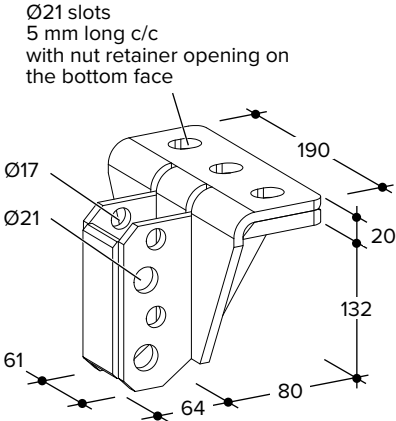
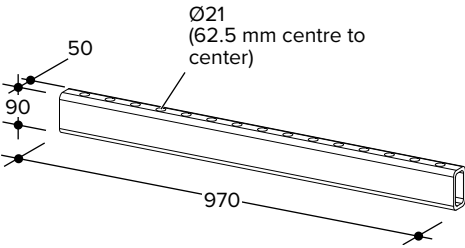
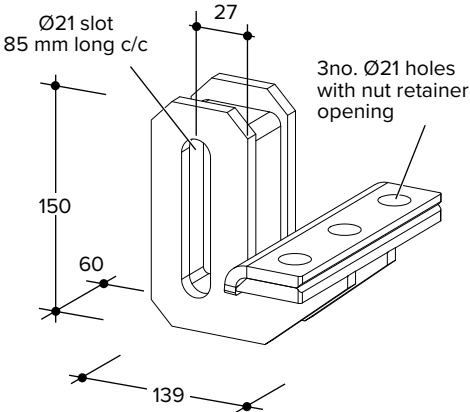
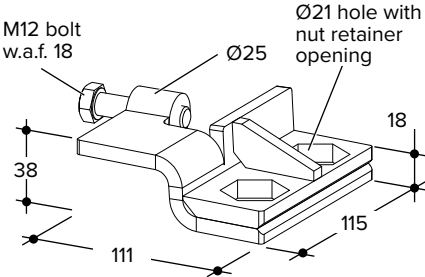
See page 104.

4.3 Cladding

4.3.1 Perforated panels and connectors

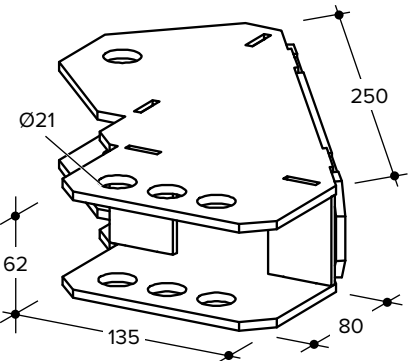
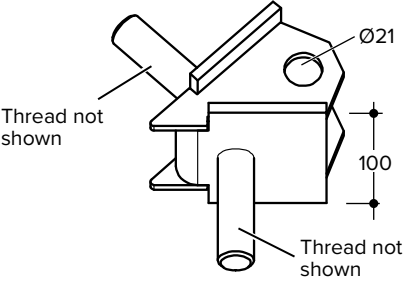
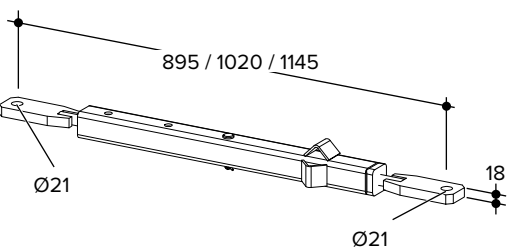
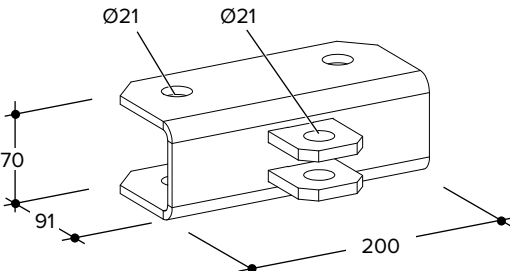
| | Component | Part code | Weight [kg] |
|---|---|---------------|--------------|
|  | SCR Cladding Panel 287.5/125 Used to provide rentable cladding. Infill made of perforated steel sheet with a Ø6 mm hole pattern. | 612430 | 59.35 |
|  | SCR Cladding Panel 250/125 Used to provide rentable cladding. Infill made of perforated steel sheet with a Ø6 mm hole pattern. See page 77. | 611920 | 50.39 |
|  | SCR Cladding Panel 125/50 Used to provide rentable cladding. Infill made of perforated steel sheet with a Ø6 mm hole pattern. See page 77. | 611921 | 17.17 |
|  | SCR Cladding Panel 125/37.5 Used to provide rentable cladding. Infill made of perforated steel sheet with a Ø6 mm hole pattern. See page 77. | 611922 | 15.29 |

| | Component | Part code | Weight [kg] |
|---|--|---------------|-------------|
|  | SCR Cladding Panel 50/50 Used to provide rentable cladding. Infill made of perforated steel sheet with a Ø6 mm hole pattern. See page 77. | 611923 | 8.66 |
|  | SCR Cladding Panel 50/37.5 Used to provide rentable cladding. Infill made of perforated steel sheet with a Ø6 mm hole pattern. See page 77. | 611924 | 7.50 |
|  | SCR Cladding Panel 37.5/37.5 Used to provide rentable cladding. Infill made of perforated steel sheet with a Ø6 mm hole pattern. See page 77. | 611925 | 5.85 |
|  | SCR Panel Joint Reinforcement Plate Used to reinforce the bolted panel connections when necessary. Always use in pairs. | 611903 | 0.69 |
|  | SCR Panel Deck Connection Washer Used to fix cladding panels to a timber or plywood deck. | 611902 | 0.04 |

| | Component | Part code | Weight [kg] |
|---|---|---------------|--------------|
|  | SCR Cladding Panel Bearing The SCR Cladding Panel Bearing is used to support panel cladding. See page 71. S.W.L.*: $V = 18.00 \text{ kN}$ $H \perp = 9.00 \text{ kN}$ * when used in conjunction with the SCR Panel Bearing Spreader Beam. | 612056 | 4.79 |
|  | SCR Panel Bearing Spreader Beam Used with the SCR Cladding Panel Bearing it helps to support the vertical loads of the cladding panels. See page 73. | 612059 | 14.13 |
|  | SCR IK Cladding Panel Web Connector M Standard component used to connect the SCR Cladding Panels to the web of the IK Walers M. See page 75. S.W.L.*: $H \perp = 6.00 \text{ kN}$ $H \parallel = 2.40 \text{ kN}$ * component cannot carry any vertical loads. | 611550 | 3.36 |
|  | SCR IK Cladding Panel Flange Connector M Alternative component used to connect the SCR Cladding Panels to the flange of the IK Walers M. Always use in pairs to form a staggered connection to the node. See page 74. S.W.L.*: $H \perp = 6.00 \text{ kN}$ $H \parallel = 2.40 \text{ kN}$ * component cannot carry any vertical loads. | 611540 | 2.20 |

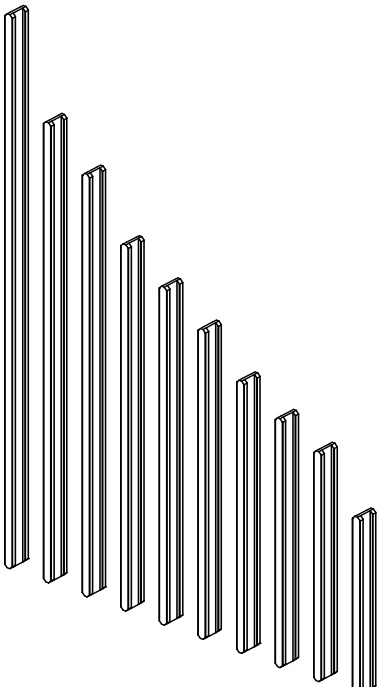
| | Component | Part code | Weight [kg] |
|--|--|---------------|--------------|
| | SCR IK Cladding Panel Web Connector L Standard component used to connect the SCR Cladding Panels to the web of the IK Walers L. See page 76. S.W.L.*: $H \perp = 6.00 \text{ kN}$ $H \parallel = 2.40 \text{ kN}$ * component cannot carry any vertical loads. | 612216 | 2.79 |
| | SCR IK Cladding Panel Flange Connector L Alternative component used to connect the SCR Cladding Panels to the flange of the IK Walers L. Always use in pairs to form a staggered connection to the node. This component can be differentiated from the SCR IK Cladding Panel Flange Connector M by the cut corner. See page 75. S.W.L.*: $H \perp = 6.00 \text{ kN}$ $H \parallel = 2.40 \text{ kN}$ * component cannot carry any vertical loads. | 611545 | 1.27 |
| | SCR Cladding Extension Panel 125/144 Used to provide cladding on extendable units. Infill made of perforated steel sheet with a Ø6 mm hole pattern. These panels are typically used for extensions and have welded M20 nuts on one side of the panel to allow for the fixing of the SCR Extension Panel Stopper. Please note orientation of panel as per supplied design scheme. See page 77. | 611926 | 36.23 |
| | SCR Cladding Extension Panel 50/144 See SCR Cladding Extension Panel 125/144 above. | 611927 | 17.38 |

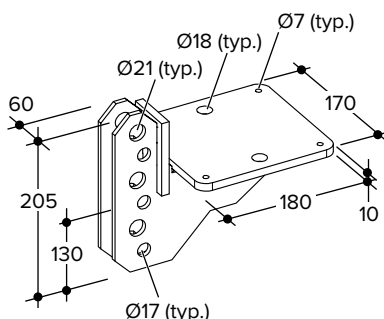
| | Component | Part code | Weight [kg] |
|--|---|---------------|--------------|
| | SCR Cladding Extension Panel 37.5/144 Used to provide cladding on extendable units. Infill made of perforated steel sheet with a Ø6 mm hole pattern. These panels are typically used for extensions and have a welded M20 nut on one side of the panel to allow for the fixing of the SCR Extension Panel Stopper. Please note orientation of panel as per supplied design scheme. See page 77. | 611928 | 16.15 |
| | SCR Extension Panel Bearing Used with extendable units, the SCR Extension Panel Bearing is positioned on the horizontal joint between the SCR Cladding Panels to allow for the extendable panels to slide. See page 77. | 611962 | 18.76 |
| | SCR Cladding Panel T-Spacer Used as a spacer between the SCR Cladding Panels at the returns and in the extendable panels. Use only in the designated positions shown in the supplied design scheme. See page 77. | 611548 | 0.10 |
| | SCR Extension Panel Stopper Used in extendable width SAFESCREEN units as a safety feature to prevent extendable panels from over extending. Not designed to take any loads. See page 78. | 611966 | 1.66 |
| | SCR Return Connector 90° The SCR Return Connector 90° allows 2no. cladding panels to be attached at right angles. The SCR Return Connector 90° is positioned on the outer side of the corner. If required use 2no. SCR Panel Joint Reinforcement Plates. See page 79. | 611575 | 1.46 |

| | Component | Part code | Weight [kg] |
|---|---|---------------|--------------|
|  | SCR Return Connector Adjustable The SCR Return Connector Adjustable allows 2no. cladding panels to be attached at right angles to create a return. The SCR Return Connector Adjustable is positioned on the inner side of the corner and attached to the inner profiles of the cladding panels. The SCR Return Connector Adjustable allows for the return panel to extend beyond the front facing panels (fly-past). An internal corner brace can also be attached to the SCR Return Connector Adjustable. See page 80. | 611620 | 3.64 |
| | | | |
|  | SCR Return Connector 45° The SCR Return Connector 45° allows to attach two cladding panels at a 45° angle to create a return. The SCR Return Connector 45° is positioned on the inner side of the corner and attached to the inner profiles of the cladding panels using the incorporated M20 threads (thread not shown) on both faces. If required use 2no. SCR Panel Joint Reinforcement Plates. See page 81. S.W.L.: $V = 0.60 \text{ kN}$ $H = 9.00 \text{ kN}$ $BM = 0.45 \text{ kN}$ | 611615 | 1.21 |
| | | | |
|  | SCR Return Panel Brace Used to brace the return panels. See page 87. | 612245 | 12.45 |
| | | | |
|  | SCR Return Panel Brace Connector Used in conjunction with SCR Return Panel Brace to brace the return panels. See page 88. | 612240 | 2.27 |
| | | | |

| | Component | Part code | Weight [kg] |
|--|---|---------------|-------------|
| | SCR Panel Rib 125 | 611655 | 3.89 |
| | SCR Panel Rib 50 | 611660 | 1.70 |
| | SCR Panel Rib 37.5 | 611665 | 1.94 |
| | Used with the cladding panels to create more attachment points, for the SCR Panel Platform Bracket for example. The SCR Panel Rib is attached to the profiles of the panels. See page 90. | | |
| | SCR Panel Rib 60 | 611683 | 2.23 |
| | Used with the cladding panels to create more attachment points, for the SCR Panel Platform Bracket for example. The SCR Panel Rib is attached between the outer profiles and the centre profiles of the panels. See page 90. | | |
| | SCR Panel Crane Suspension | 612410 | 1.96 |
| | Used to lift the SCR Cladding Panels. For more information refer to the separate Operating Instructions. | | |
| | SCR Cladding Panel Transport Pin | 612124 | 0.10 |
| | Used to secure the extension panels in the retracted position whilst the SAFESCREEN unit is being transported to site. See page 148. Steel wires not fully shown for clarity. | | |

4.3.2 Timber cladding and connectors

| | Component | Part code | Weight [kg] |
|--|---|---------------|-------------|
|  | H 20 Beam 590 | 581851 | 29.50 |
| | H 20 Beam 490 | 581840 | 22.54 |
| | H 20 Beam 450 | 581830 | 20.70 |
| | H 20 Beam 390 | 581829 | 17.94 |
| | H 20 Beam 360 | 581818 | 16.56 |
| | H 20 Beam 330 | 581807 | 16.50 |
| | H 20 Beam 290 | 581792 | 13.34 |
| | H 20 Beam 265 | 581781 | 12.19 |
| | H 20 Beam 245 | 581770 | 11.27 |
| | H 20 Beam 190 | 581760 | 8.74 |
| | H 20 Beam Per Run Meter | 581862 | 4.60 |
| | Used to form the timber cladding. See page 88. | | |



SCR Timber Beam Bearing

611250

4.96

The SCR Timber Beam Bearing is used with timber cladding to support the timber beams.

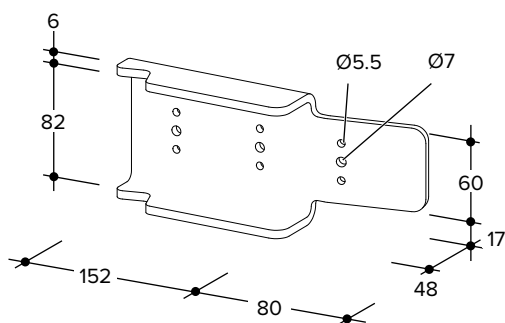
See page 83.

S.W.L.:

V = 18.00 kN

H (pull) = 8.40 kN

H (shear side ways) = 2.10 kN



SCR IK Timber Beam Connector

611401

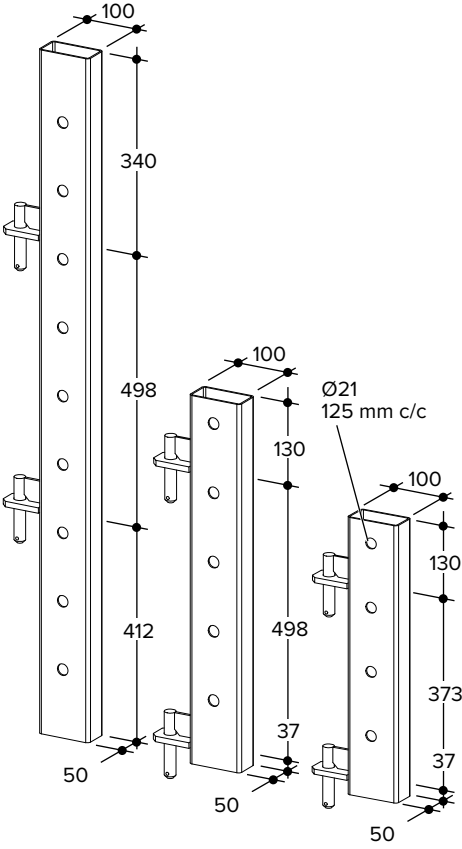
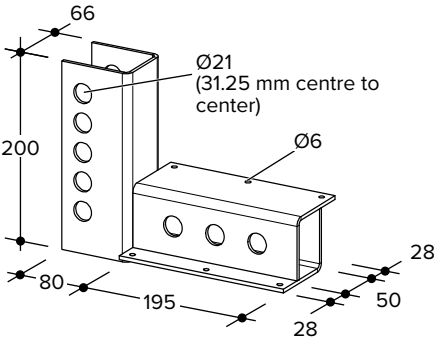
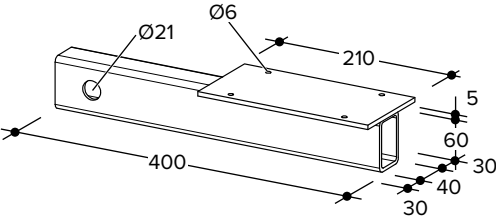
1.26

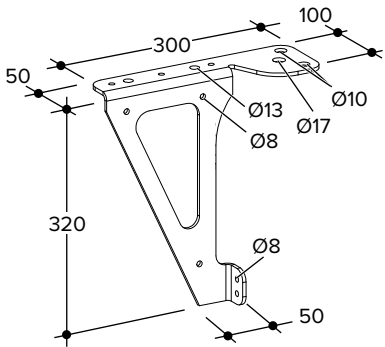
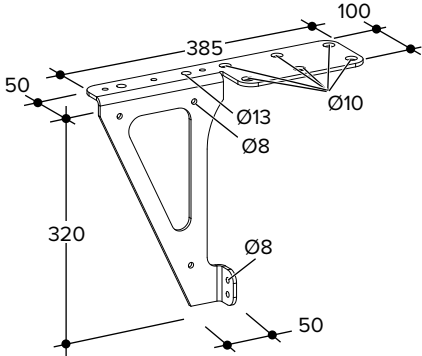
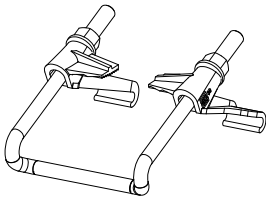
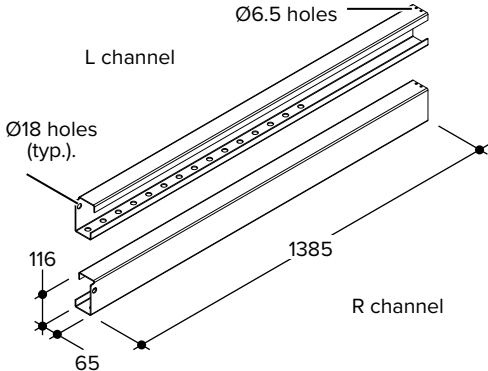
Used with timber cladding, the SCR IK Timber Beam Connector is designed to connect timber beams to the rail.

It can not support vertical forces / forces along the waler. All vertical forces need to be transferred to a SCR Timber Beam Bearing.

See page 84.

4.4 Platforms

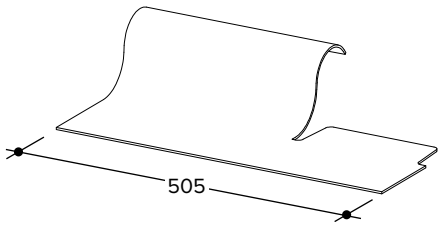
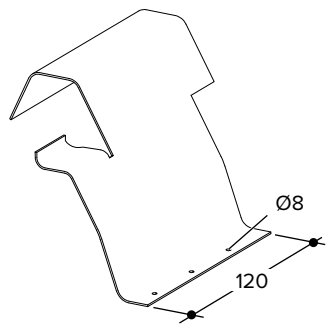
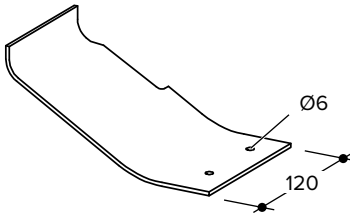
| | Component | Part code | Weight [kg] |
|---|---|---------------|-------------|
|  | SCR Platform Bracket Adaptor 1.25m | 611640 | 9.88 |
| | SCR Platform Bracket Adaptor 0.5m | 611645 | 5.90 |
| | SCR Platform Bracket Adaptor 0.375m | 611650 | 5.00 |
| | <p>The SCR Platform Bracket Adaptors are attached to the profiles of the SCR Cladding Extendable Panels to provide attachment points for a SCR Panel Platform Bracket. The SCR Platform Bracket Adaptors allow for the attachment points of the SCR Cladding Extension Panel to be flush to the attachment points of the SCR Cladding Panels.</p> <p>See page 93.</p> | | |
|  | SCR Panel Platform Bracket | 611580 | 2.99 |
| <p>The SCR Panel Platform Bracket is attached to the profiles of the cladding panels and it supports a timber platform. The SCR Panel Platform Bracket can be attached upside down.</p> <p>See page 86.</p> | | | |
|  | SCR Panel Platform Bracket Extension | 612239 | 3.21 |
| <p>Used with cladding panels and attached to the SCR Panel Platform Bracket. The SCR Panel Platform Bracket Extension allows an extended access platform to be created that reaches the concrete slab once the formwork is removed.</p> <p>See page 87.</p> | | | |

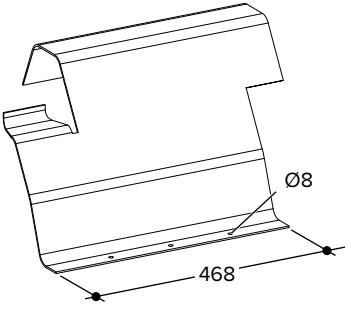
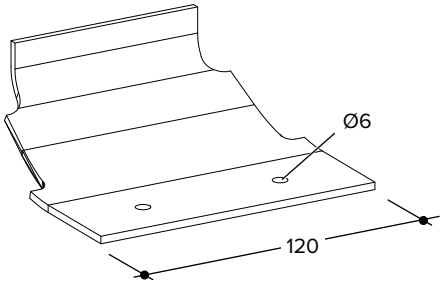
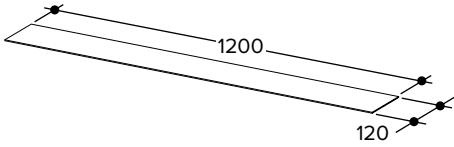
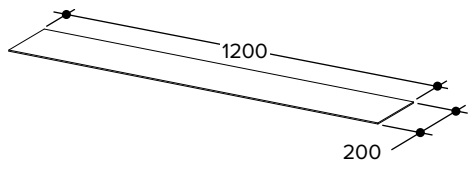
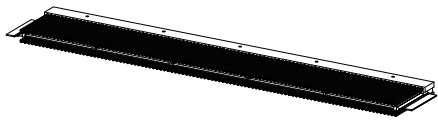
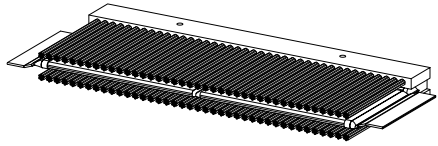
| | Component | Part code | Weight [kg] |
|---|--|--------------------------------|----------------------------|
|  | SCR Platform Bracket Timber Beam Used to create support for a platform when using timber beams as cladding. Two parallel timber beams are required for the SCR Platform Bracket Timber Beam to be attached. See page 89. | 611255 | 1.61 |
| | | | |
|  | SCR Platform Bracket Timber Beam Long The SCR Platform Bracket Timber Beam Long is used for the same purpose as the SCR Platform Bracket Timber Beam. The SCR Platform Bracket Timber Beam Long however does not require a timber packer to be attached to the timber beams. | 611535 | 1.99 |
| | | | |
|  | H 20 Timber Beam Clamp Used to attach the H 20 Beams to the SCR Platform Beam 0.75m Rigid or to the SCR Platform Beam 0.75m. Can also be used to connect timber beams to an IK Waler L. | 568048 | 0.79 |
| | | | |
|  | Extension Channel 138 Left Extension Channel 138 Right Used in folding platforms, to allow for platforms to be folded and adjusted for temporary storage / transportation. Always use in pairs. See page 137. | 595149 595150 | 9.68 9.68 |
| | | | |

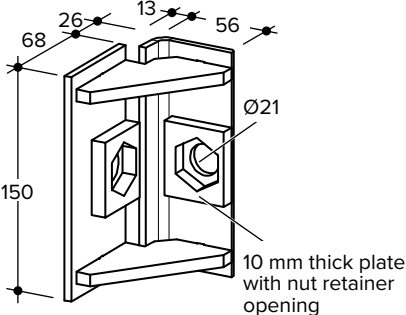
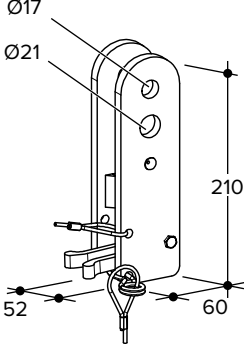
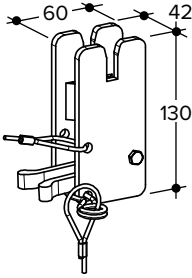
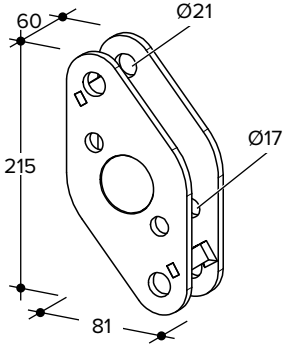
| | Component | Part code | Weight [kg] |
|--|--|---------------|--------------|
| | HD Channel 262 | 595253 | 15.75 |
| | HD Channel 150 | 595254 | 9.00 |
| | HD Channel 137 | 595255 | 8.25 |
| | HD Channel 131 | 595256 | 7.88 |
| | HD Channel 125 | 595257 | 7.50 |
| | HD Channel 119 | 595258 | 7.13 |
| | HD Channel 106 | 595259 | 6.38 |
| | HD Channel per meter | 595260 | 6.00 |
| | <p>Used for the folding platform. One flange, with holes, allows for fixing channel to channel or to fixed platforms. The other flange, without holes, allows for plywood decks to be fixed using self-drilling screws.</p> <p>Non-standard length available as sale only. Items upon request.</p> <p>Some items may not be readily available. See page 137.</p> | | |
| | | | |
| | Guide Box | 595142 | 2.24 |
| | <p>Used with the HD Channels to allow for adjustment of the Extension Channel 138 (code:595149/595150).</p> <p>Supplied with M16 x 40 CSK Screws, Washers and Nuts.</p> <p>See page 137.</p> | | |
| | Pivot Plate | 595143 | 2.20 |
| | <p>Connects to the Extension Channel 138 (code:595149/595150) to allow for the wing platform to rotate for easier temporary storage / transportation.</p> <p>See page 104.</p> | | |
| | SCR Steel Toe Trap 28x28 | 611675 | 3.44 |
| | <p>Used to form a debris-catching platform.</p> <p>The SCR Steel Toe Trap 28x28 is used in conjunction with the SCR Steel Toe Plate 0.28x0.28.</p> <p>See page 95.</p> | | |

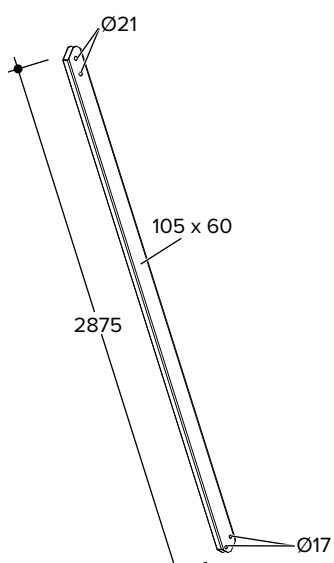
| | Component | Part code | Weight [kg] |
|---|---|---------------|-------------|
|  | SCR Steel Toe Plate 0.28x0.28 | 611626 | 2.30 |
| | Used to form a debris-catching platform. | | |
| | The SCR Steel Toe Plate 0.28x0.28 is used in conjunction with the SCR Steel Toe Trap 28x28. | | |
| | See page 95. | | |

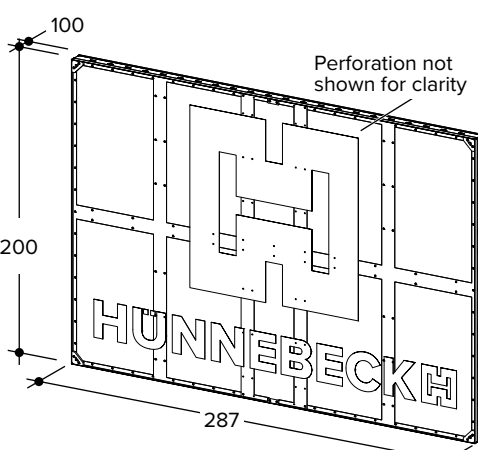
4.5 Rubber covers

| | Component | Part code | Weight [kg] |
|---|---|---------------|-------------|
|  | Rubber Cover Climbing Bracket L0 | 611664 | 0.35 |
| | See page 95. | | |
|  | Rubber Cover Climbing Bracket IK M L-1 | 611663 | 0.08 |
| | See page 95. | | |
|  | Rubber Cover IK M L1 | 611662 | 0.07 |
| | See page 96. | | |

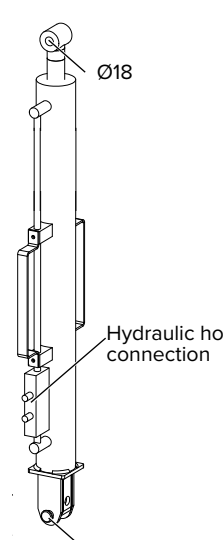
| | Component | Part code | Weight [kg] |
|---|---|---------------|-------------|
|  | Rubber Cover Climbing Bracket IK L | 611848 | 0.09 |
| | See page 96. | | |
|  | Rubber Cover IK L | 611849 | 0.04 |
| | See page 96 | | |
|  | Rubber Strip 15x120 | 611651 | 0.50 |
| | See page 96. | | |
|  | Rubber Strip 20x120 | 611652 | 0.67 |
| | See page 97. | | |
|  | SCR Sealing Brush 15/125 | 612225 | |
| | Used to seal the vertical joints of the SAFESCREEN unit. See page 107. | | |
|  | SCR Sealing Brush 15/50 | 612226 | |
| | Used to seal the vertical joints of the SAFESCREEN unit. See page 107. | | |

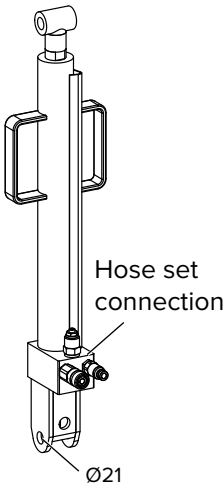
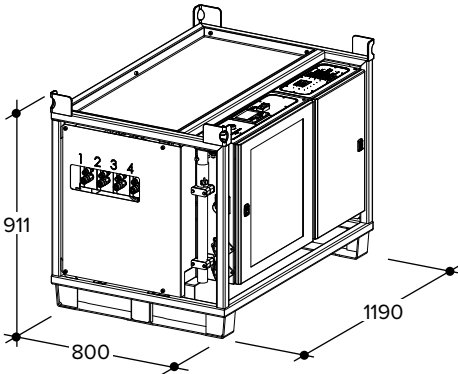
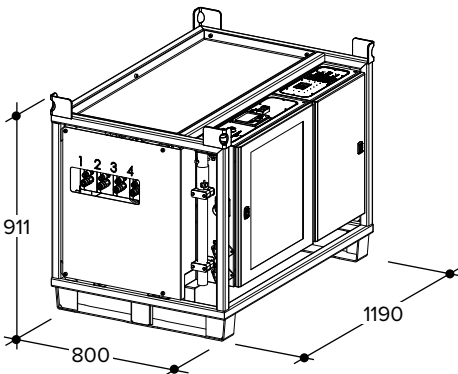
| | Component | Part code | Weight [kg] |
|---|--|---------------|-------------|
|  | SCR Inner Corner Panel Connector | 611755 | 1.33 |
| | Used to connect the cladding panels on the front of a loading platform at right angles. See page 129. | | |
|  | IK Connector DW15 | 612360 | 2.29 |
| | Used to connect a DW15 tie rod to an IK Waler. The IK Connector DW15 prevents the DW15 tie rod from turning and therefore secures it against loosening. | | |
|  | IK Nut Securing Latch DW15 | 612295 | 1.15 |
| | Prevents a standard DW15 Hex. Nut from turning on the DW15 tie rod. | | |
|  | IK Tensioning Bar DW15 | 611670 | 2.71 |
| | Used to attach a DW15 tie rod at a flexible angle to an IK Waler. | | |

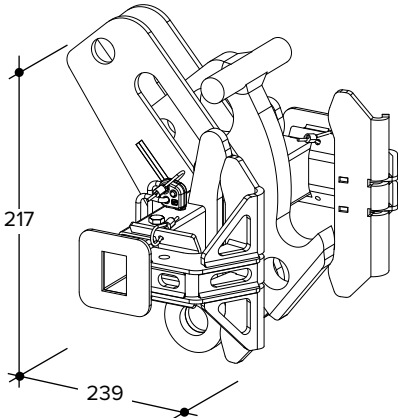
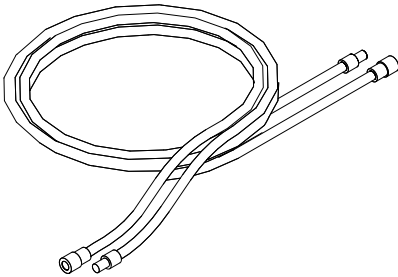
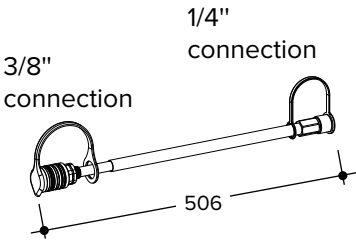
| | Component | Part code | Weight [kg] |
|---|---|---------------|--------------|
|  | SCR Diagonal Brace Used to brace the loading platform assembly to the rails of the SAFESCREEN unit. The SCR Diagonal Brace to be attached to a IK Waler M or to a IK Waler L. The outer Ø21 hole of the diagonal can be aligned to the outer row of Ø21 holes of the IK Waler M, whilst the inner Ø21 holes of the diagonal can be aligned with the central row of holes of the IK Waler L. See page 105. | 611762 | 29.68 |

| | | | |
|---|---|---------------|--|
|  | SCR Cladding Panel 287.5/200 Special panel used with the loading platforms. | 612435 | |
|---|---|---------------|--|

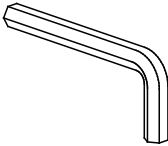
4.7 Power unit and hydraulics

| | Component | Part code | Weight [kg] |
|---|--|---------------|--------------|
|  | Hydraulic Cylinder 50/485 Stroke height: 485 mm. The Hydraulic Cylinder 50/485 is used for hydraulic climbing of SAFESCREEN units. It can be used for a typical stroke of 250mm +/- 63mm. The Hydraulic Cylinder 50/485 is placed in the top round surface of the Bracket Claw Unit and secured against uplift with the integrated 15mm pin (not shown). See page 161. | 611695 | 26.71 |

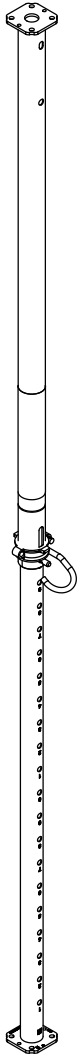
| | Component | Part code | Weight [kg] |
|---|--|---------------|---------------|
|  <p>Hose set connection</p> <p>Ø21</p> | Hydraulic Cylinder H 50/485 A more recent version of the Hydraulic Cylinder 50/485 with the same characteristics. | 612595 | 12.75 |
| | | | |
|  <p>911</p> <p>800</p> <p>1190</p> | Powerpack 4 Jack 110V Used with the Hydraulic Cylinders and Hose sets, to move the SAFESCREEN unit without the need of a crane. This powerpack has 4 no. connections for hydraulic hoses and is to be used with a 110V / single phase / 50 Hz supply. The Euro Trolley can be used to make the Powerpacks mobile. | 612565 | 402.00 |
| | | | |
|  <p>911</p> <p>800</p> <p>1190</p> | Powerpack 4 Jack 230V Used with the Hydraulic Cylinders and Hose sets, to move the SAFESCREEN unit without the need of a crane. This powerpack has 4 no. connections for hydraulic hoses and is to be used with a 230V / single phase / 50 Hz supply. The Euro Trolley can be used to make the Powerpacks mobile. See page 161. | 611760 | 402.00 |
| | | | |

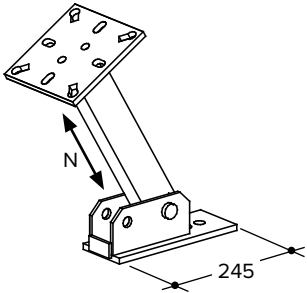
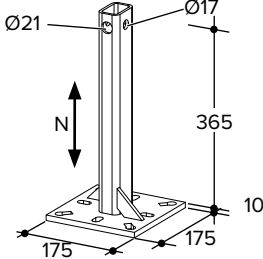
| | Component | Part code | Weight [kg] |
|---|---|--|--|
|  | SCR Climbing Head Attached to the top of the hydraulic cylinders using the Ø18 pin, the SCR Climbing Head is used for climbing operations. | 612620 | |
| | | | |
|  | Hydraulic Hose 8 m (red) Hydraulic Hose 12 m (blue) Hydraulic Hose 18 m (yellow) Hydraulic Hose 24 m (white) Used with the Powerpack and the Hydraulic Cylinders. See page 161. | 612131 612134 612137 612140 | 1.97 2.73 3.87 4.99 |
| | | | |
| | | | |
| | | | |
| | | | |
|  | Adapter Hose A (green) Adapter Hose B (orange) Used to operate the SCF 60 with the power packs of the SCF 150 system. The Adapter Hose A has a flat face coupler socket size 10 on one side and a 1/4" standard coupler socket on the other. The Adapter Hose B has a flat face coupler plug size 10 on one side and a 1/4" standard coupler socket on the other. | 612675 612680 | 0.79 0.62 |
| | | | |
| | Link Cable Powerpack 25 m | 612685 | |
| | Link Cable M/F Connectors 25 m | 612690 | |
| | Hydraulic Oil ISO VG 32 20l Can Hydraulic Oil ISO VG 46 20l Can | 611862 611863 | 16.90 18.00 |

4.8 Tools

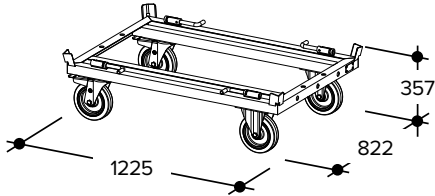
| | Component | Part code | Weight [kg] |
|---|--------------|-----------|-------------|
|  | Allen Key 17 | 612677 | 0.43 |
| | Allen Key 19 | 611258 | 0.60 |
| | Allen Key 24 | 611259 | 1.23 |
| | Allen Key 27 | 611261 | 1.74 |
| | Allen Key 30 | 611262 | 2.40 |
| | Allen Key 36 | 611263 | 4.30 |

4.9 Props

| | Component | Part code | Weight [kg] |
|--|--|-----------|-------------|
|  | EUROPLUSnew 20-250* (1470 mm - 2500 mm) | 601390 | 13.15 |
| | EUROPLUSnew 20-300* (1720 mm - 3000 mm) | 601400 | 16.82 |
| | EUROPLUSnew 20-350* (1980 mm - 3500 mm) | 601410 | 20.52 |
| | EUROPLUSnew 20-400* (2240 mm - 4000 mm) | 601415 | 23.79 |
| | EUROPLUSnew 20-550* (3030 mm - 5500 mm) | 601425 | 36.07 |
| | EUROPLUSnew 30-150** (1040 mm - 1500 mm) | 601430 | 10.68 |
| | EUROPLUSnew 30-250** (1470 mm - 2500 mm) | 601440 | 16.19 |
| | EUROPLUSnew 30-300** (1720 mm - 3000 mm) | 601445 | 19.17 |
| | EUROPLUSnew 30-350** (1980 mm - 3500 mm) | 601450 | 24.24 |
| | EUROPLUSnew 30-400** (2240 mm - 4000 mm) | | 28.75 |
| | All steel props are hot-dip galvanized and have a quick-lowering mechanism and an anti-crush guard as well. Additionally the props have a protection to prevent the sliding-out of the inner tube. | | |
| | *Safe Working Load (as single prop): 20.00 kN (class D) | | |
| | **Safe Working Load (as single prop): 30.00 kN (class D) | | |

| | Component | Part code | Weight [kg] |
|---|---|---------------|-------------|
|  | Strut Base Used to convert EUROPLUS® Props into alignment struts. The base plate of the EUROPLUS® connects to the Strut Base with 4no. M12 x 30 Bolts and Nuts. Safe Working Load (N): 15.00 kN. | 566369 | 7.70 |
|  | Strut Adapter Used to convert EUROPLUS® Props into alignment struts. The upper plate of the EUROPLUS® connects to the Strut Adapter with 4no. M12 x 30 Bolts and Nuts. Previous versions (pre 2024) do not have the Ø21 thro' hole and drilling may be required. Safe Working Load (N): 15.00 kN. | 565331 | 4.88 |

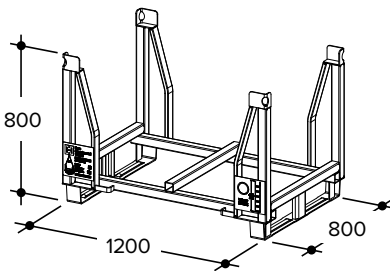
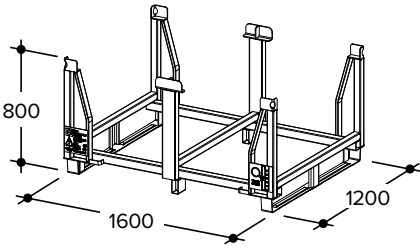
4.10 Storage

| | Component | Part code | Weight [kg] |
|---|--|---------------|--------------|
|  | Euro Trolley Used to manually manoeuvre approved HÜNNEBECK transport equipment. The Euro Trolley has 2no. lockable swivel castors. Safe Working Load: 1,300 kg | 607610 | 39.57 |



For more information regarding the Euro Trolley, refer to the separate Operating Instructions!

| | | | |
|---|--|---------------|--------------|
|  | Euro Lattice Box Lattice box used to store and transport small items by crane. Can be moved using the Euro Trolley. Safe Working Load: 1,200 kg. | 548480 | 68.79 |
|---|--|---------------|--------------|

| | Component | Part code | Weight [kg] |
|--|--|---------------|--------------|
|  | Euro Stacking Frame 120/80 | 553689 | 54.47 |
| | Stacking frame used to store and transport materials by crane. Can be moved using the Euro Trolley. Safe Working Load: 1,200 kg. | | |
|  | Euro Stacking Frame 160/120 | 566494 | 80.00 |
| | Stacking frame used to store and transport materials by crane. Safe Working Load: 1,200 kg. | | |

5 Applications

The following illustrations show typical applications of the components of the SAFESCREEN G2 system. Other applications may be possible, consult your Hünnebeck design office. **Please note that unless otherwise stated, all bolts are grade 10.9 and the nuts grade 10.**

5.1 Anchors and climbing brackets

The Customer must note the following:

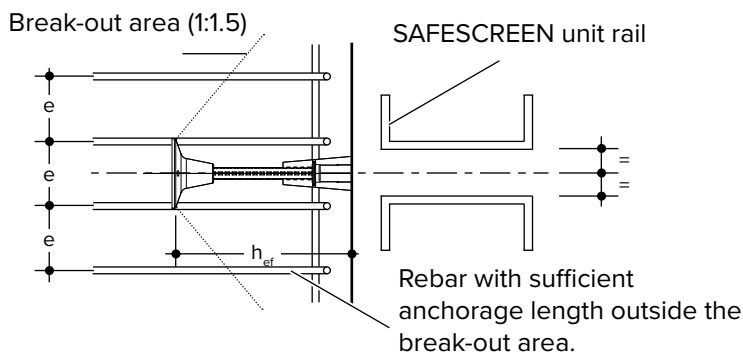
Due to the quick turn-around cycles of the SAFESCREEN system, the concrete used to anchor the SAFESCREEN unit may not yet be set (cured) before the SAFESCREEN unit is lifted to another anchor point, thus not leaving the 28 days required for the concrete to reach most of its designed strength. Therefore the designed concrete and rebar are most likely not capable of withstanding the extra imposed loads caused by the SAFESCREEN units.

The Customer is responsible for ensuring that the existing structure is capable of withstanding the extra imposed loads, including but not limited to re-designing the rebar where the anchor points will be located.

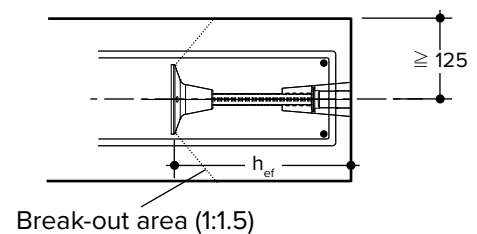
Some typical rebar layouts used at the anchor points of the SAFESCREEN units are shown below. The rebar schemes are to illustrate typical layouts only. For more information regarding the specific site requirements, refer to the supplied design scheme. Contact the Hünnebeck design office for more information.

5.1.1 SCR Slab Edge Bracket application

Cone and rebar layout - plan view

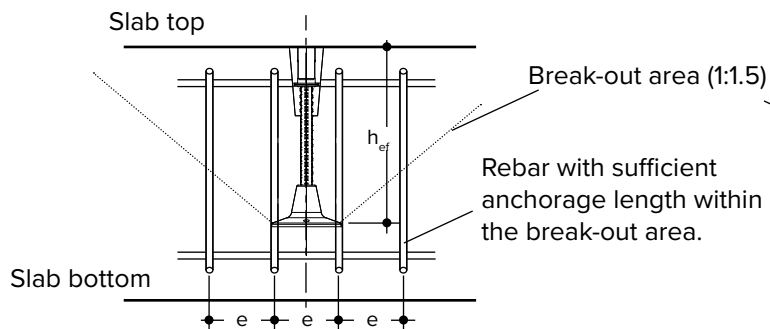


Cone and rebar layout - section

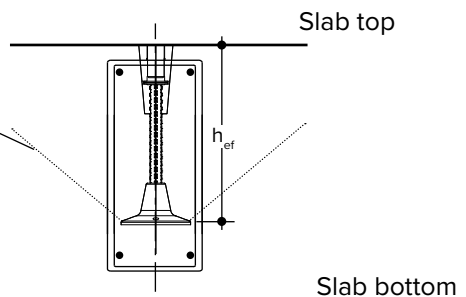


5.1.2 SCR Slab Top Bracket application

Cone and rebar layout - section



Cone and rebar layout - section





WARNING

Risk of serious injury or death!

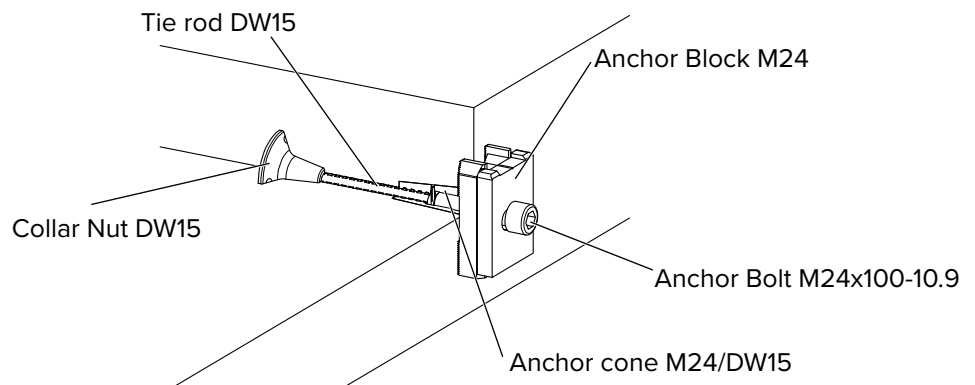
Avoid any openings, embedded items, or concrete surface off-sets in the break-out area that may reduce the capacities of the concrete. This includes e.g. boxes for reverse bending reinforcement. If such features or items can not be avoided in the break-out area of the cones they will very likely reduce the load bearing capacity of the anchor point.

For support please consult your local HÜNNEBECK office. IF IN DOUBT, ASK!

5.1.3 Anchor cone M24

Note that in this section, the anchor shown is made of for DW15 components, however depending on the job requirements DW20 components may be used.

The pre-cast Anchor cone M24/DW15 (code:496664) in conjunction with an Anchor Block M24 (code:611220), the Anchor Bolt M24x100-10.9 (code:611218), the tie rod and the Collar Nut DW15 (code:602091) will provide horizontal restraint for the SAFESCREEN unit.



During shuttering the Customer is to ensure that:

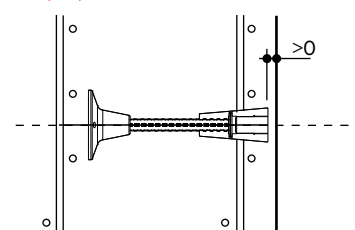
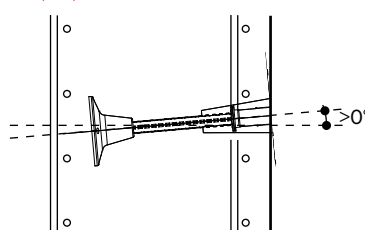
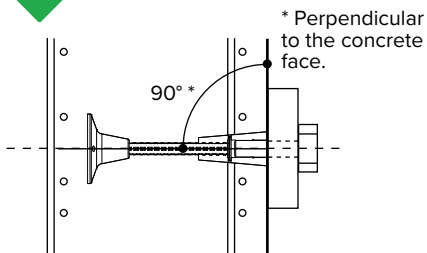
The Anchor cone M24/DW15 (code:496664) is flush with the form sheet.

The Anchor cone M24/DW15 (code:496664) with the anchoring is mounted perpendicular to the form sheet.

The Anchor cone M24/DW15 (code:496664) anchoring is fixed to the concrete reinforcement.

The anchor is 125 mm from the top of the slab and that it is aligned with the climbing rail.

Concrete slab - plan views



The anchor must be installed in such a way that it cannot tilt during pouring.



WARNING

Risk of serious injury or death!

Do not weld or heat tie rods. This can cause the tie rod to fail and lead to the SAFESCREEN unit to lose horizontal restraint provided by the anchors.



WARNING

Risk of serious injury or death!

Anchors not mounted properly will cause the bolt to overload and break due to shear forces and bending.

This can lead to the SAFESCREEN unit losing horizontal restraint provided by the anchors.



WARNING

Risk of serious injury or death!

The design of the anchors will only state the local transmission of loads (forces) into the concrete.

The transfer of loads (reaction forces) within the concrete structure must be checked separately for each application.

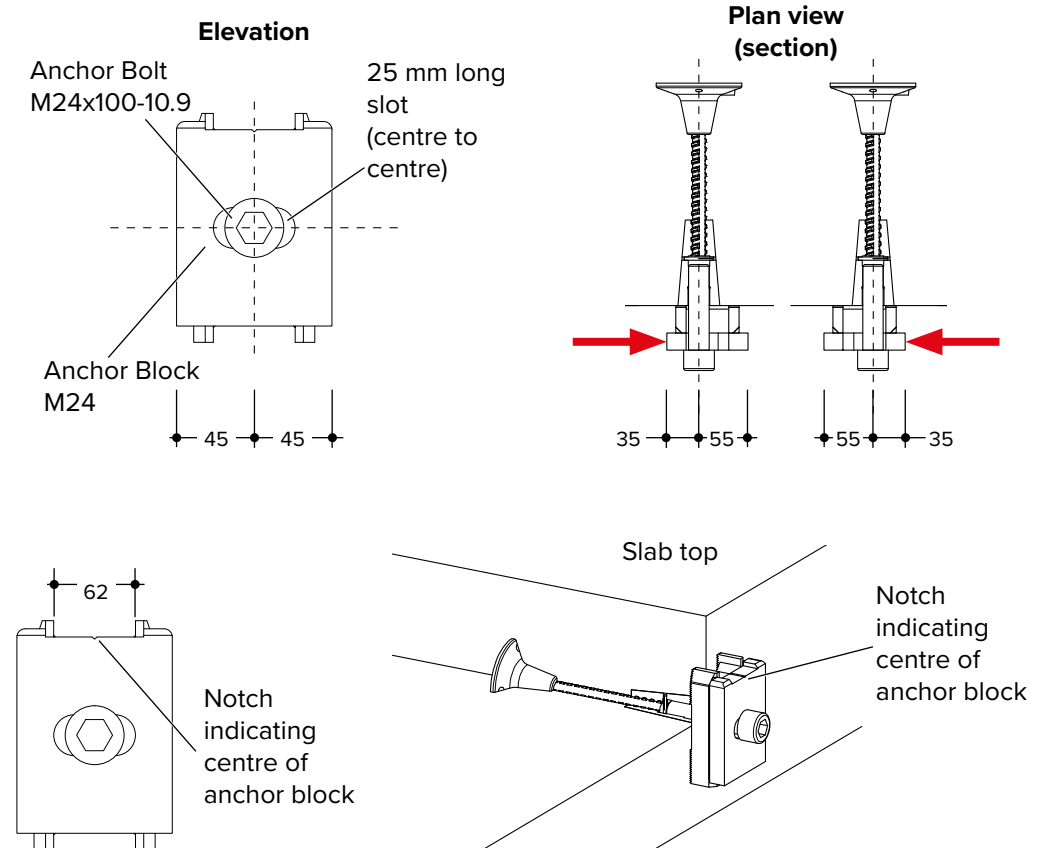
Customer to ensure that the concrete can take the extra imposed loads.

The required concrete grade for cone anchoring is dependent on the magnitude of loads. Please refer to DIBt approval Z-21.6-1854 or contact Hünnebeck for technical advice.

5.1.4 Anchor Block M24

The Anchor Block M24 (code:611220) can be adjusted ± 10 mm horizontally to compensate for any horizontal misplacement of the cone. The vertical tolerance for the placement of the anchor cone is ± 20 mm.

Adjustment range of the Anchor Block M24



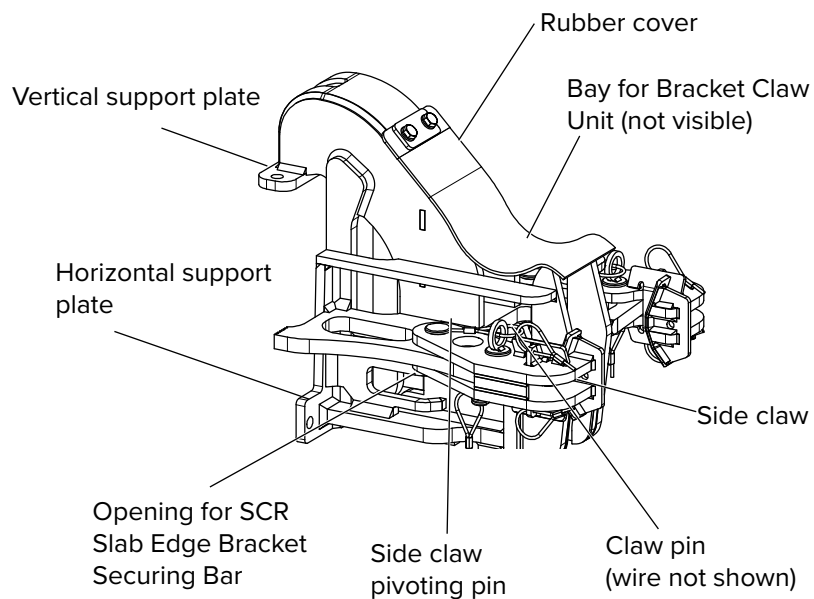
The 62 mm spacing between the protruding parts at the top of the Anchor Block M24 can be used to align the component with the rails.



The required distance from the anchor centre to the top of the slab is 125 mm. If a steel spacer plate is used, then the required distance can be reduced by the same distance as the thickness of the spacer filler plate. In this case, the minimum vertical distance between the top of the concrete slab and the anchor centre line is 100 mm.

5.1.5 SCR Slab Edge Bracket

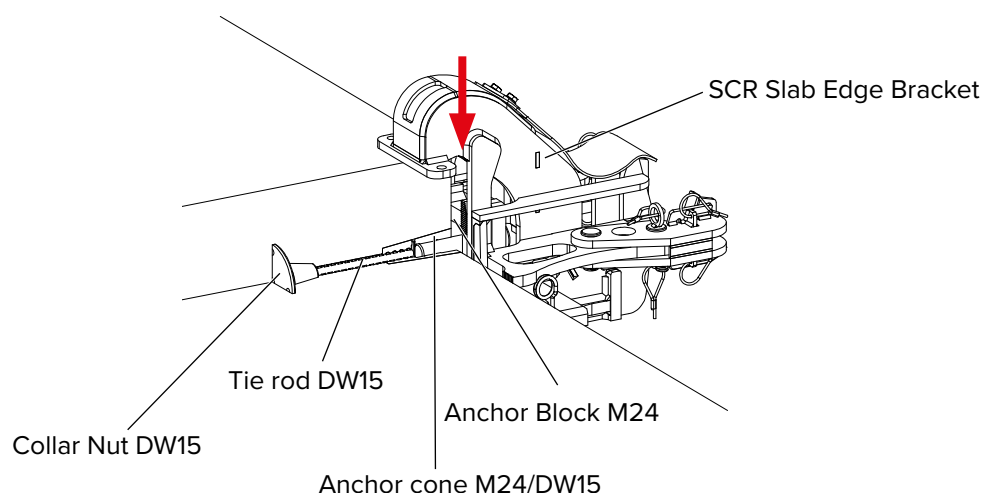
Used on slab edges, the SCR Slab Edge Bracket (code:611170) is attached to the Anchor Block M24 (code:611220), see page 43.



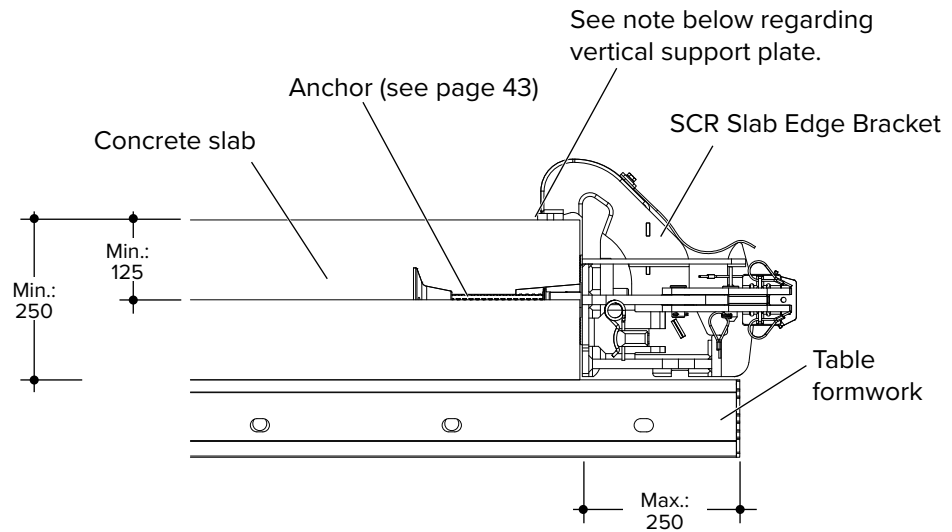
To attach the SCR Slab Edge Bracket (code:611170), position the horizontal support plate of the bracket against the slab edge just above the Anchor Block M24 (code:611220). Slide the bracket downwards until the bracket engages the block.



The Anchor Block M24 (code:611220) must be fully inserted into the SCR Slab Edge Bracket (code:611170) and the vertical support plate of the bracket must rest on top of the concrete slab. The SCR Slab Edge Bracket must be secured with the SCR Slab Edge Bracket Securing Bar (code:611230), see page 49.



The SCR Slab Edge Bracket (code:611170) can be used on slabs with the slab formwork still in place. The minimum required concrete slab thickness is 250 mm.



WARNING

Risk of serious injury or death!

All vertical loads must be taken by the vertical support plate of the SCR Slab Edge Bracket (code:611170).

Ensure that there is separation between the Anchor Block M24 (code:611220) and the inside curve of the SCR Slab Edge Bracket (code:611170).

The Anchor Block M24 (code:611220) must not be subjected to shear forces.

This can cause the Anchor Block M24 (code:611220) to break due to shear forces, leading to the SAFESCREEN unit to lose horizontal restraint provided by the anchors.

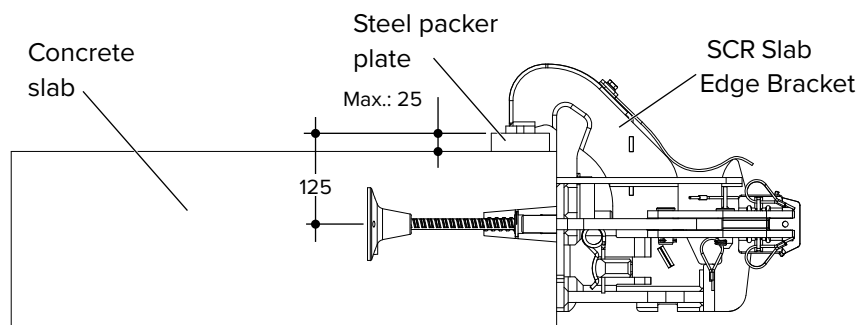
The SCR Slab Edge Bracket (code:611170) must be secured by the SCR Slab Edge Bracket Securing Bar (code:611230) before taking any loads.

For more information regarding anchors and the tolerances for the positioning of the anchors, see pages 43 and 44.

If the concrete slab thickness is between 225 and 250 mm, a steel packer plate can be used between the vertical support plate of the bracket and the concrete slab. The steel spacer plate must not be more than 25 mm thick and the distance of the centre line of the anchor to the slab top must not be less than 100 mm.



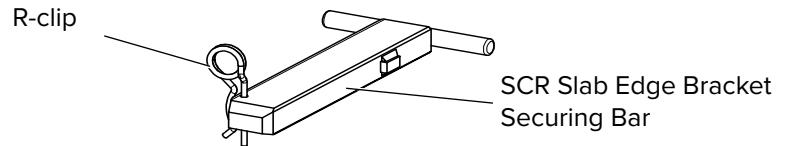
The distance between the top of the steel packer plate and the centre line of the anchor cone must be 125 mm.



When used as the supporting climbing bracket for the SAFESCREEN unit, a Bracket Claw Unit (code:611115) is inserted into the SCR Slab Edge Bracket (code:611170), see page 54.

5.1.6 SCR Slab Edge Bracket Securing Bar

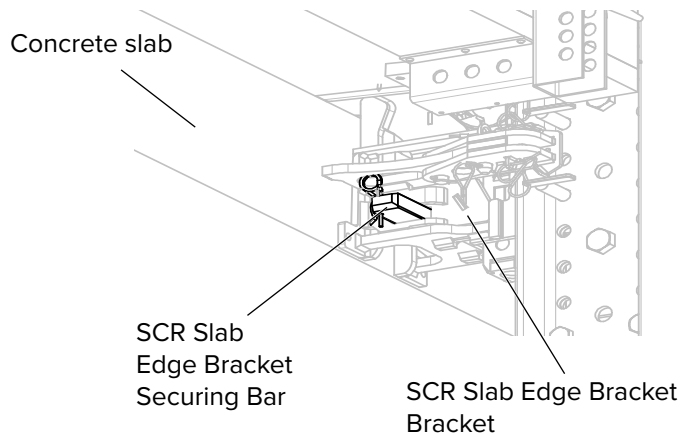
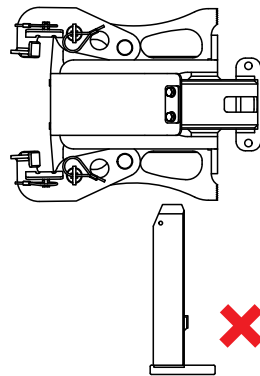
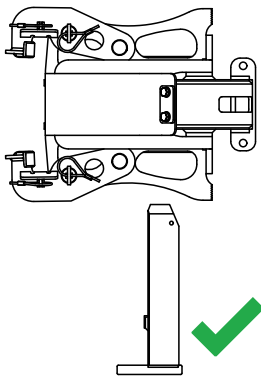
The SCR Slab Edge Bracket Securing Bar (code:611230) prevents the SCR Slab Edge Bracket (code:611170) from sliding vertically and disengaging from the Anchor Block M24 (code:611220).



WARNING

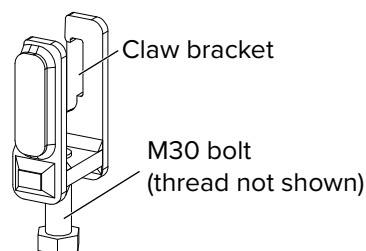
Risk of serious injury or death!

If the SCR Slab Edge Bracket Securing Bar (code:611230) can not be inserted the position of the cone has to be checked. Never use the SCR Slab Edge Bracket (code:611170) without a SCR Slab Edge Bracket Securing Bar (code:611230).

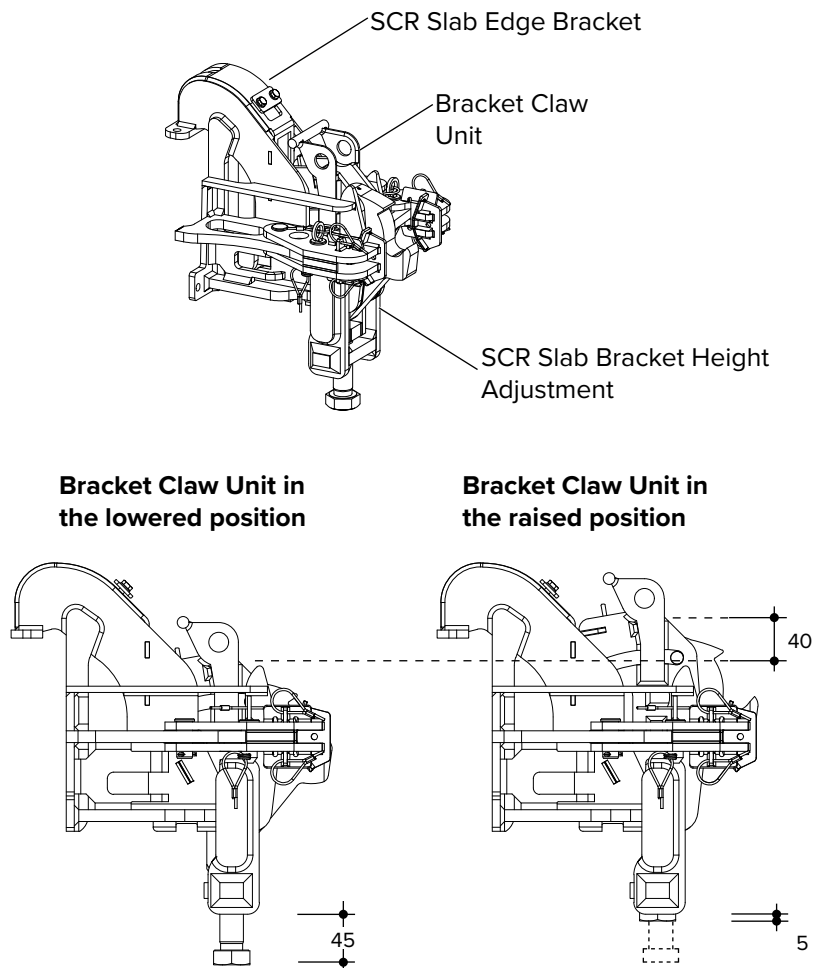


5.1.7 SCR Slab Bracket Height Adjustment

The SCR Slab Bracket Height Adjustment (code:611205) is used with the SCR Slab Edge Bracket (code:611170) to vertically adjust the position of the Bracket Claw Unit (code:611115) up to 40 mm.



The SCR Slab Bracket Height Adjustment (code:611205) is attached at the bottom of the SCR Slab Edge Bracket (code:611170) and can be adjusted using a SW46 spanner.



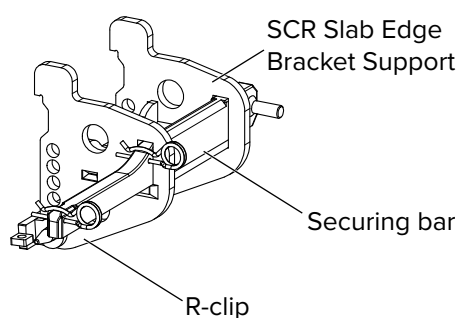
The supporting Bracket Claw Units (code:61115) should be levelled before start of climbing operations. It is possible to adjust the height of the support of the SAFESCREEN unit whilst it is being supported by the Bracket Claw Unit (code:61115) but it is recommended that the supporting Bracket Claw Units (code:61115) should be levelled before start of climbing operations as long as the claw module is not yet loaded.

For more information regarding the Bracket Claw Unit (code:61115) see page 54.

5.1.8 SCR Slab Edge Bracket Support

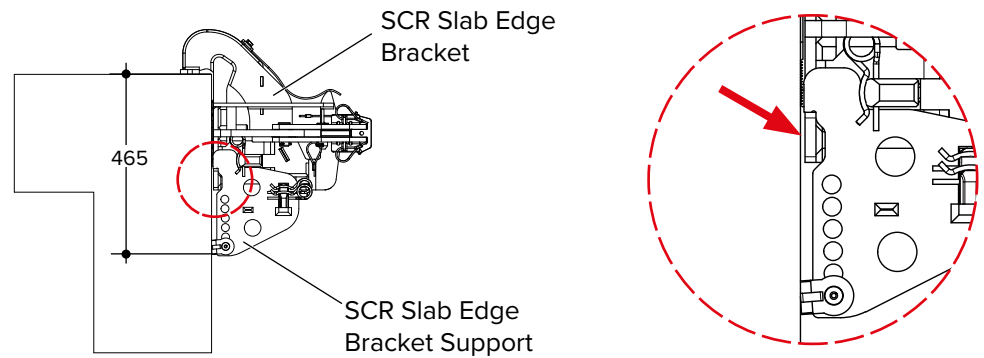
The SCR Slab Edge Bracket Support (code:611725) is used to increase the vertical load capacity of the SCR Slab Edge Bracket (code:611170).

Minimum slab thickness >280 mm.

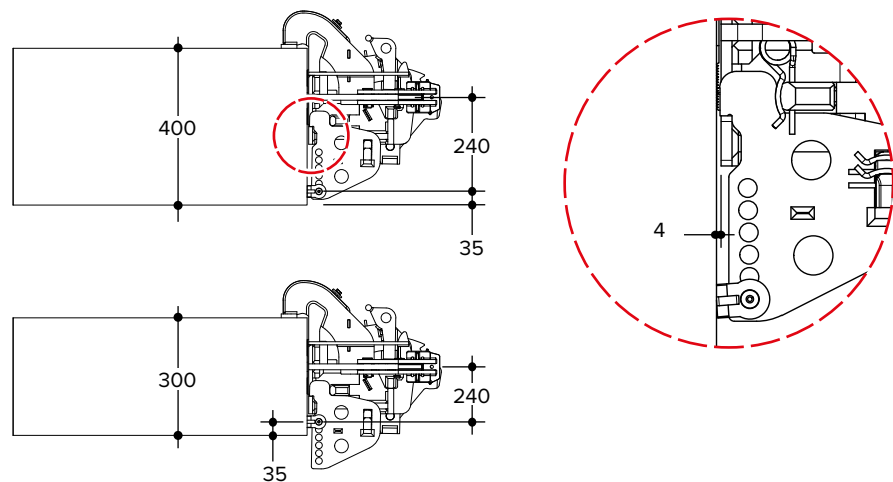


Please note that when using the SCR Slab Edge Bracket Support (code:611725), the SCR Slab Edge Bracket (code:611170) must not be in contact with the concrete slab as

shown in the detail below.



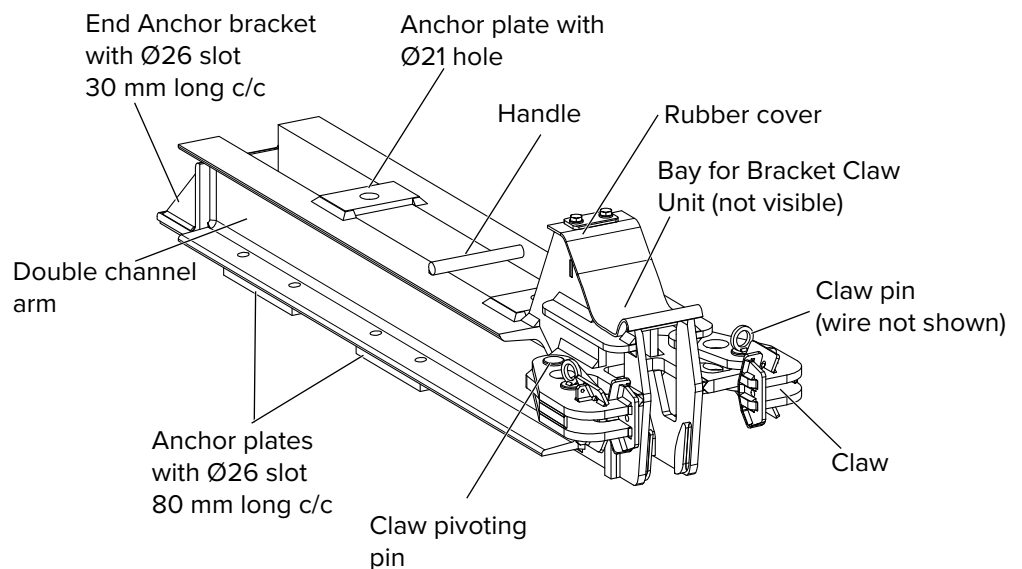
The back support plate of the SCR Slab Edge Bracket Support (code:611725) can be positioned in one of the available 6no. hole positions to accommodate several slab thicknesses.



For more information regarding the Bracket Claw Unit (code:611115) see page 54.

5.1.9 SCR Slab Top Bracket

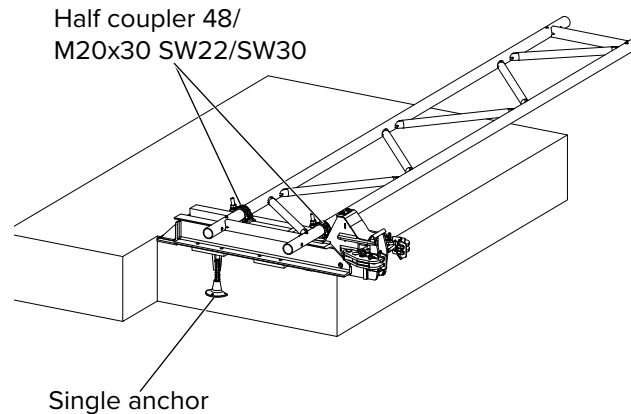
Used on slab tops, the SCR Slab Top Bracket (code:611510) is anchored to the concrete slab.



Note that in the SCR Slab Top Bracket (code:611510) has a second anchor plate on the top with a Ø21 mm hole which is not visible in the image above, just behind the bracket at the front.

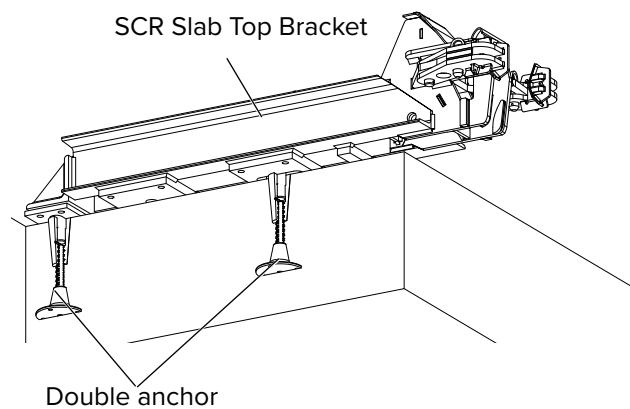
The SCR Slab Top Bracket (code:611510) can be fixed to the concrete slab using one of three options shown below.

Option 1: Single anchor

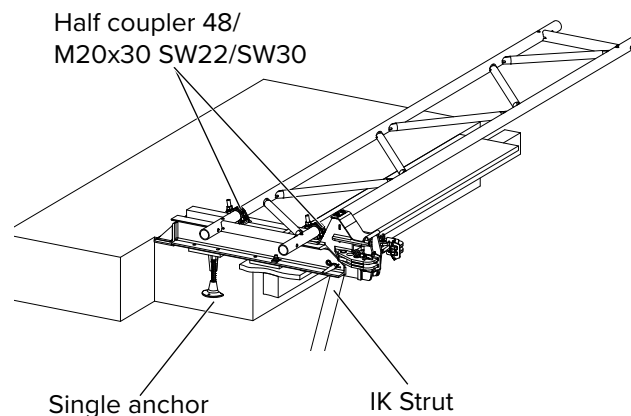


Note that in both option 1 and 3 the steel lattice girder has to be connected to the adjacent SCR Slab Top Bracket (code:611510), not shown.

Option 2: Double anchor



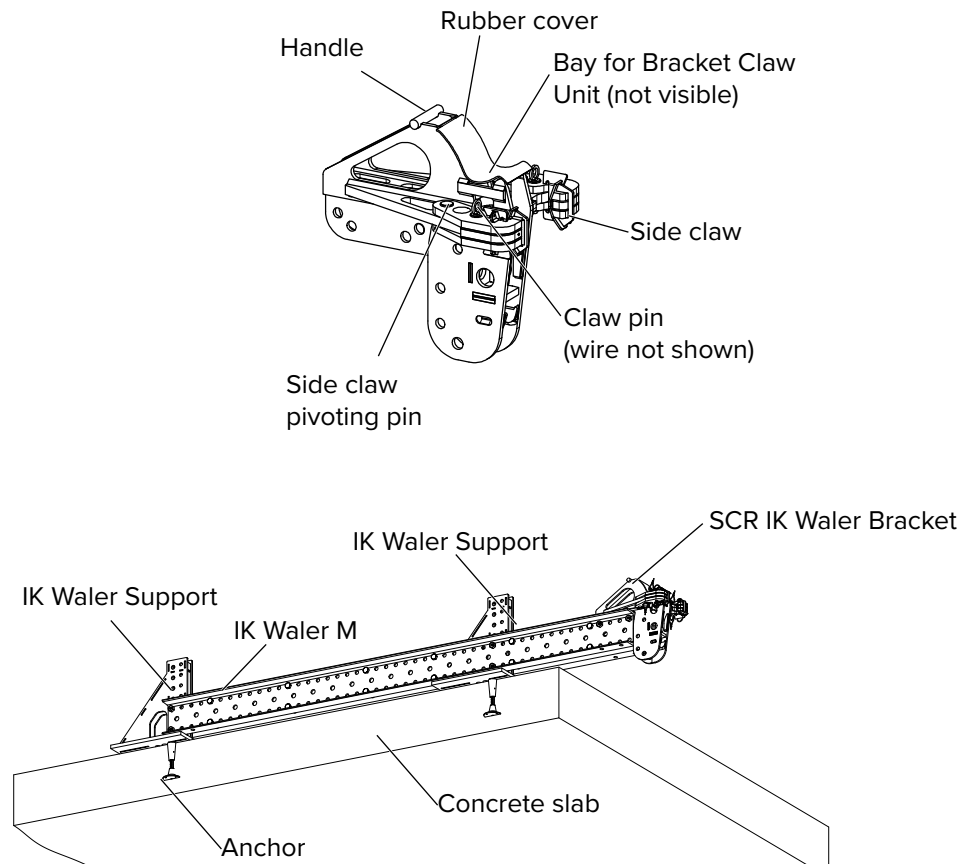
Option 3: Cantilevered bracket with IK Strut



To support the SAFESCREEN unit, a Bracket Claw Unit (code:611115) is inserted into the SCR Slab Top Bracket (code:611510), see page 54.

5.1.10 SCR IK Waler Bracket

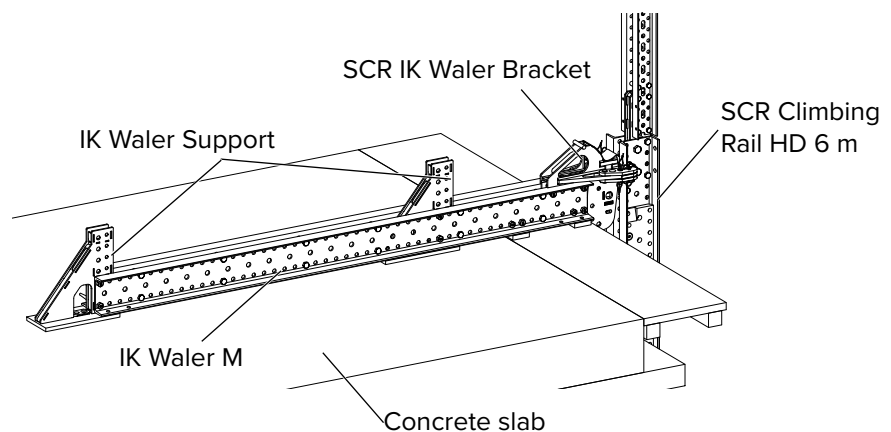
Used on slab tops, the SCR IK Waler Bracket (code:611710) is used in a similar way as the SCR Slab Top Bracket (code:611510) but will provide more flexibility for anchoring. The bracket is be fixed in an IK Waler L or IK Waler M, which must be ordered separately.



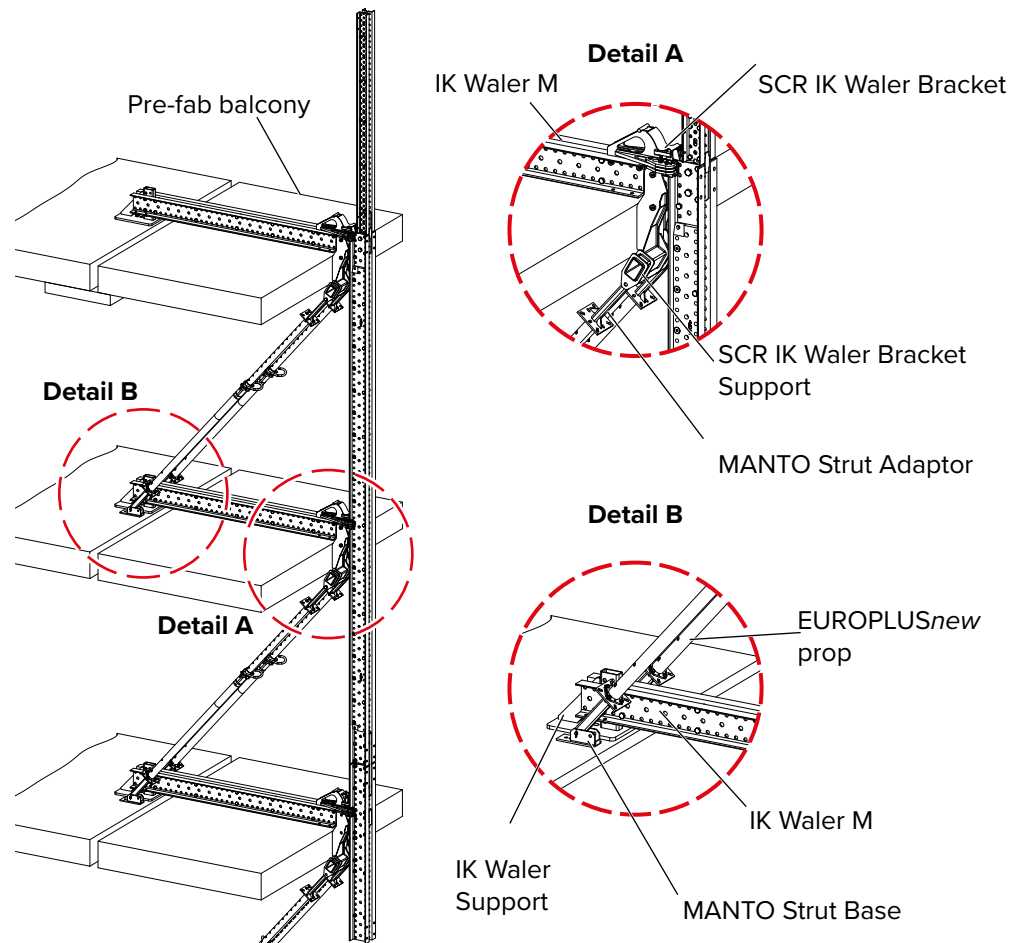
For more information regarding IK Walers, please refer to the INFRA-KIT user guide.

Some of the typical applications can be seen below. Note that these are only examples. For a detailed design, refer to the HÜNNEBECK design office.

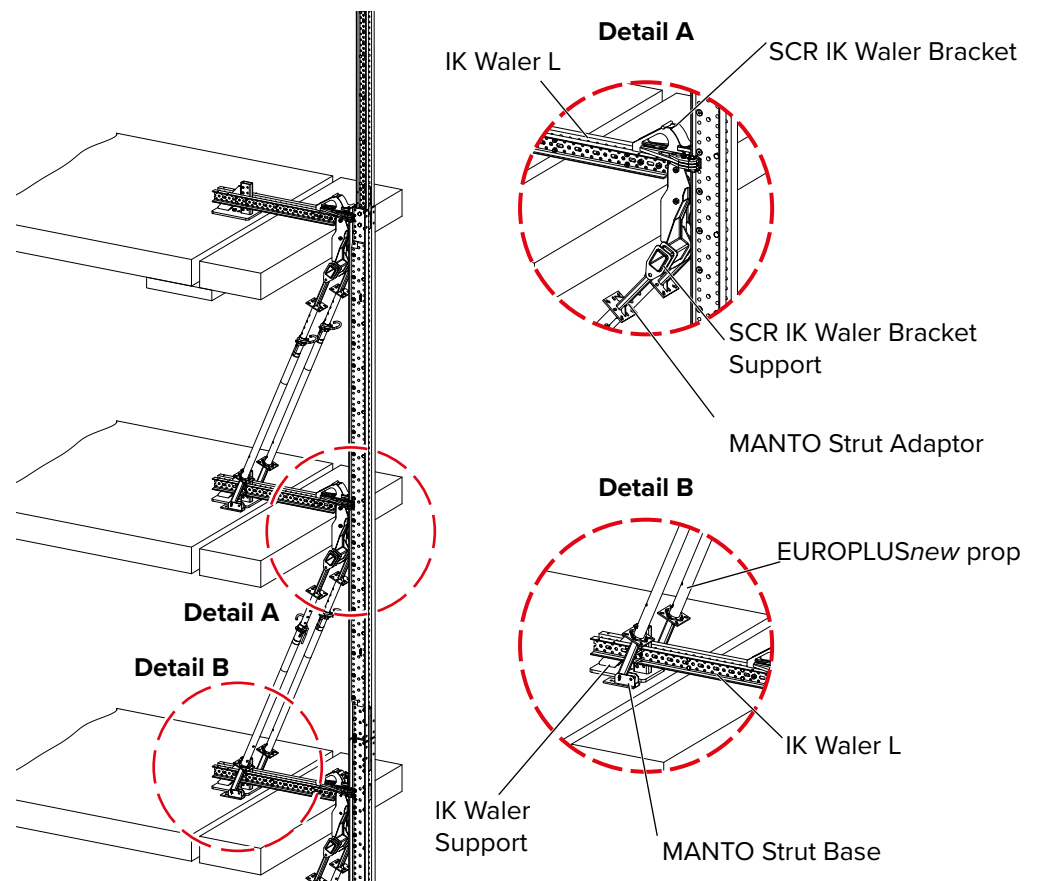
Cantilevering single IK Waler M



Propped IK Waler M (pre-fab balcony)



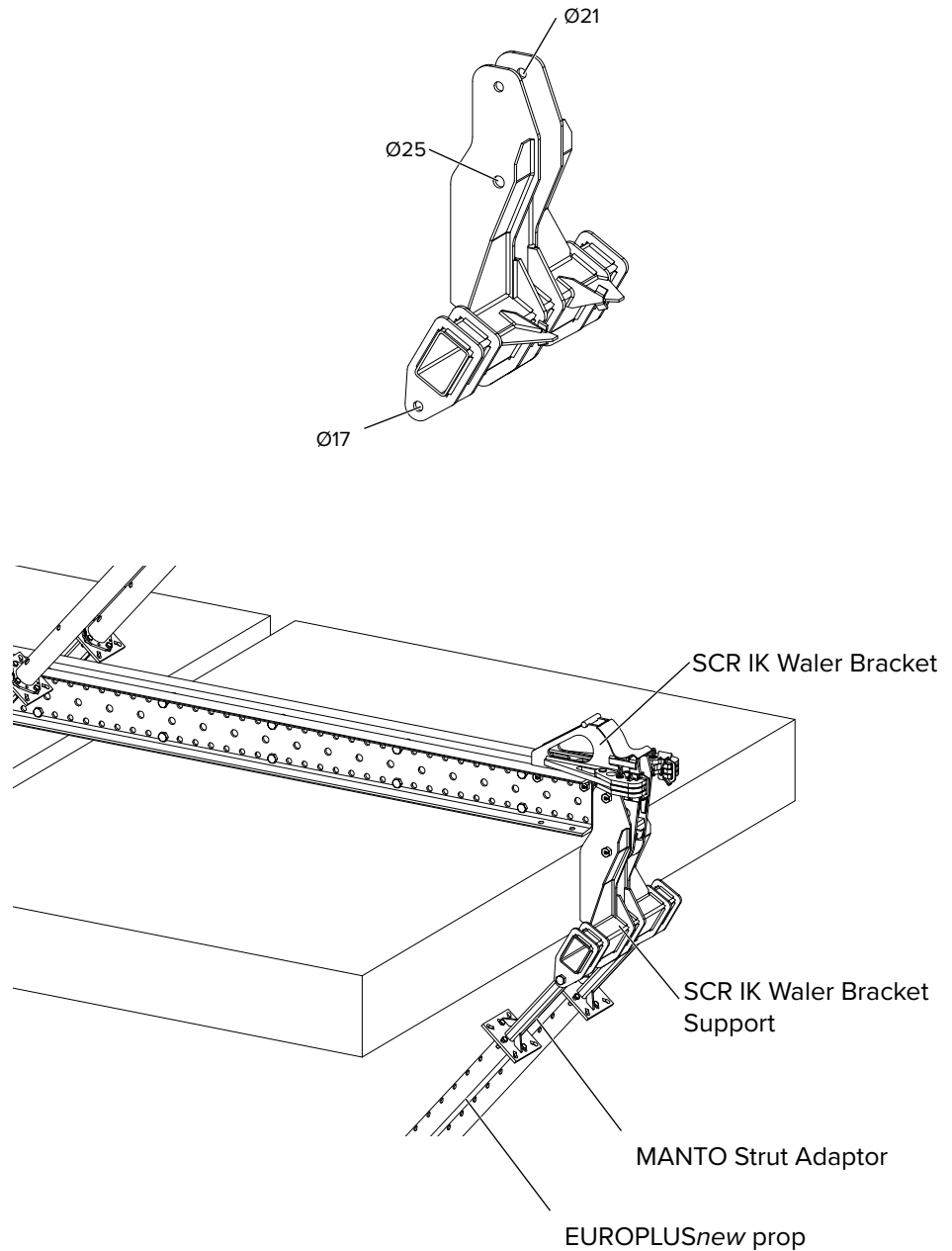
Propped IK Waler L with platform



When used as the supporting climbing bracket for the SAFESCREEN unit, a Bracket Claw Unit (code:611115) is inserted into the SCR IK Waler Bracket (code:611710), see page 54.

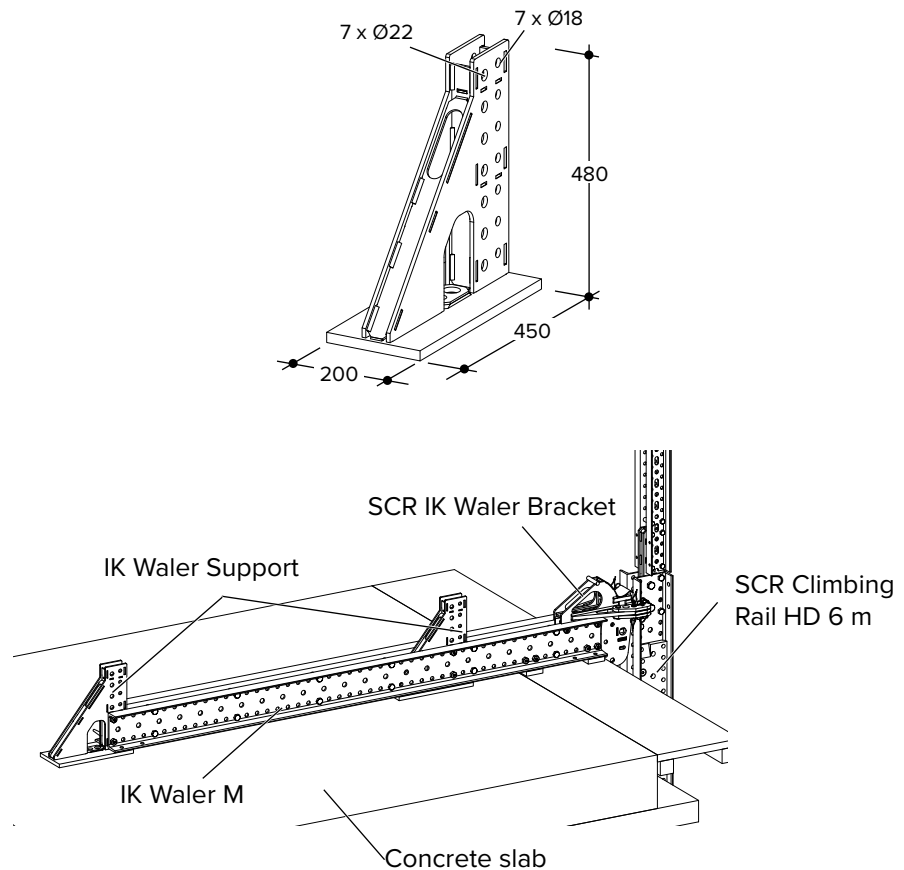
5.1.11 SCR IK Waler Bracket Support

The SCR IK Waler Bracket Support (code:611730) is used to increase the vertical load capacity of the SCR IK Waler Bracket (code:611710). Struts can be attached to the SCR IK Waler Bracket Support (code:611730) and anchored to the concrete slab below.



5.1.12 IK Waler Support

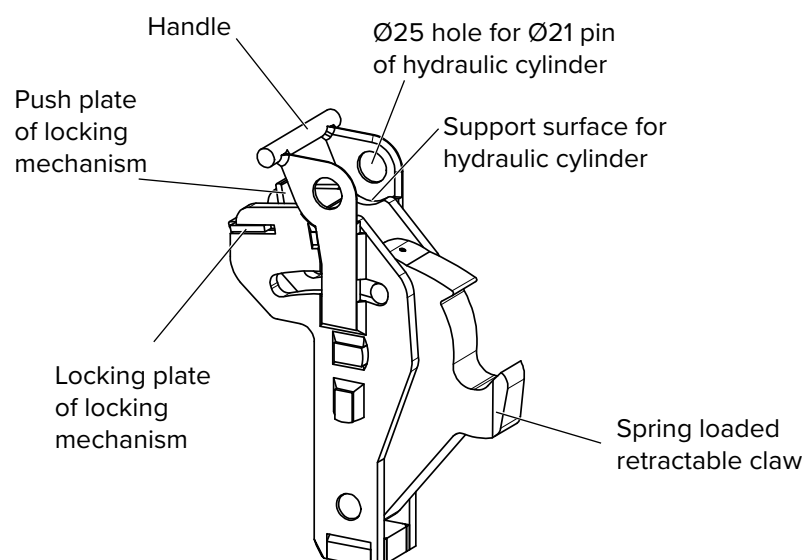
The IK Waler Support (code:611740) is used to anchor an IK Waler to a concrete slab. The base of the IK Waler Support (code:611740) has two hole positions (Ø26 and a Ø32 mm) for anchors.



5.1.13 Bracket Claw Unit

The Bracket Claw Unit (code:611115) allows the climbing brackets to support the SAFESCREEN unit.

The top of the Bracket Claw Unit (code:611115) has a curved surface to accommodate the hydraulic cylinder which is secured against uplift using a Ø21 mm pin (part of the hydraulic cylinder).

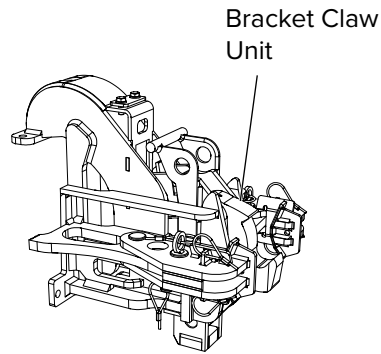


The Bracket Claw Unit (code:611115) is inserted into the climbing brackets and is locked in place with the spring loaded locking mechanism.

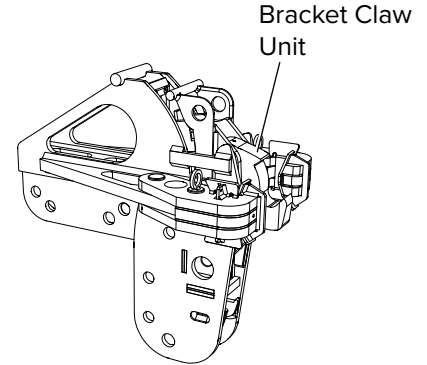


Ensure that the spring loaded locking mechanism is fully engaged and that the Bracket Claw Unit (code:611115) is locked in place.

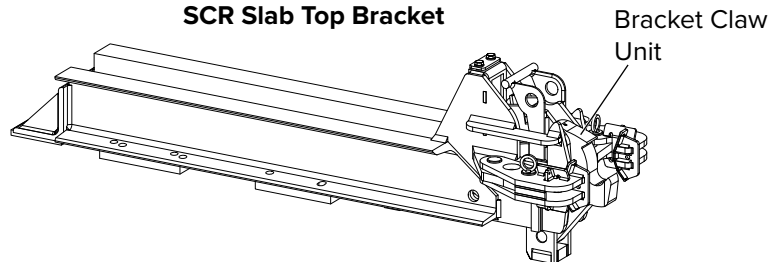
SCR Slab Edge Bracket



SCR IK Waler Bracket

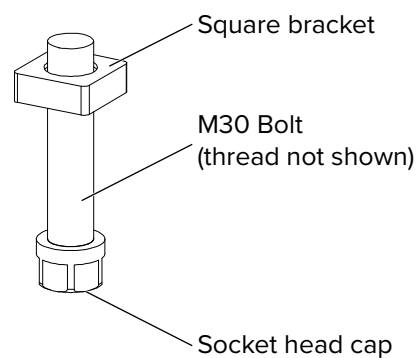


SCR Slab Top Bracket



5.1.14 SCF 60 Wall Bracket Height Adjustment

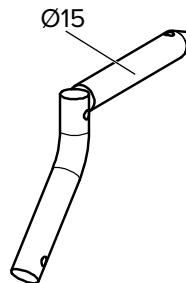
The SCF 60 Wall Bracket Height Adjustment (code:611210) is used with the SCR IK Waler Bracket (code:611710) to vertically adjust the position of the Bracket Claw Unit (code:611115) up to 40 mm.



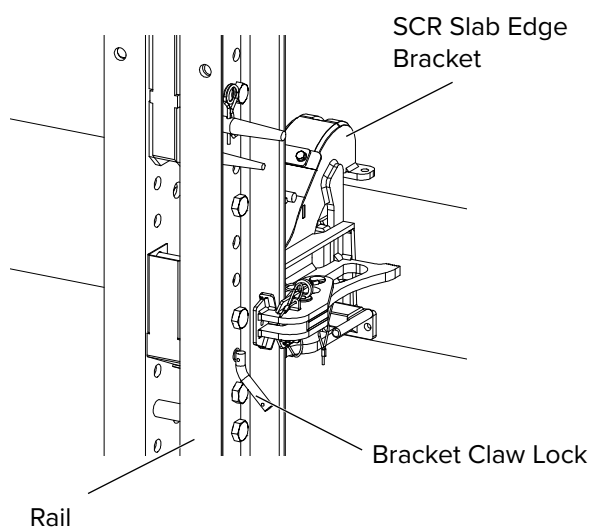
The SCF 60 Wall Bracket Height Adjustment (code:611210) is attached at the bottom of the SCR IK Waler Bracket (code:611710), see page 51.

5.1.15 Bracket Claw Lock

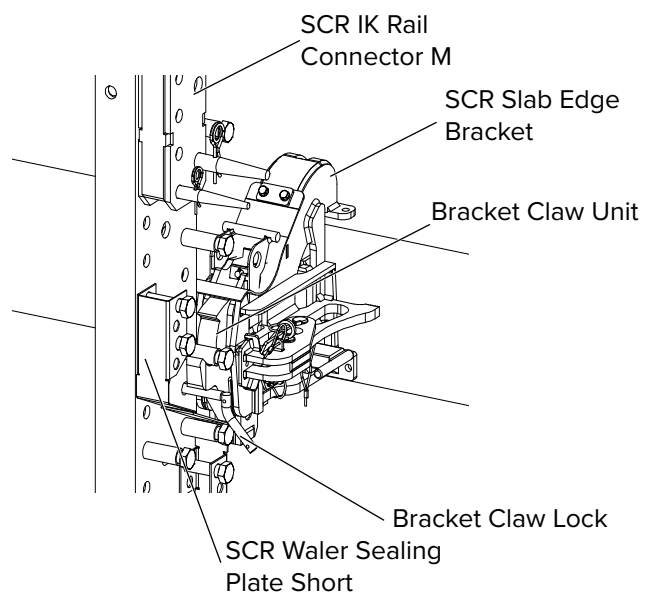
The Bracket Claw Lock (code:611380) is used to secure the SAFESCREEN unit against uplift. The Bracket Claw Lock (code:611380) is inserted into the rail and secured using a Spring Cotter Pin Ø4 (code:173776).



Perspective



Perspective without IK Waler profile



5.2 Connections (fasteners)

The fasteners shown in this user guide, which are used to connect the different components to each other, are typical connections. Depending on the specific job requirements, these fasteners and/or their quantity may vary. Any connections not specified in the table below or in this user guide can be found in the design schemes supplied.

Always refer to the supplied design scheme specific to each job requirement, for the appropriate connection type to be used.

Shown below is a schedule of the type of connections that are most commonly used with the SAFESCREEN G2 system. Reference to these connection types are made throughout this document. This table can also be used as a reference for the supplied design schemes.



* - In many location it is essential that bolts and nuts grade 10.9 / 10 are used. Therefore, to prevent mixing up of nuts HÜNNEBECK requires the use of nuts grade 10 for all connections sized M16 or M20 - even when the bolt is only of grade 8.8.

| Connection types | | | | |
|------------------|-----|--------|---|-------|
| Type | Qty | Code | Description | Grade |
| CT_S_00 | | | Removal of standard IK-bolt connection | |
| CT_S_01 | | | IK Pin Ø16 | |
| | 1 | 608816 | IK Pin Ø16 | |
| | 1 | 173776 | Spring Cotter Pin Ø4 | |
| CT_S_02 | | | IK Pin Ø20 | |
| | 1 | 608820 | IK Pin Ø20 | |
| | 1 | 173776 | Spring Cotter Pin Ø4 | |
| CT_S_03 | | | IK Pin Ø25 | |
| | 1 | 608825 | IK Pin Ø25 | |
| | 1 | 174553 | Spring Cotter Pin Ø5 | |
| CT_S_04 | | | DU-AL T-bolt | |
| | 1 | 717605 | DU-AL T-bolt-clamp | |
| CT_S_05 | | | SCF 60 Dual Axis Brace Pin | |
| | 1 | 611410 | SCF 60 Dual Axis Brace Pin | |
| | 1 | 173776 | Spring Cotter Pin Ø4 | |
| CT_S_06 | | | Waler Bolt D20 | |
| | 1 | 420000 | Waler Bolt D20 | |
| | 1 | 173776 | Spring Cotter Pin Ø4 | |
| CT_M6_01 | | | M6 - securing extension channels | |
| | 1 | | Hex Head Bolt ISO 4017-M6x16-8.8, galv. | 8.8/8 |
| | 1 | | Hexagonal nut ISO 7040 M6 gr. 8, galv. | |
| CT_M6_02 | | | M6 - fixing of rubber cover at steel toe trap | |
| | 1 | | Hex Head Bolt ISO 4017-M6x30-8.8, galv. | 8.8/8 |
| | 1 | | Washer ISO 7094 / DIN 440-R 6.4mm, galv. | |
| | 1 | | Hexagonal nut ISO 7040 M6 gr. 8, galv. | |
| CT_M12_01 | | | Mushroom head bolt M12x60 + nut | |
| | 1 | | Mushroom head bolt DIN 603 / ISO 8677 - M12x60 cl. 4.6, galv. | 4.6/8 |
| | 1 | | Hexagonal nut ISO 4032 - M12 cl. 8, galv. | |
| CT_M12_02 | | | Mushroom head bolt M12x90 + nut and washer | |

| Connection types | | | | |
|------------------|-----|--------|--|---------|
| Type | Qty | Code | Description | Grade |
| | 1 | | Mushroom head bolt DIN 603 / ISO 8677 - M12x90 cl. 4.6, galv. | 4.6/8 |
| | 1 | | Washer 13 DIN 440 Form V, galv. | |
| | 1 | | Hexagonal nut ISO 4032 - M12 cl. 8, galv. | |
| CT_M12_03 | | | Mushroom head bolt M12x90 + nut and washer | |
| | 1 | | Mushroom head bolt DIN 603 / ISO 8677 - M12x90 cl. 4.6, galv. | 4.6/8 |
| | 1 | | Hexagonal nut ISO 4032 - M12 cl. 8, galv. | |
| | 1 | | Counter plate plywood D21mm, 100mm x 100mm | |
| | 2 | | Countersunk timber screw 5x60mm self-drilling, galv. | |
| CT_M12_04 | | | Mushroom head bolt M12x120 + nut | |
| | 1 | | Mushroom head bolt DIN 603 / ISO 8677 - M12x120 cl. 4.6, galv. | 4.6/8 |
| | 1 | | Hexagonal nut ISO 4032 - M12 cl. 8, galv. | |
| CT_M16_01 | | | M16 - connector for pivot plate | |
| | 1 | | Hex Head Bolt ISO 4017-M16x45-8.8, galv. | 8.8 |
| | 1 | 608703 | Hexagonal nut ISO 7040 M16 gr. 10, galv. | 10* |
| CT_M16_02 | | | M16 - connector for C127-channels | |
| | 1 | | Hex Head Bolt ISO 4017-M16x45-8.8, galv. | 8.8 |
| | 1 | 608703 | Hexagonal nut ISO 7040 M16 gr. 10, galv. | 10* |
| | 2 | | Square washer DIN 436 17.5, galv. | |
| CT_M16_03 | | | Mushroom head bolt M16x90 + nut | |
| | 1 | | Mushroom head bolt DIN 603 / ISO 8677 - M16x90, galv. | |
| | 1 | 608703 | Hexagonal nut ISO 7040 M16 gr. 10, galv. | 10* |
| CT_M16_04 | | | Standard IK-L-connection without Spacer Sleeve L-Waler | |
| | 1 | 608702 | Hex Head Bolt ISO 4014-M16x100-10.9, galv. | 10.9/10 |
| | 1 | 608703 | Hexagonal nut ISO 7040 M16 gr. 10, galv. | |
| CT_M16_05 | | | Standard IK-L-connection with Spacer Sleeve L-Waler | |
| | 1 | 608702 | Hex Head Bolt ISO 4014-M16x100-10.9, galv. | 10.9/10 |
| | 1 | 608703 | Hexagonal nut ISO 7040 M16 gr. 10, galv. | |
| | 1 | 608496 | Spacer Sleeve IK Waler L | |
| CT_M16_06 | | | SCR Timber Beam Bearing - 1x H20 beam - set | |
| | 2 | | Hex Head Bolt ISO 4017-M16x120-8.8, galv. | |
| | 2 | | Hexagonal nut ISO 7040 M16 gr. 10, galv. | |
| | 2 | | Washer ISO 7094 / DIN 440-R 17.5mm, galv. | |
| | 1 | | Spacer plates 115mm x 250mm, thickness to be adjusted H20 web thickness | |
| | 8 | | Steel nail 50mm x 3.5mm, galv. | |
| CT_M16_07 | | | SCR Timber Beam Bearing - 1x laminated timber beam 80mm x 200mm - set | |
| | 2 | | Hex Head Bolt ISO 4017-M16x120-8.8, galv. | |
| | 2 | | Hexagonal nut ISO 7040 gr. 10, galv. | |
| | 2 | | Washer ISO 7094 / DIN 440-R 17.5mm, galv. | |
| CT_M16_08 | | | SCF 60 Platform Beam Support EU - double H20 beam - set | |
| | 2 | | Hex Head Bolt ISO 4017-M16x180-8.8, galv. | 8.8 |
| | 2 | | Hexagonal nut ISO 7040 M16 gr. 10, galv. | 10* |
| | 2 | | Washer ISO 7094 / DIN 440-R 17.5mm, galv. | |

| Connection types | | | | |
|------------------|-----|--------|--|---------|
| Type | Qty | Code | Description | Grade |
| | 3 | | Spacer plates 115mm x 250mm, thickness to be adjusted H20 web thickness | |
| | 12 | | Steel nail 50mm x 3.5mm, galv. | |
| CT_M20_01 | | | M20 - nut | |
| | 1 | | Hexagonal nut ISO 7040 - M20 gr. 10, galv. | 10.9/10 |
| CT_M20_02 | | | M20 - connector for SCR Panel Rib | |
| | 1 | | Hex Head Bolt ISO 4762-M20x50-8.8, galv. | 8.8 |
| CT_M20_03 | | | M20 - connector for cladding panels | |
| | 1 | | Hex Head Bolt ISO 4762-M20x50-8.8, galv. | 8.8 |
| | 1 | | Hexagonal nut ISO 7040 - M20 gr. 10, galv. | 10* |
| CT_M20_04 | | | M20 - connector for cladding panels + extension panel bearing | |
| | 1 | | Hex Head Bolt ISO 4762-M20x70-8.8, galv. | 8.8 |
| | 1 | | Hexagonal nut ISO 7040 - M20 gr. 10, galv. | 10* |
| CT_M20_05 | | | Panel joint reinforcement plates at return panel connector | |
| | 1 | | Hex Head Bolt ISO 4014-M20x80-8.8, galv. | 8.8 |
| | 1 | | Hexagonal nut ISO 7040 - M20 gr. 10, galv. | 10* |
| | 1 | 611903 | SCR G2 Panel Joint Reinforcement plate | |
| CT_M20_06 | | | M20 - connector for SCR Panel Rib 60 | |
| | 1 | | Hex Head Bolt ISO 4762-M20x90-8.8, galv. | 8.8 |
| CT_M20_07 | | | Standard IK-M-connection without Spacer Sleeve M-Waler | |
| | 1 | 608617 | Hex Head Bolt ISO 4014-M20x110-10.9, galv. | 10.9/10 |
| | 1 | 608618 | Hexagonal nut ISO 7040 M20 gr. 10 | |
| CT_M20_08 | | | Standard IK-M-connection with Spacer Sleeve M-Waler | |
| | 1 | 608617 | Hex Head Bolt ISO 4014-M20x110-10.9 | 10.9/10 |
| | 1 | 608618 | Hexagonal nut ISO 7040 M20 gr. 10 | |
| | 1 | 608498 | Spacer Sleeve M-Waler | |
| CT_M20_09 | | | M20 - IK-M-connection with Bolt Sleeve Ø30 | |
| | 1 | 608617 | Hex Head Bolt ISO 4014-M20x110-10.9, galv. | 10.9/10 |
| | 1 | 608618 | Hexagonal nut ISO 7040 M20 gr. 10 | |
| | 1 | 611720 | Bolt Sleeve Ø30 | |
| CT_M20_10 | | | Panel joint reinforcement plates at panel joint | |
| | 1 | | Hex Head Bolt ISO 4014-M20x110-10.9, galv. | 10.9/10 |
| | 1 | 608618 | Hexagon socket head cap screws ISO 4762-M20x150-8.8, galv. | |
| | 2 | 611903 | SCR-G2 Panel Joint Reinforcement plate | |
| CT_M20_11 | | | M20 - connector for cladding panels + spreader beam | |
| | 1 | 612509 | Hex Head Bolt ISO 4762-M20x150-8.8, galv. | 8.8 |
| | 1 | 608618 | Hexagonal nut ISO 7040 - M20 gr. 10, galv. | 10* |
| CT_M20_12 | | | M20 - IK-M-Climbing Rail Stiffener Plate connection without Bolt Sleeve Ø30 | |
| | 1 | 612557 | Hex Head Bolt ISO 4014-M20x180-10.9, galv. | 10.9/10 |
| | 1 | 608618 | Hexagonal nut ISO 7040 - M20 gr. 10, galv. | |
| CT_M20_13 | | | M20 - IK-M-Climbing Rail Stiffener Plate connection with Bolt Sleeve Ø30 | |

| Connection types | | | | |
|----------------------|-----|--------|--|---------|
| Type | Qty | Code | Description | Grade |
| | 1 | 612557 | Hex Head Bolt ISO 4014-M20x180-10.9, galv. | 10.9/10 |
| | 1 | 608618 | Hexagonal nut ISO 7040 - M20 gr. 10, galv. | |
| | 1 | 611720 | Bolt Sleeve Ø30 | |
| CT_M20_14 | | | M20 - Panel joint reinforcement plates at 45° return panel connector | |
| | 1 | | Hexagonal nut ISO 7040 - M20 gr. 10, galv. | 10.9/10 |
| | 1 | 611903 | SCR-G2 Panel Joint Reinforcement plate | |
| CT_M24_01 | | | M24 - IK-M- connection | |
| | 1 | 609084 | Hex Head Bolt ISO 4014-M24x110-10.9, galv. | 10.9/10 |
| | 1 | 612512 | Hexagonal nut ISO 7040 M24 gr. 10, galv. | |
| CT_M24_02 | | | M24 - IK-M-Climbing Rail Stiffener Plate connection | |
| | 1 | | Hex Head Bolt ISO 4014-M24x180-10.9, galv. | 10.9/10 |
| | 1 | 612512 | Hexagonal nut ISO 7040 M24 gr. 10, galv. | |
| CT_CSK_M16_01 | | | Connection guide box | |
| | 1 | | Countersunk Bolt ISO 10642-M16x40-8.8, galv. | 8.8/8 |
| | 1 | | Hexagonal nut DIN 985 M16 gr. 10, galv | |
| CT_CSK_M20_01 | | | M20 - IK-M-Climbing Rail Stiffener Plate connection without Bolt Sleeve Ø30 | |
| | 1 | | Countersunk Bolt ISO 10642-M20x140-10.9, galv. | 10.9/10 |
| | 1 | | Hexagonal nut DIN 985** M20 gr. 10 | |
| CT_CSK_M20_02 | | | M20 - IK-M-Climbing Rail Stiffener Plate connection with Bolt Sleeve Ø30 | |
| | 1 | | Countersunk Bolt ISO 10642 - M20x140-10.9, galv. | 10.9/10 |
| | 1 | | Hexagonal nut DIN 985** M20 gr. 10 | |
| | 1 | 611720 | Bolt Sleeve Ø30 | |
| CT_CSK_M20_03 | | | M20 - fixing of SCR extension panel stopper | |
| | | | Countersunk Bolt ISO 10642-M20x40-8.8, galv. | 8.8 / 8 |
| CT_CSK_M20_04 | | | M20 - fixing of SCR extension panel bearing (countersunk bolts) | |
| | 1 | | Countersunk Bolt ISO 10642-M20x60-8.8, galv. | 8.8/8 |
| | 1 | | Hexagonal nut DIN 985 - M20 gr. 10, galv. | |
| CT_WC_01 | | | Flat head timber screw 4x25mm | |
| | 1 | | Flat head timber screw 4x25mm self-drilling, galv. | |
| CT_WC_02 | | | Timber screw 5x35mm | |
| | 1 | | Countersunk timber screw 5x35mm self-drilling, galv. | |
| CT_WC_03 | | | Flat head self-taping screw 5x35mm | |
| | 1 | | Flat head self-taping screw 5x35mm, galv. | |
| CT_WC_04 | | | Steel angle + 8x timber screw 5x35mm | |
| | 1 | | Steel angle 90x90x65mm, with rib, galv. | |
| | 8 | | Countersunk timber screw 5x35mm self-drilling, galv. | |
| CT_WC_05 | | | Timber screw 5x60mm | |
| | 1 | | Countersunk timber screw 5x60mm self-drilling, galv. | |
| CT_WC_06 | | | Connection plywood (21mm) @ H20-beams / DU-AL beams | |
| | 2 | | Countersunk timber screw 5x60mm self-drilling, galv. | |
| CT_WC_07 | | | Connection cladding panel @ plywood or timber | |
| | 1 | 611902 | Panel-deck connection washer | |
| | 1 | | Countersunk timber screw 5x60mm self-drilling, galv. | |

| Connection types | | | | |
|------------------|-----|--------|---|-------|
| Type | Qty | Code | Description | Grade |
| CT_WC_08 | | | Timber screw 5x80mm, TORX | |
| | 1 | | Countersunk timber screw 5x80mm, TORX, self-drilling, galv. | |
| CT_WC_09 | | | Connection timber boards (5cm) @ H20-beams / DU-AL beams | |
| | | | 2 screws per board and beam | |
| | 2 | | Countersunk timber screw 5x80mm self-drilling, galv. | |
| CT_WC_10 | | | Timber screw 8x60mm | |
| | 2 | | Countersunk timber screw 8x60mm self-drilling, galv. | |
| CT_WC_11 | | | SCR IK M/L timber beam Connector cpl. | |
| | 1 | 611401 | SCR IK M/L timber beam Connector | |
| | 2 | | Countersunk timber screw WÜRTH ASSY plus VG 6x160mm self-drilling, galv. | |
| CT_WC_12 | | | Hinge belt for traps | |
| | 1 | 611847 | Belt 50mm red - 50cm | |
| | 1 | | Counter plate plywood D21mm, 65mm x 100mm | |
| | 4 | | Countersunk timber screw 5x40mm self-drilling, galv. | |
| | 4 | | Flat head timber screw 5x30 self-drilling, galv | |
| CT_WC_13 | | | Hinge for traps | |
| | 1 | | Hinge 200mm x 35, galv. | |
| | 4 | | Countersunk timber screw 5x30mm self-drilling, galv. | |
| | 2 | | Hex Head Bolt ISO 4017-M5x35-8.8, galv. | |
| | 2 | | Washer ISO 7094 / DIN 440-R 5.5mm, galv. | |
| | 2 | | Hexagonal nut ISO 4032 - M5 cl 8, galv. | |
| CT_WC_14 | | | Packer plate for SCR platform bracket timber - 1 x H 20 beam - set | |
| | 1 | | Spacer plates 115mm x 250mm, thickness to be adjusted H 20 web thickness | |
| | 8 | | Steel nail 50mm x 3.5mm, galv. | |
| CT_WC_15 | | | Roofing felt nail 3,5 x 25mm | |
| | 1 | | Roofing felt nail 3,5 x 25mm, galv. | |
| CT_WC_16 | | | Timber screw 6x100mm, TORX | |
| | 1 | | Countersunk timber screw 6x100mm, TORX, self-drilling, galv. | |
| CT_WC_17 | | | Timber screw 4.5x25mm, TORX | |
| | 1 | | Countersunk timber screw 4.25x25mm TORX self-drilling, galv. | |

5.3 Rails

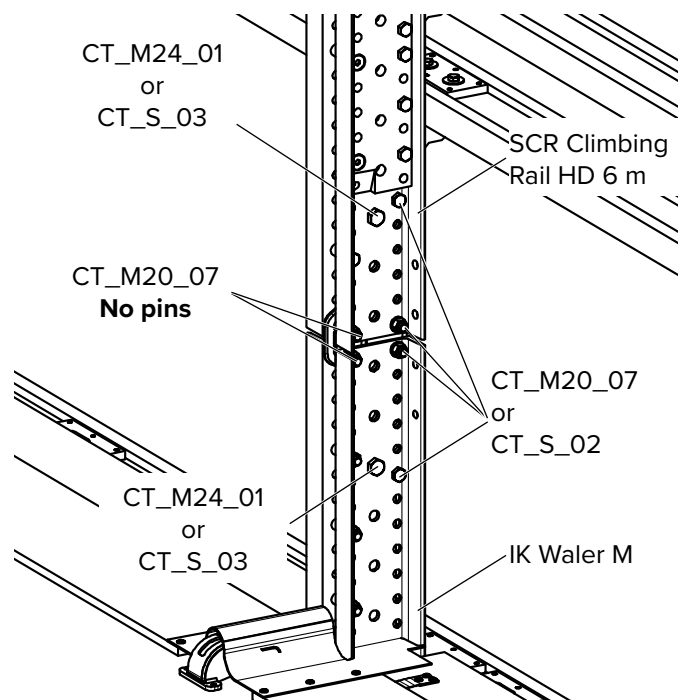
The rails are made of IK Walers M or IK Walers L attached together using bolts and nuts, spacer sleeves and support bobbins. The fasteners vary depending on the type of IK Waler used to form the rails.



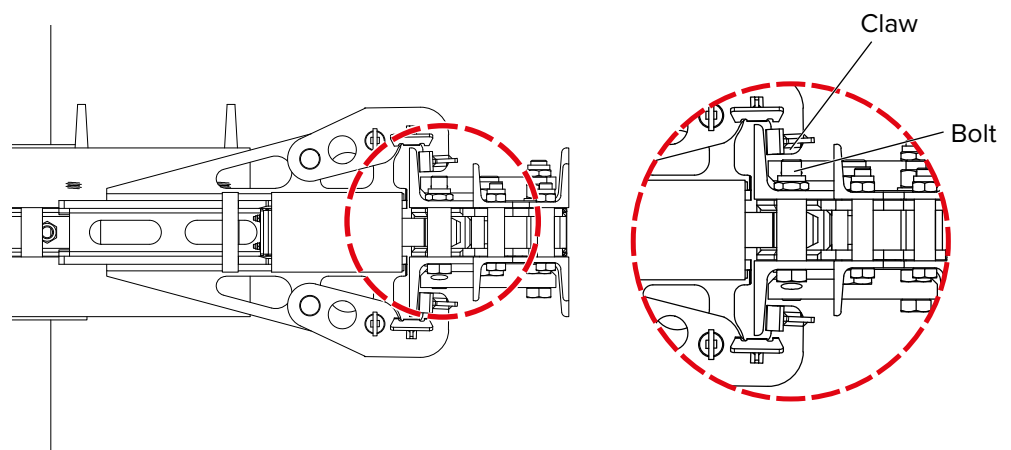
Each SAFESCREEN unit is specifically designed to suit the site requirements, therefore the connections shown are typical only. For more information regarding the required connections for a specific SAFESCREEN unit refer to the supplied design schemes.



Do not use pins on the inside hole positions of the IK Waler M. Only bolts and nuts can be used on the inside hole positions of the rail to avoid clashes with the claws of the climbing brackets.



The clearance between the claws of the climbing brackets and the bolts can be seen below.



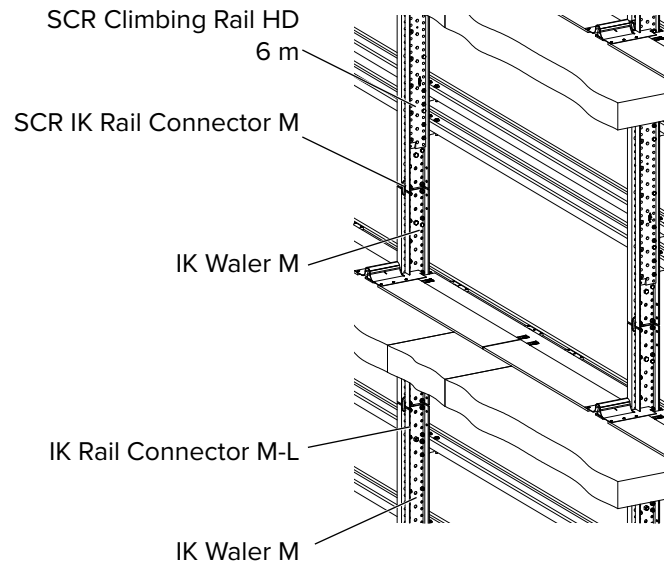
The SCR Climbing Rail HD 6 m (code:612205) is a standard length of pre-assembled IK Walers M, supplied with stiffener plates on both sides.

Extensions to the height of the unit can be done using standard lengths of IK Walers M

and/or IK Walers L, also pre-assembled, to suit the requirements of the site.

For the actual assembly setup, please refer to the supplied design scheme.

The IK Walers M can be connected end-to-end using the SCR IK Rail Connector M (code:611970), see page 63. The IK Walers L can be connected end-to-end to the IK Walers M using the IK Rail Connector M-L (code:611235), see page 64.

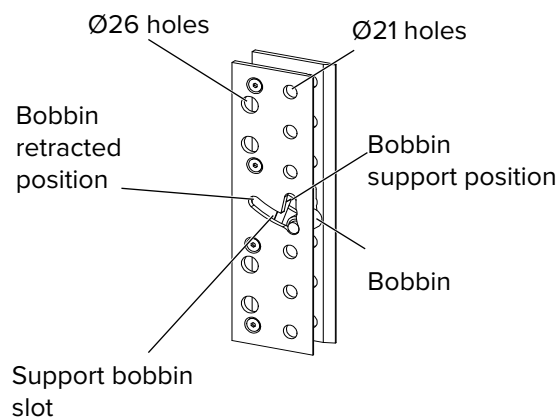


For more information regarding IK Walers, please refer to the INFRA-KIT user guide.

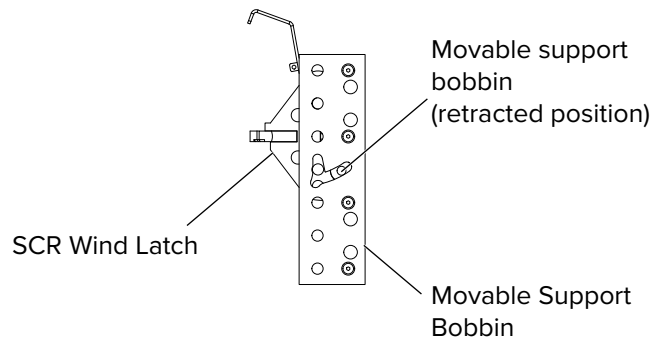
5.3.1 Movable Support Bobbin

The Movable Support Bobbin (code:611820) is attached to the rail of the SAFESCREEN unit and it has a retractable bobbin that is used to support the unit and allows for 250 mm climbing increments. The Movable Support Bobbin (code:611820) replaces a standard intermediate climbing bolt in the climbing rail and allows for the installation of the SCR Wind Latch (code:611810). The Movable Support Bobbin (code:611820) is installed in the climbing rail and can carry the loads of the SAFESCREEN unit during climbing. The bobbin can be pushed aside along the slot in the side plates to give way for the SCR Wind Latch (code:611810) to be installed.

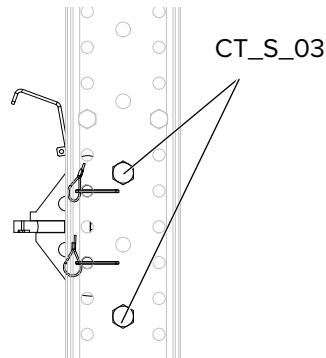
When supporting the unit, the movable support bobbin slides upwards to the support position.



Shown below is the Movable Support Bobbin (code:611820) with the movable support bobbin in its retracted position to allow the SCR Wind Latch (code:611810) to be installed.

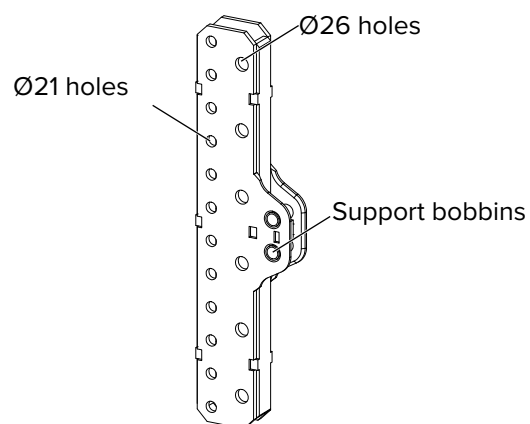


The connection of the Movable Support Bobbin (code:611820) to the rail is shown below. The SCR Wind Latch (code:611810) is also shown to illustrate the interaction between both components. For more information regarding the typical connections see page 59.



5.3.2 SCR IK Rail Connector M

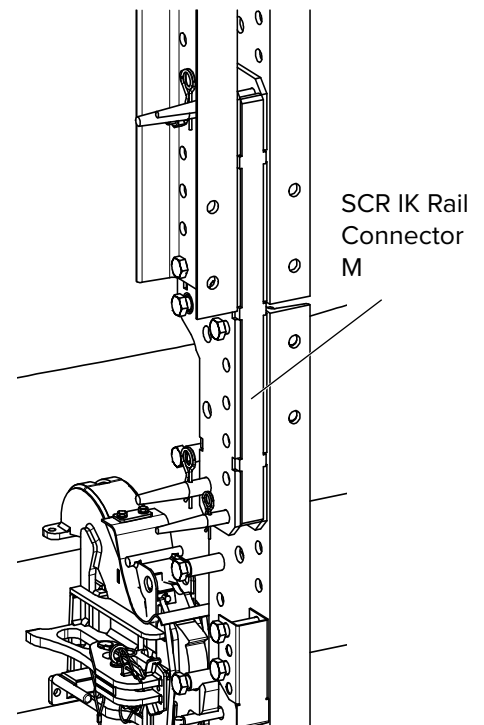
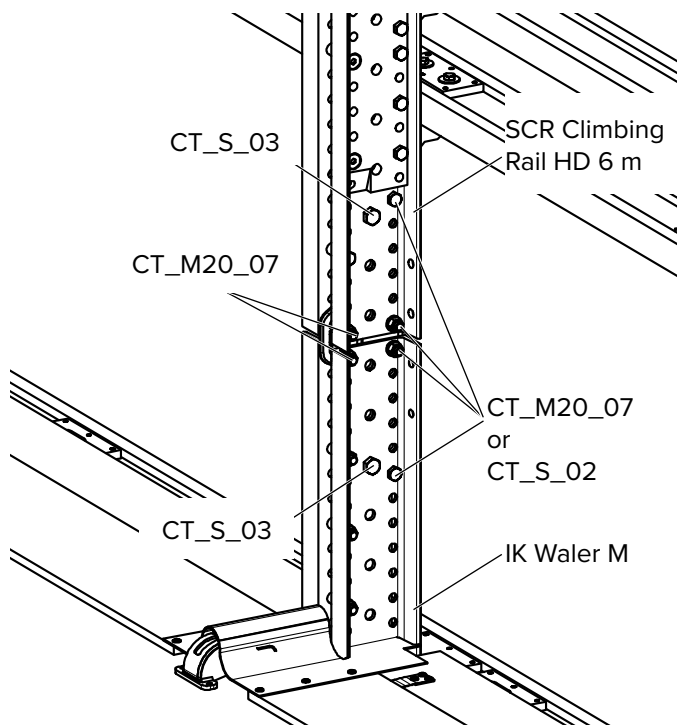
The SCR IK Rail Connector M (code:611970) is used to connect two IK Waler M end-to-end.



Typically the SCR IK Rail Connector M (code:611970) can be attached to the IK Waler M using with the following:

- 2no. CT_M20_07
- 2no. CT_S_03
- 4no. CT_S_02

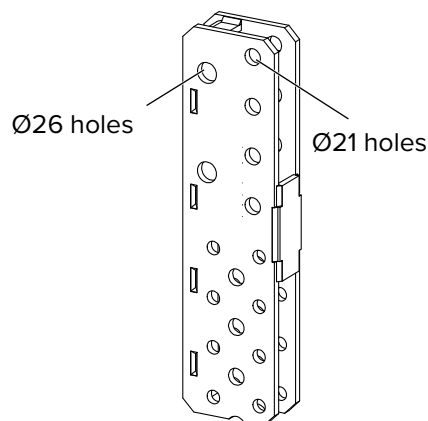
The CT_S_03 connection cannot be used on the inside of the IK Waler M. For more information regarding the typical connections see page 59.



For more information regarding the required fasteners including those to be removed, please refer to the supplied design scheme.

5.3.3 IK Rail Connector M-L

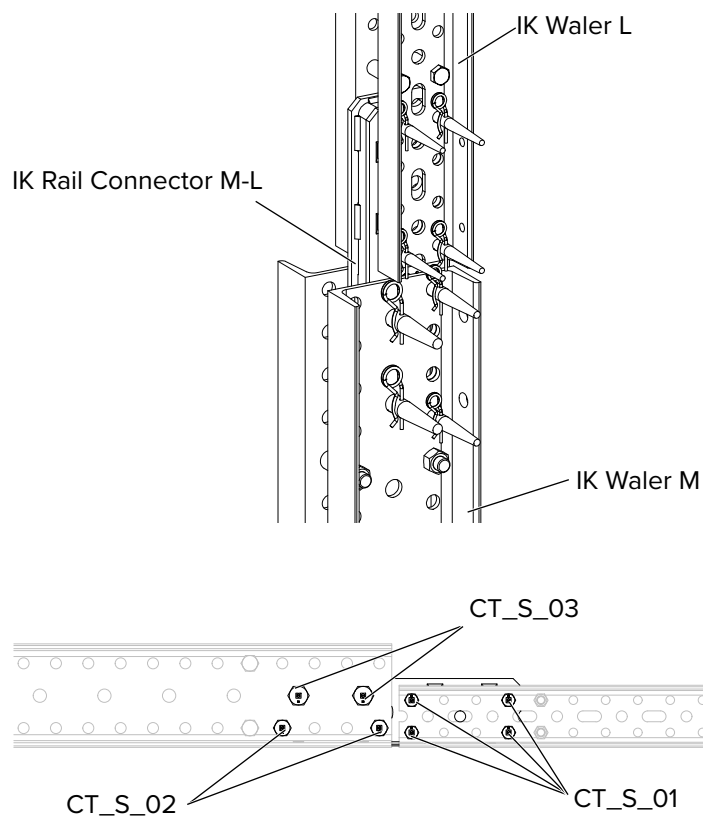
The IK Rail Connector M-L (code:611235) is used to do an end-to-end connection between an IK Waler M and an IK Waler L.



The IK Rail Connector M-L (code:611235) is typically attached to the walers using with the following:

- CT_S_03
- CT_S_02
- CT_S_01

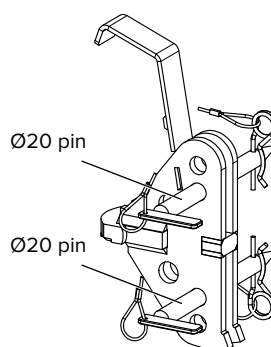
The connections shown above can be replaced by bolts if required. For more information regarding the typical connections see page 59.



For more information regarding the required fasteners, please refer to the supplied design scheme.

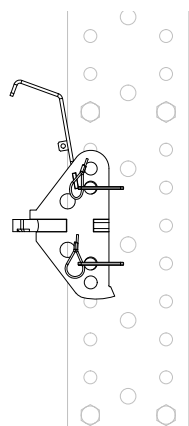
5.3.4 SCR Wind Latch

The SCR Wind Latch (code:611810) helps to transfer high horizontal forces from the vertical structural members to the climbing bracket in level L0.

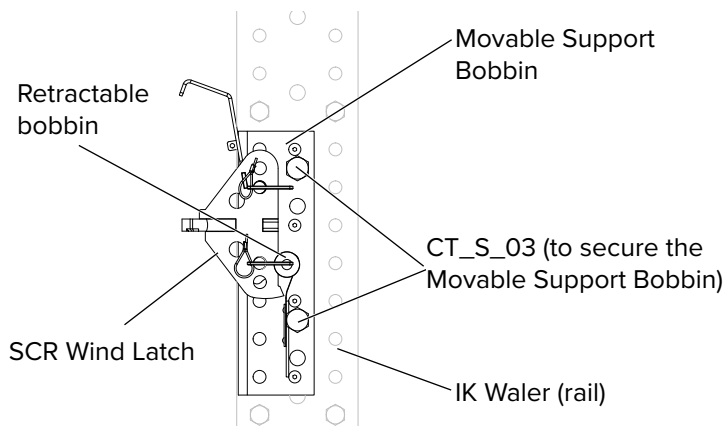


Shown below is a typical application of the SCR Wind Latch (code:611810) in conjunction with the Movable Support Bobbin (code:611820).

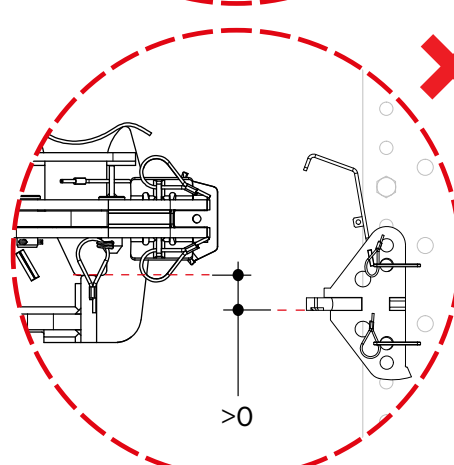
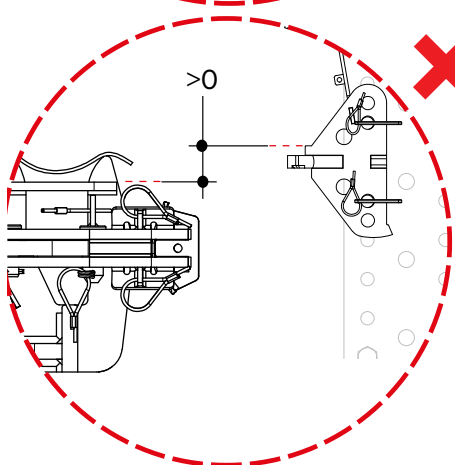
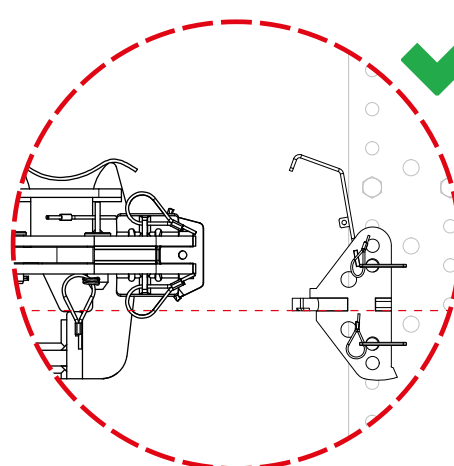
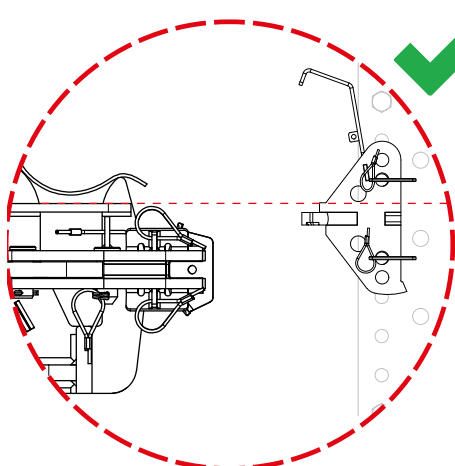
SCR Wind Latch without Movable Support Bobbin



SCR Wind Latch with Movable Support Bobbin

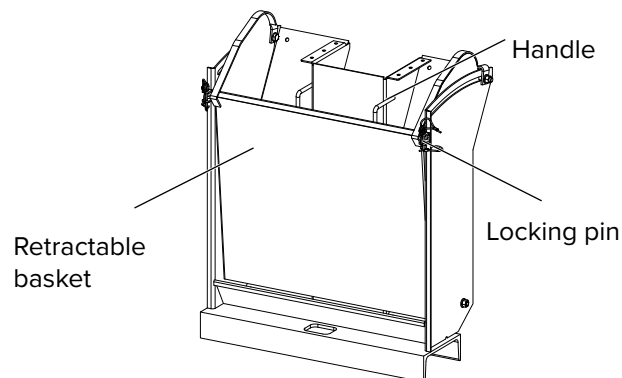


Check if the SCR Wind Latch (code:611810) is properly installed. The upper and lower limits are shown below. These limits are applicable when using any type of climbing bracket.

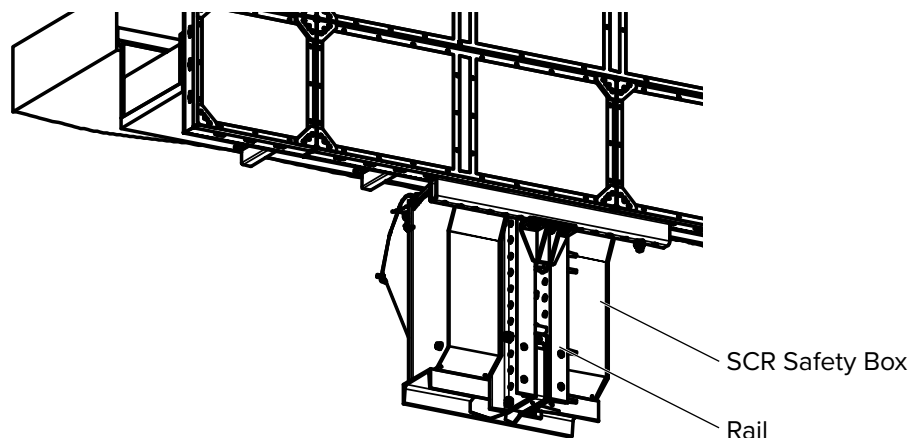


5.3.5 SCR Safety Box

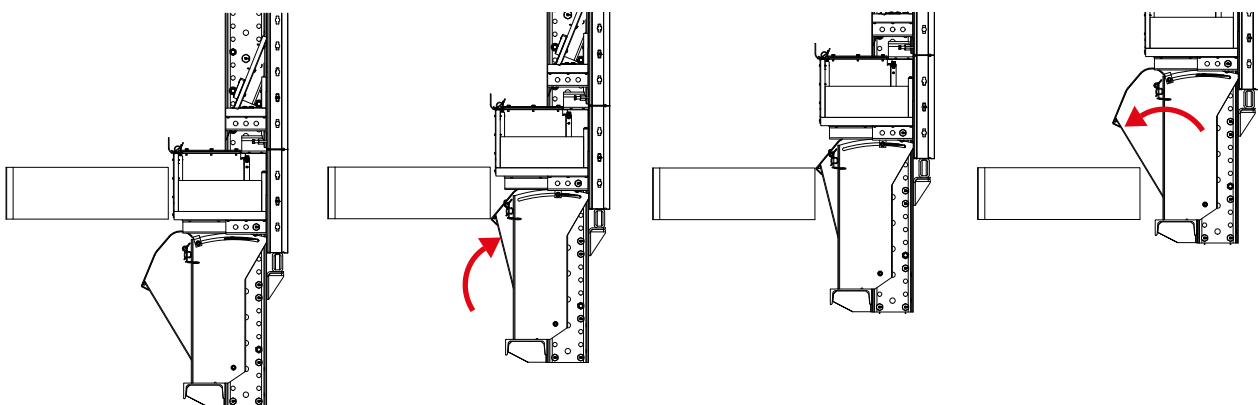
The SCR Safety Box (code:611450) is placed at the bottom end of the rail and is designed to collect small items like tools and debris falling through gaps near the rail.



The fasteners used to secure the SCR Safety Box (code:611450) may vary depending on the IK Waler used to form the vertical structural elements. Please refer to the supplied design scheme.



During climbing operations, the SCR Safety Box (code:611450) the operator must manually retract the lid of the SCR Safety Box (code:611450) and push the lid in before climbing the unit, after which the lid must be manually moved back to the open position.

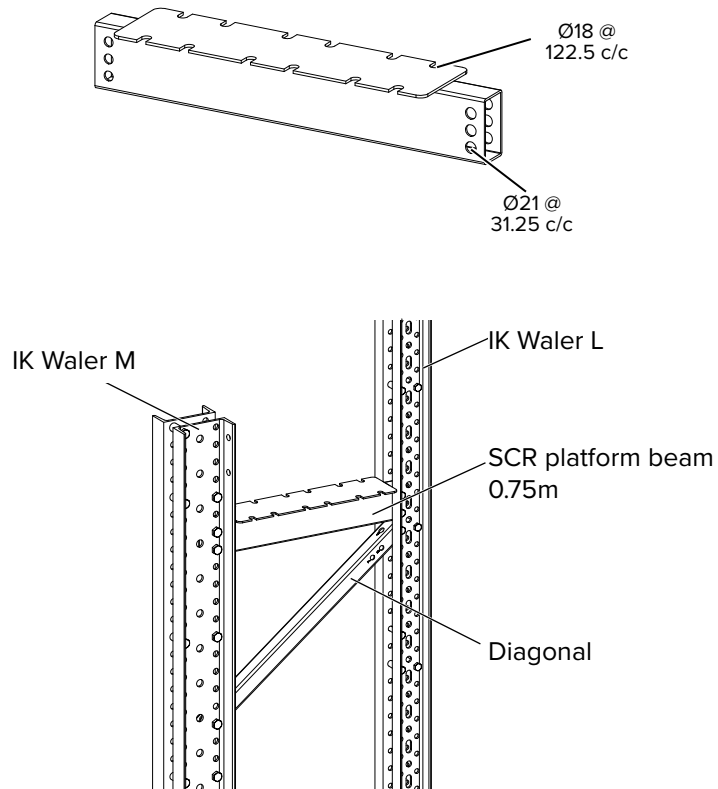


During transportation the SCR Safety Box (code:611450) must be kept in the retracted position and secured using the included latches.

Before climbing operations ensure that the SCR Safety Box (code:611450) is empty and can operate as illustrated.

5.3.6 SCR platform beam 0.75m

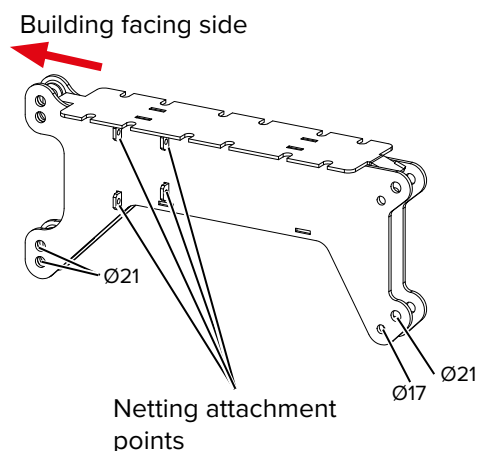
The SCR platform beam 0.75m (code:612260) is used to support the platform on SAFESCREEN truss units.



5.3.7 SCR Platform Beam 0.75m Rigid

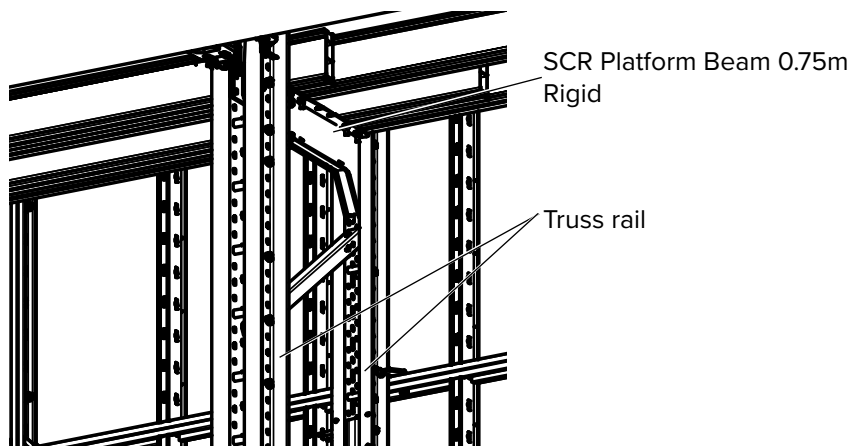
The SCR Platform Beam 0.75m Rigid (code:612263) is used to support the platform on SAFESCREEN truss units.

The SCR Platform Beam 0.75m Rigid (code:612263) has attachment points for debris netting or tarpaulin. The SCR Platform Beam 0.75m Rigid (code:612263) must be installed so that the netting attachment points face the building.

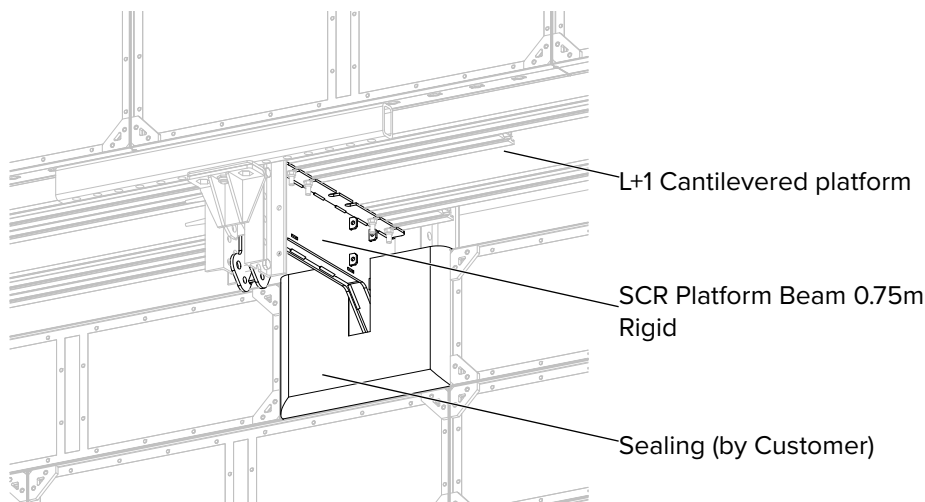


The SCR Platform Beam 0.75m Rigid (code:612263) can be used to form the

SAFESCREEN truss unit as shown below.

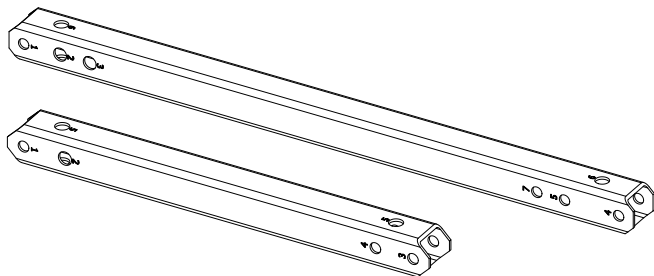


The SCR Platform Beam 0.75m Rigid (code:612263) can also be used for the L+1 cantilevered platform, as shown below.



5.3.8 SCF 60 Diagonals

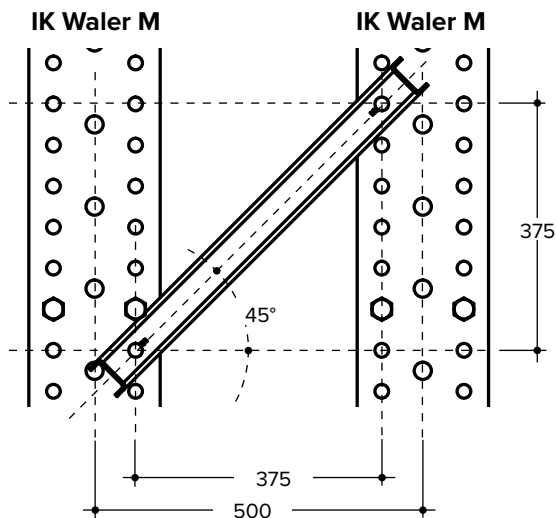
The SCF 60 Diagonals are used to stiffen the assembly. Each diagonal has numbered hole positions (Ø21 and Ø17 mm) which allow for the SCF 60 Diagonal to be attached to an IK Waler L or an IK Waler M.



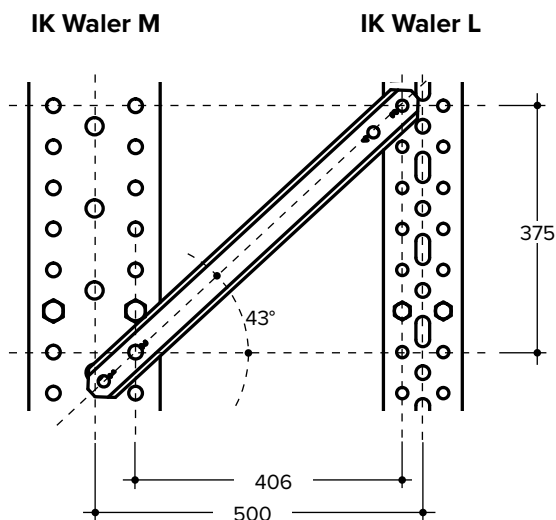
| SCF 60 Diagonal | | |
|-----------------|---------------|-------|
| Hole no. | Diameter [mm] | |
| | 50x50 | 75x75 |
| 1 | 17 | 17 |
| 2 | 21 | 21 |
| 3 | 17 | 21 |
| 4 | 17 | 17 |
| 5 | 21 | 17 |
| 6 | --- | 21 |
| 7 | --- | 17 |

The SCF 60 Diagonal 75x75 (code:612130) is used in conjunction with the SCR platform beam 0.75m (code:612260) or with the SCR Platform Beam 0.75m Rigid (code:612263) in truss units, see page 71.

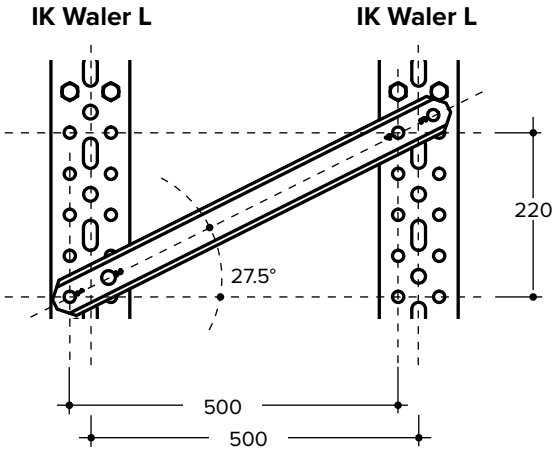
| SCF 60 Diagonal 50x50 | | | |
|-----------------------|----------------------|---------------|----------------------|
| IK Waler M | | IK Waler M | |
| Diagonal hole | Connection | Diagonal hole | Connection |
| 5 | CT_M20_07 or CT_S_02 | 5 | CT_M20_07 or CT_S_02 |



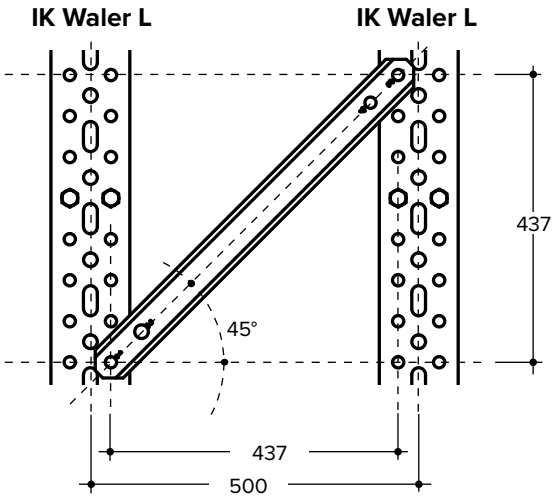
| SCF 60 Diagonal 50x50 | | | |
|-----------------------|----------------------|---------------|----------------------|
| IK Waler M | | IK Waler L | |
| Diagonal hole | Connection | Diagonal hole | Connection |
| 2 | CT_M20_07 or CT_S_02 | 3 | CT_M16_04 or CT_S_01 |



| SCF 60 Diagonal 50x50 | | | |
|-----------------------|----------------------|---------------|----------------------|
| IK Waler L | | IK Waler L | |
| Diagonal hole | Connection | Diagonal hole | Connection |
| 1 | CT_M16_04 or CT_S_01 | 4 | CT_M16_04 or CT_S_01 |

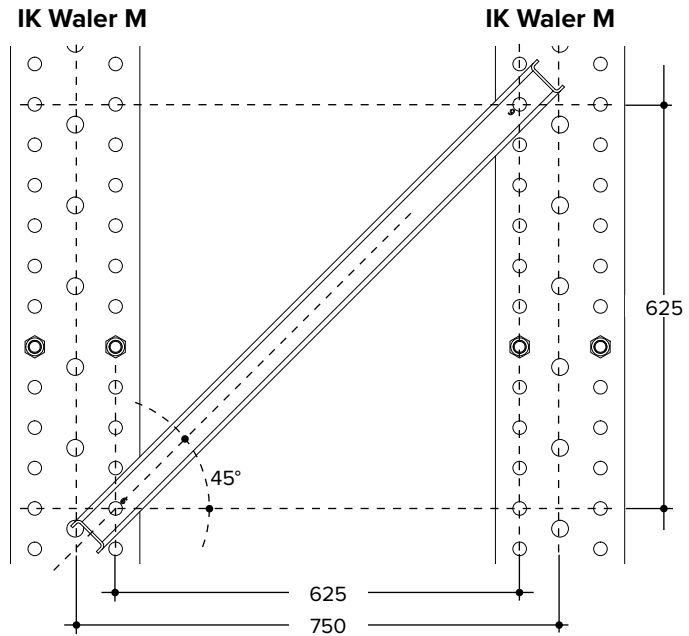


| SCF 60 Diagonal 50x50 | | | |
|-----------------------|----------------------|---------------|----------------------|
| IK Waler L | | IK Waler L | |
| Diagonal hole | Connection | Diagonal hole | Connection |
| 1 | CT_M16_04 or CT_S_01 | 3 | CT_M16_04 or CT_S_01 |

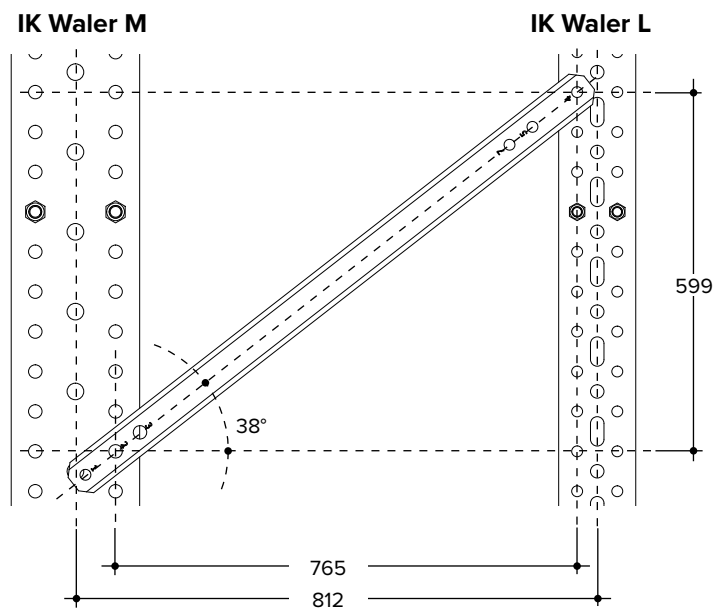


The different applications of the SCF 60 Diagonal 75x75 (code:612130), depending on the IK Waler used, can be seen below.

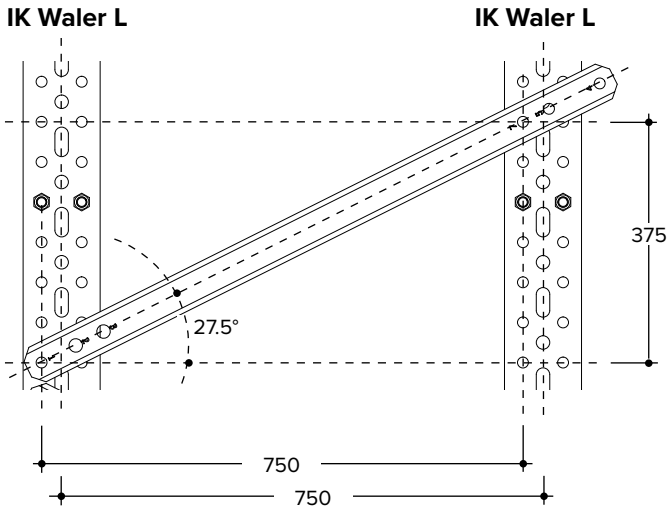
| SCF 60 Diagonal 75x75 | | | |
|-----------------------|----------------------|---------------|----------------------|
| IK Waler M | | IK Waler M | |
| Diagonal hole | Connection | Diagonal hole | Connection |
| 6 | CT_M20_07 or CT_S_02 | 6 | CT_M20_07 or CT_S_02 |



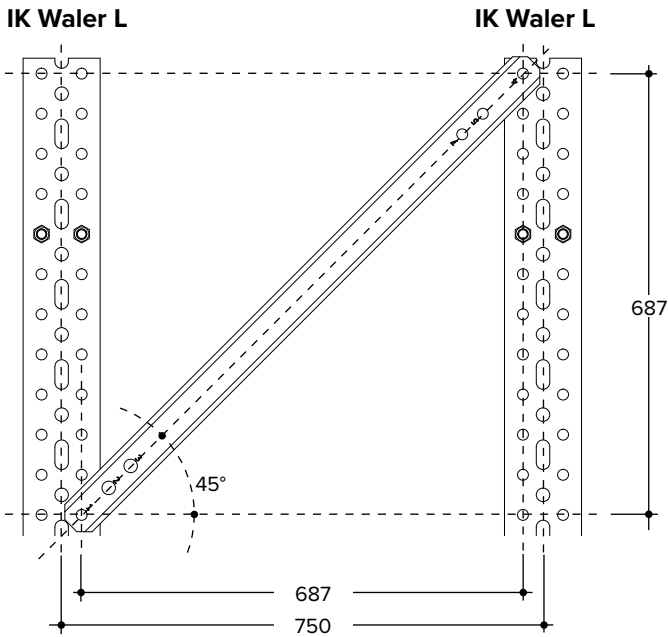
| SCF 60 Diagonal 75x75 | | | |
|-----------------------|----------------------|---------------|----------------------|
| IK Waler M | | IK Waler L | |
| Diagonal hole | Connection | Diagonal hole | Connection |
| 2 | CT_M20_07 or CT_S_02 | 4 | CT_M16_04 or CT_S_01 |



| SCF 60 Diagonal 75x75 | | | |
|-----------------------|----------------------|---------------|----------------------|
| IK Waler L | | IK Waler L | |
| Diagonal hole | Connection | Diagonal hole | Connection |
| 1 | CT_M16_04 or CT_S_01 | 7 | CT_M16_04 or CT_S_01 |



| SCF 60 Diagonal 75x75 | | | |
|-----------------------|----------------------|---------------|----------------------|
| IK Waler L | | IK Waler L | |
| Diagonal hole | Connection | Diagonal hole | Connection |
| 1 | CT_M16_04 or CT_S_01 | 4 | CT_M16_04 or CT_S_01 |

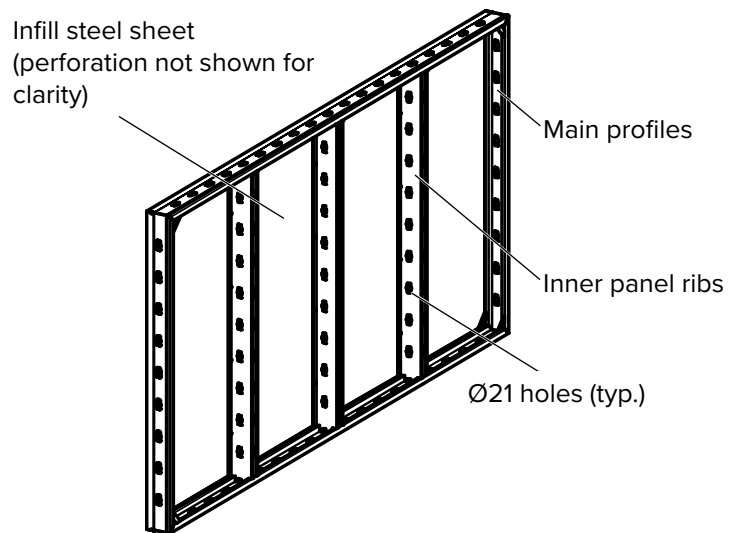


5.4 Cladding

5.4.1 SCR Cladding Panel

One of the cladding options for the SAFESCREEN units. Standard sizes of the SCR Cladding Panels allow for a wide range of configurations of the cladding area.

The SCR Cladding Panels have an perforated steel infill sheet attached to the frame of the panel to provide the required cladding. Note that this infill sheet is not shown in any illustration for clarity purposes.



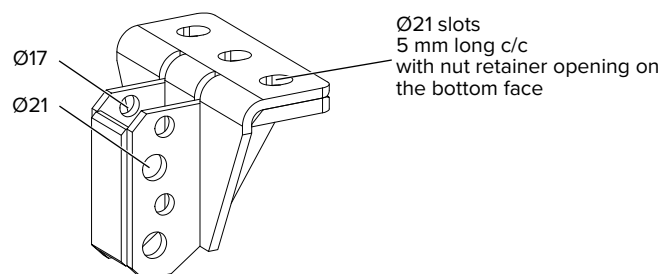
The connections between SCR Cladding Panels will vary depending on the job requirements. Refer to the supplied design scheme for more details.



The SCR IK Flange Cladding Panel Connectors must always be in pairs. The SCR Cladding Panels must be secured to the rail using 2no. SCR IK Flange Cladding Panel Connectors on both sides of the connection to the vertical structural elements.

5.4.2 SCR Cladding Panel Bearing

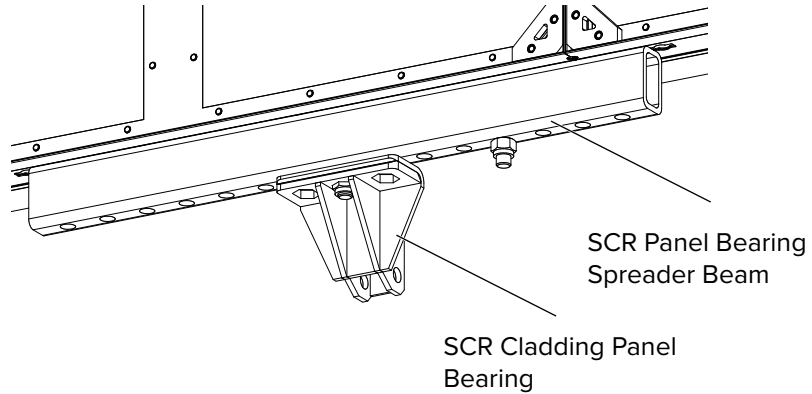
Used in SAFESCREEN units that use SCR Cladding Panels. The SCR Cladding Panel Bearing (code:612056) is attached to the rail to transfer the vertical load of the cladding to the rail.



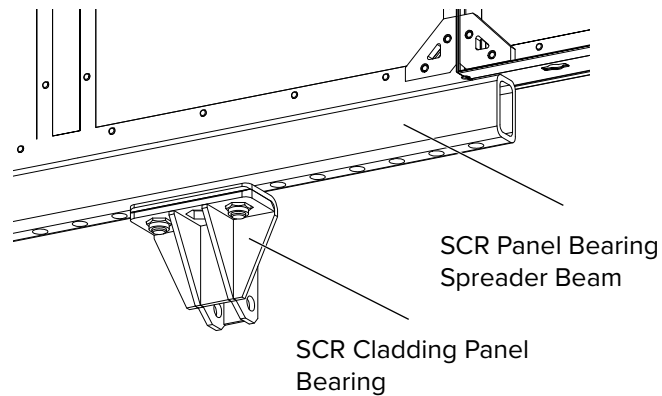
The SCR Panel Bearing Spreader Beam (code:612059) is used in conjunction with the SCR Cladding Panel Bearing (code:612056). The complete weight of the SCR Cladding Panel assembly rests on the SCR Cladding Panel Bearing (code:612056) in the bottom of the set-up. The SCR Panel Bearing Spreader Beam (code:612059) is used if the SCR Cladding Panel Bearing (code:612056) is placed between two ribs or frame verticals of the cladding panel and if the weight of the complete set-up is so big that the horizontal bottom frame of the panel might be overloaded. Please note, that if a SCR Panel Bearing Spreader Beam (code:612059) is necessary on one vertical frame or mast of the SCF 60 unit it must be used on the second as well.

The SCR Panel Bearing Spreader Beam (code:612059) can be attached to the SCR Cladding Panel Bearing (code:612056) using one of several options:

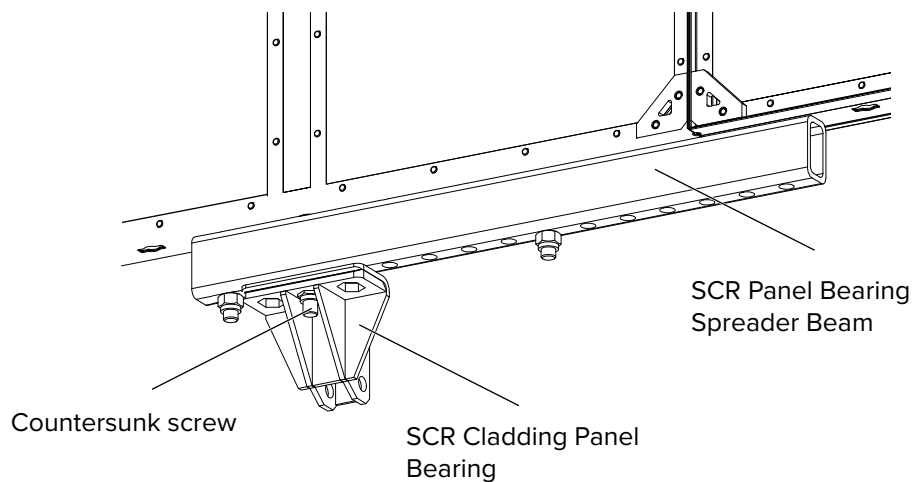
- Single bolt through spreader beam and panel. This is the preferred option, to be used when the the center hole of the cladding bearing matches with a hole in the panel.



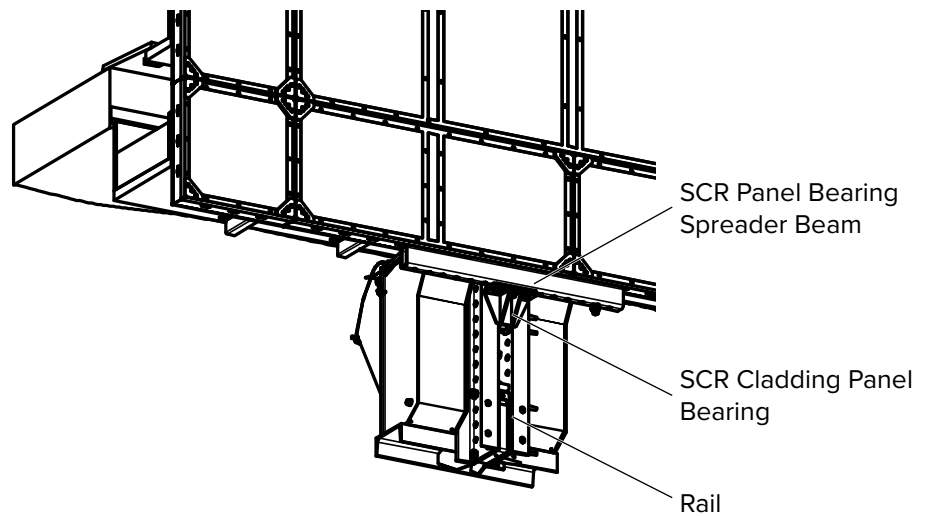
- Double bolt through spreader beam and panel. To be used when the two side holes of the cladding panel bearing match with two holes in the panel.



- Single countersunk bolt over the center of the cladding panel bearing and 2no. additional M20x110 bolts beside the bearing. To be used when a panel rib or panel joint is directly above the cladding panel bearing.

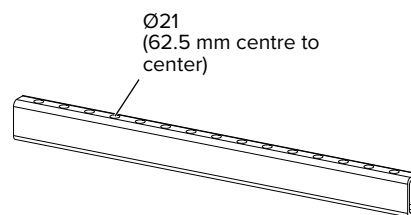


The fasteners used to secure the SCR Cladding Panel Bearing (code:612056) may vary depending on the SAFESCREEN unit. Please refer to the supplied design scheme.

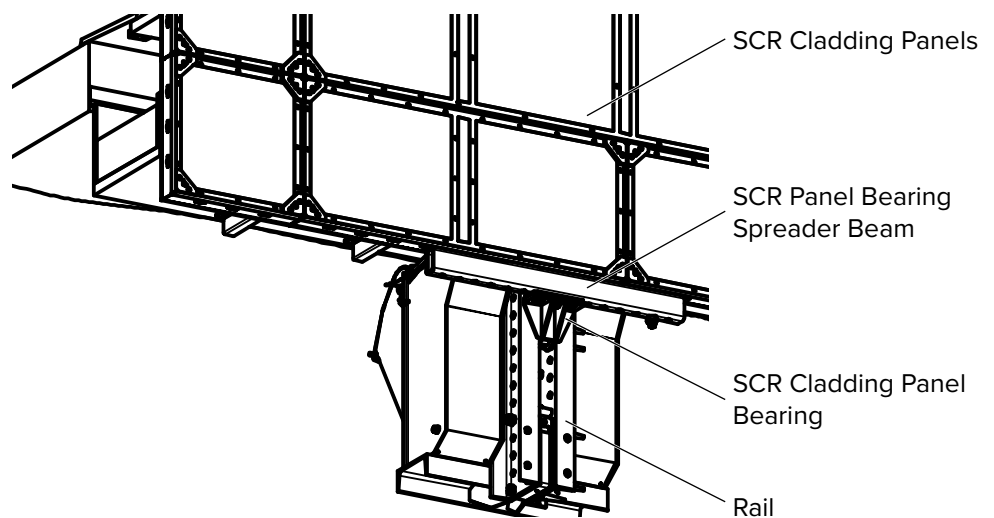


5.4.3 SCR Panel Bearing Spreader Beam

It is used to support the weight of the cladding when the SCR Cladding Panel Bearing (code:612056) is positioned in between panel ribs and / or panel joints. It collects the vertical loads coming through the ribs / joints and transfers it to the rail.



The SCR Panel Bearing Spreader Beam (code:612059) is attached to the SCR Cladding Panels using 2no. SCF60/SCR-G2-CT_M20_11.

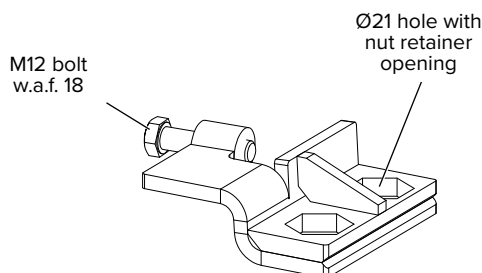


The SCR Panel Bearing Spreader Beam (code:612059) must be positioned so that it supports both ribs of the SCR Cladding Panels or the vertical joint.

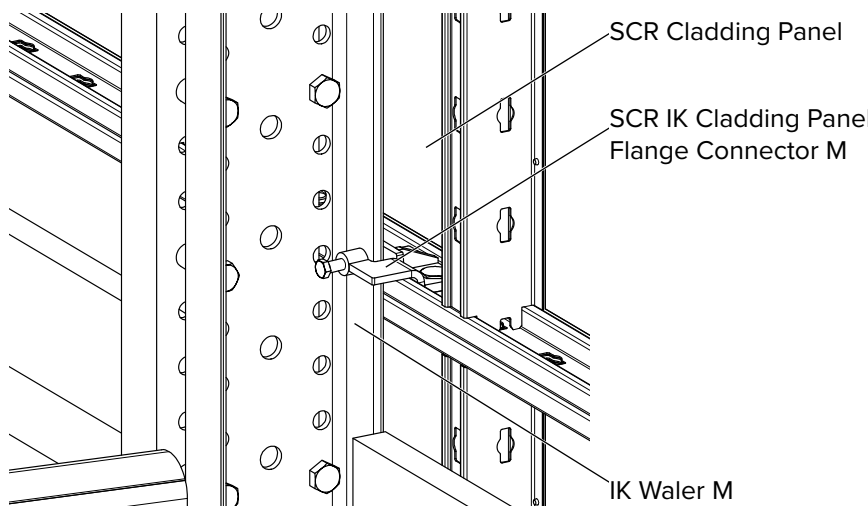
If a rib of a SCR Cladding Panel is directly above the plate of the SCR Cladding Panel Bearing (code:612056) use countersunk screws to connect the SCR Panel Bearing Spreader Beam (code:612059) to the SCR Cladding Panel Bearing (code:612056).

5.4.4 SCR IK Flange Cladding Panel Connector M

Used to connect the SCR Cladding Panels to the IK Waler M. Only used to restrain the panels horizontally. The SCR Cladding Panels can be attached to the SCR IK Cladding Panel Flange Connector M (code:611540) using any of the Ø21 mm holes.



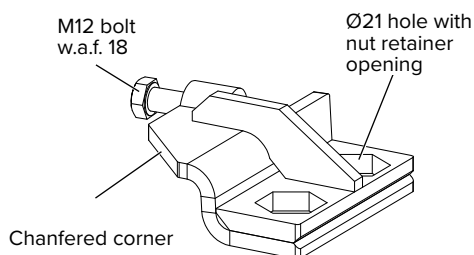
The SCR IK Cladding Panel Flange Connector M (code:611540) connects to the SCR Cladding Panels using 2no CT_M20_03. To secure the SCR IK Cladding Panel Flange Connector M (code:611540) to the rail tighten the captive M12 bolt against the flange of the IK Waler M.



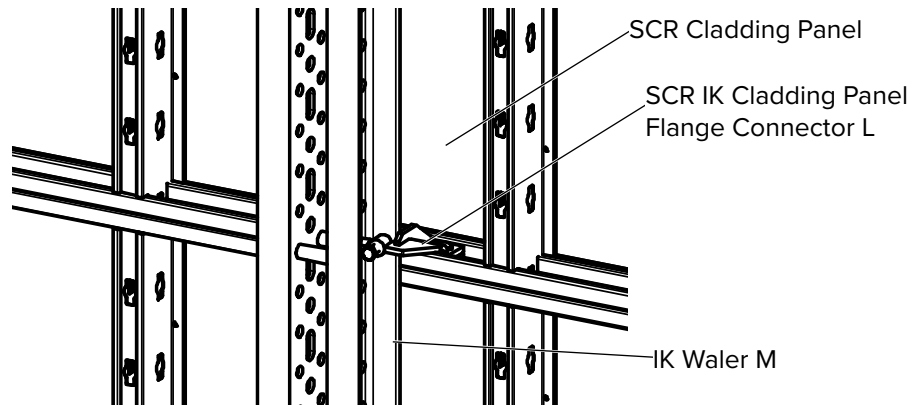
The SCR IK Cladding Panel Flange Connector M (code:611540) must always be used in pairs. The SCR Cladding Panels must be secured to the rail using 2no. SCR IK Cladding Panel Flange Connector M (code:611540) on both sides of the connection to the rail.

5.4.5 SCR IK Flange Cladding Panel Connector L

Used to connect the SCR Cladding Panels to the IK Waler L. The SCR IK Cladding Panel Flange Connector L (code:611545) can be differentiated from the SCR IK Cladding Panel Flange Connector M (code:611540) by the chamfered corner next to the M12 bolt.



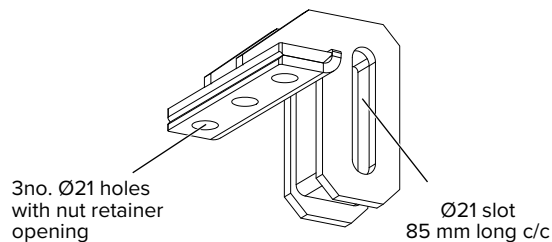
The SCR IK Cladding Panel Flange Connector L (code:611545) connects to the SCR Cladding Panels using 2no. CT_M20_03. To secure the SCR IK Cladding Panel Flange Connector L (code:611545) to the rail tighten the captive M12 bolt against the flange of the IK Waler L.



The SCR IK Cladding Panel Flange Connector L (code:611545) must always be used in pairs. The SCR Cladding Panels must be secured to the rail using 2no. SCR IK Cladding Panel Flange Connector M (code:611540) on both sides of the connection to the rail.

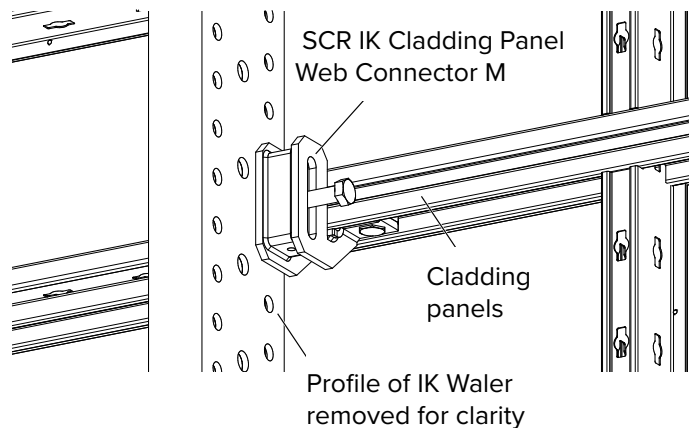
5.4.6 SCR IK Cladding Panel Web Connector M

The SCR IK Cladding Panel Web Connector M (code:611550) is used to connect SCR Cladding Panels to the IK Waler M as an alternative for when it's not possible to install the SCR IK Cladding Panel Flange Connector M (code:611540), see page 74, because it will clash with the profiles of the SCR Cladding Panels.



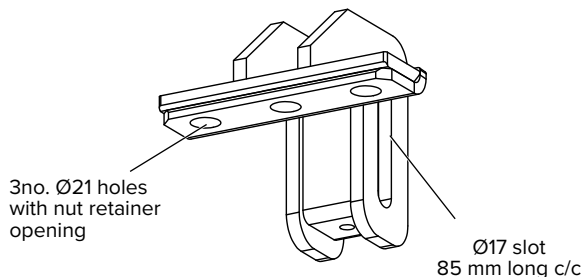
The SCR IK Cladding Panel Web Connector M (code:611550) is attached to the SCR Cladding Panels using 2no. CT_M20_03 and to the IK Waler M using the SCF60/SCR-G2-CT_M20_07 connection type.

Typically the SCR IK Cladding Panel Web Connector M (code:611550) is used in every row of SCR Cladding Panels to secure the panels to the IK Waler M.



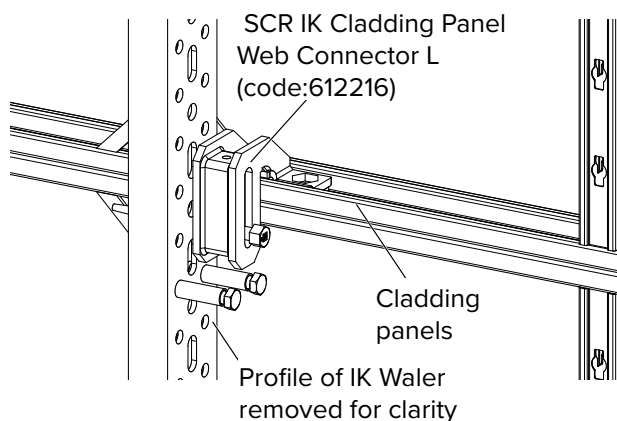
5.4.7 SCR IK Cladding Panel Web Connector L

The SCR IK Cladding Panel Web Connector L (code:612216) is used to connect SCR Cladding Panels to the IK Waler L as an alternative for when it's not possible to install the SCR IK Cladding Panel Flange Connector L (code:611545), see page 75, because it will clash with the profiles of the SCR Cladding Panels.



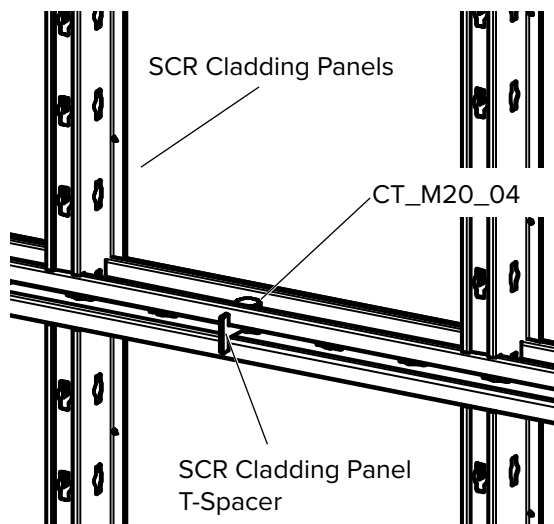
The SCR IK Cladding Panel Web Connector L (code:612216) is attached to the SCR Cladding Panels using 2no. CT_M20_03 and to the IK Waler L using the SCF60/SCR-G2-CT_M16_07 connection type.

Typically the SCR IK Cladding Panel Web Connector L (code:612216) is used in every row of SCR Cladding Panels to secure the panels to the IK Waler L.



5.4.8 SCR Cladding Panel T-Spacer

The SCR Cladding Panel T-Spacer (code:611548) is used in SAFESCREEN units with extendable panels. The SCR Cladding Panel T-Spacer (code:611548) is used to suspend the panel carrying the platform to a second panel to better distribute the vertical loads between the panels. The position of the SCR Cladding Panel T-Spacer (code:611548) will be specified in the supplied design scheme.

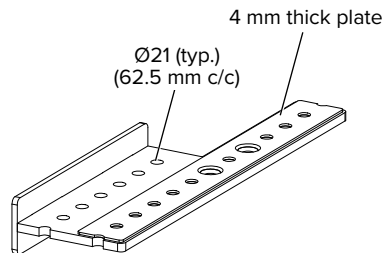




The SCR Cladding Panel T-Spacer (code:611548) is required to support panels that hold platforms against a second panel. Only use the SCR Cladding Panel T-Spacer (code:611548) where specified in the supplied design scheme.

5.4.9 SCR Extension Panel Bearing

The SCR Extension Panel Bearing (code:611962) is used in extendable SAFESCREEN units, to allow the extension panel to slide outwards or inwards thus extending or retracting the SAFESCREEN unit.

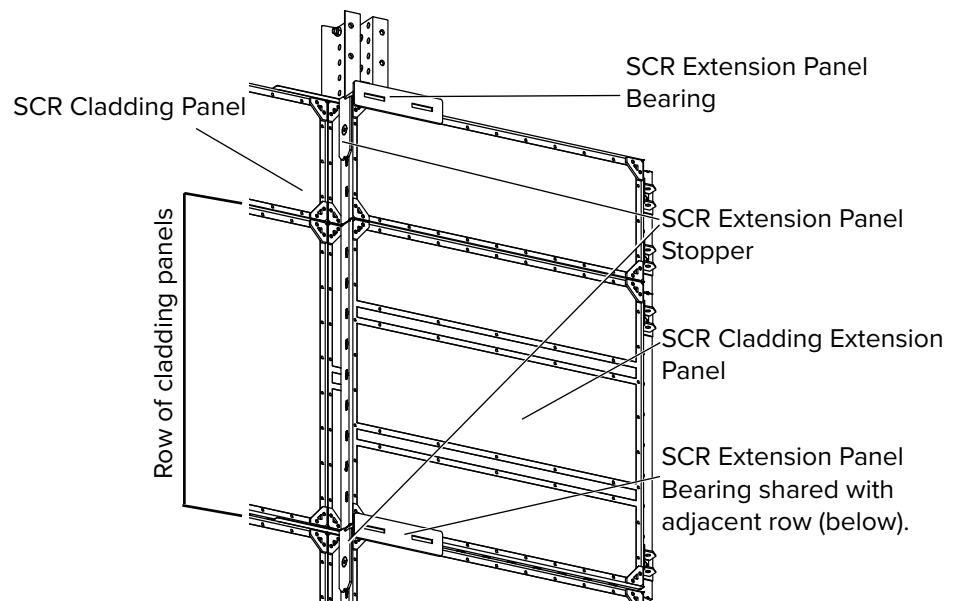


The SCR Extension Panel Bearing (code:611962) is attached to the SCR Cladding Panels. The SCR Extension Panel Bearing (code:611962) is attached to the SCR Cladding Panels using 2no. CT_M20_03. The cladding extension panels are locked in position using a CT_S_02 connection type.

Every row of SCR Cladding Panels must have a SCR Extension Panel Bearing (code:611962) on both the outer corners (top and bottom) with vertically adjacent rows sharing a common SCR Extension Panel Bearing (code:611962). Any deviation from this rule, see example on next page, must be explicitly designed and stated in the design scheme.

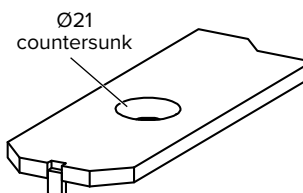
A web connector or a pair of flange connectors must be used at the same position as the SCR Extension Panel Bearing (code:611962), so that every position of the SCR Extension Panel Bearing (code:611962) is attached to the IK Waler.

The bottom position of the SCR Extension Panel Bearing (code:611962) is supported by the SCR Cladding Panel Bearing (code:612056).



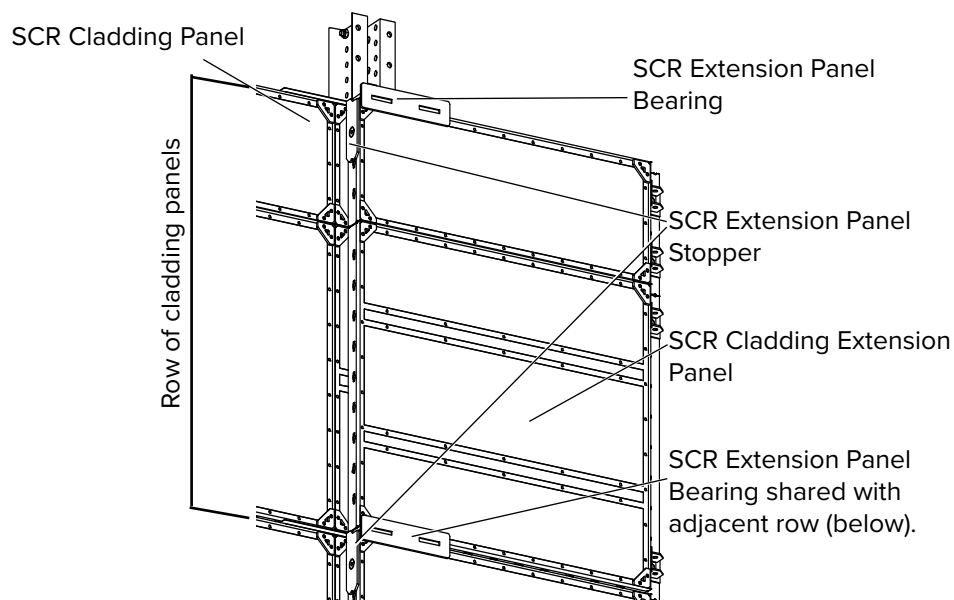
5.4.10 SCR Extension Panel Stopper

The SCR Extension Panel Stopper (code:611966) is used to prevent the SCR Cladding Extension Panel from overextending.



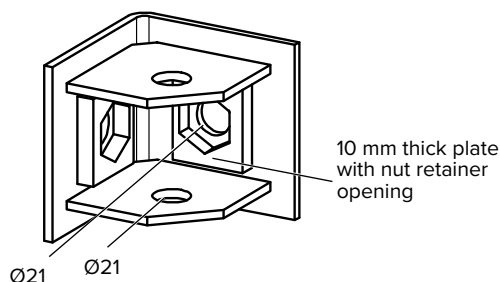
Every row of SCR Cladding Extension Panels must have a SCR Extension Panel Stopper (code: 611966) on one of the inner corners (top or bottom).

The SCR Extension Panel Stopper (code: 611966) is attached to the SCR Cladding Extension Panel using the CT_CSK_M20_03 connection type.

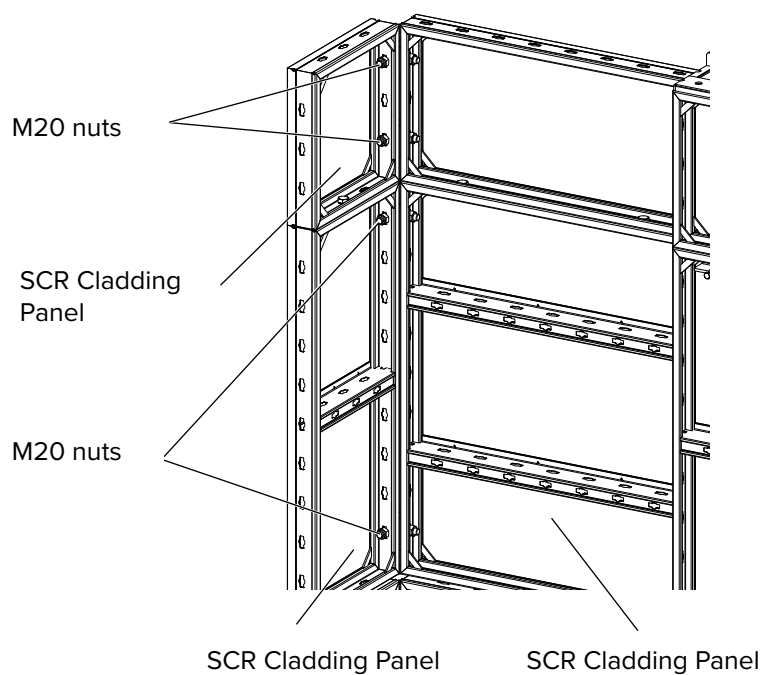
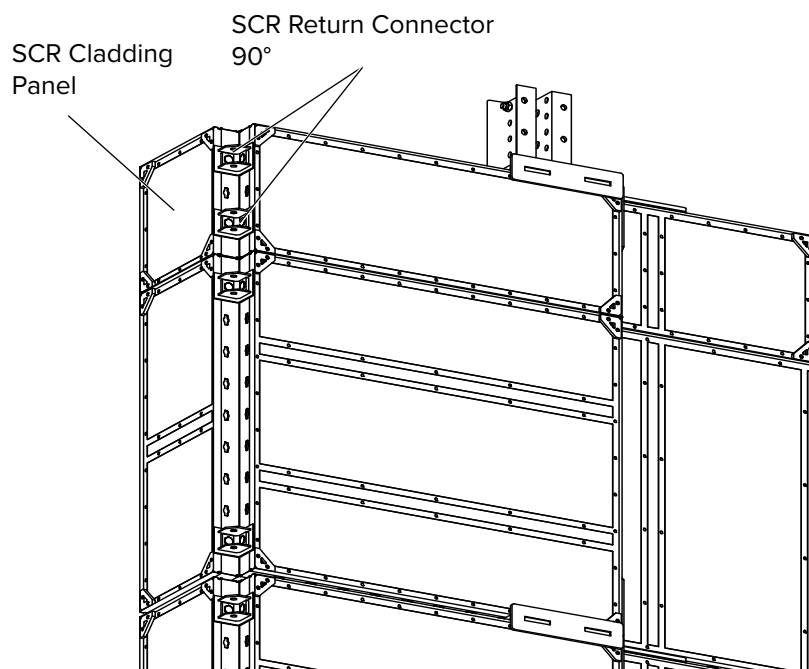


5.4.11 SCR Return Connector 90°

The SCR Return Connector 90° (code:611575) allows 2no. cladding panels to be attached to each other at right angles to create a return. The SCR Return Connector 90° (code:611575) is positioned on the outer side of the corner.



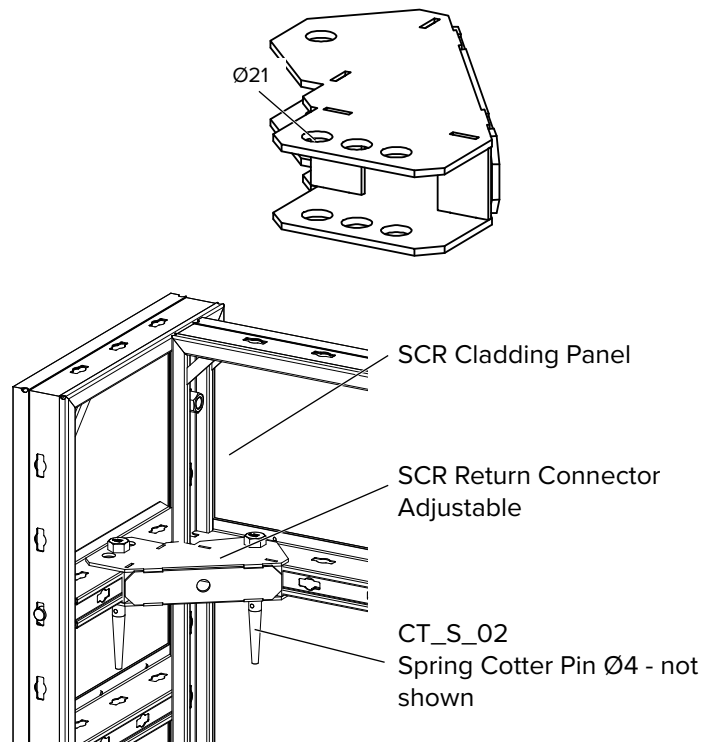
Each vertical joint of the SCR Cladding Panels must have 2no. SCR Return Connector 90° (code:611575) and the height of the return panels must match the height of the extension panels so that the holes and horizontal joints are always on the same level. The SCR Return Connector 90° (code:611575) should always be connected to the holes on the SCR Cladding Panels the closest to the horizontal joints.



In some cases the SCR Panel Joint Reinforcement Plates (code:611903) may not be required. Refer to the supplied design scheme.

5.4.12 SCR Return Connector Adjustable

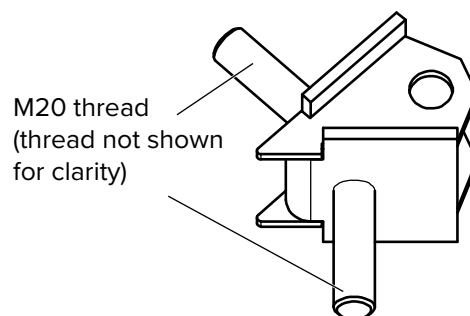
The SCR Return Connector Adjustable (code:611620) allows to attach two cladding panels at right angles to create a return. The SCR Return Connector Adjustable (code:611620) is positioned on the inner side of the corner and attached to the inner profiles of the cladding panels. The SCR Return Connector Adjustable (code:611620) allows for the return panel to extend beyond the front facing panels (fly-past). The bolting positions may vary depending on the type of SCR Cladding Panels used.

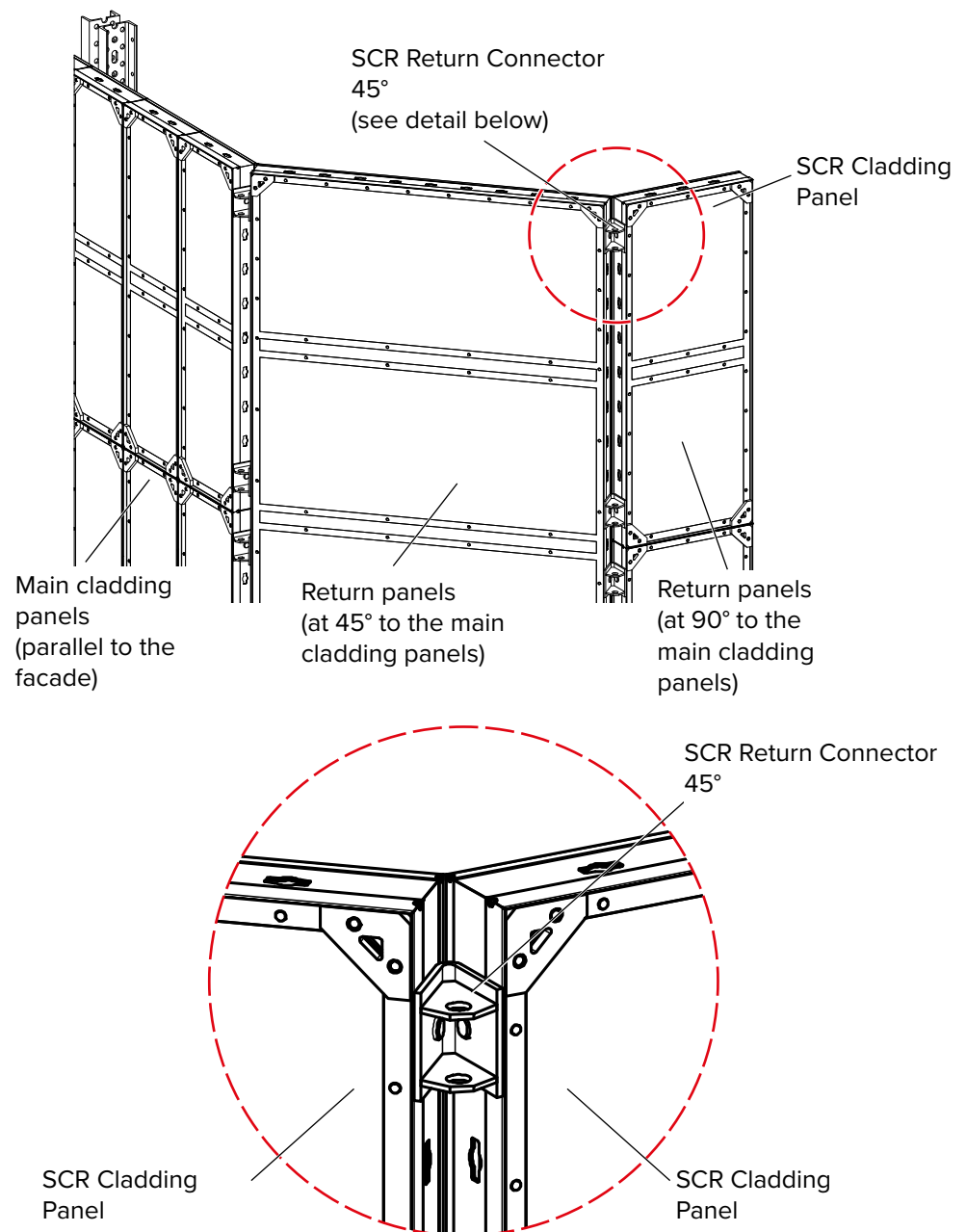


An internal corner brace, the SCR Return Panel Brace (code:612245), can also be attached to the SCR Return Connector Adjustable (code:611620). See page 87.

5.4.13 SCR Return Connector 45°

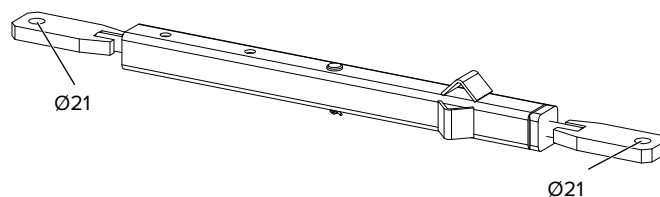
The SCR Return Connector 45° (code:611615) is used in conjunction with SCR Panel Joint Reinforcement Plates (code:611903) unless specified otherwise, to attach SCR Cladding Panels to each other at a 45° angle. This component can be used to create double return setups.



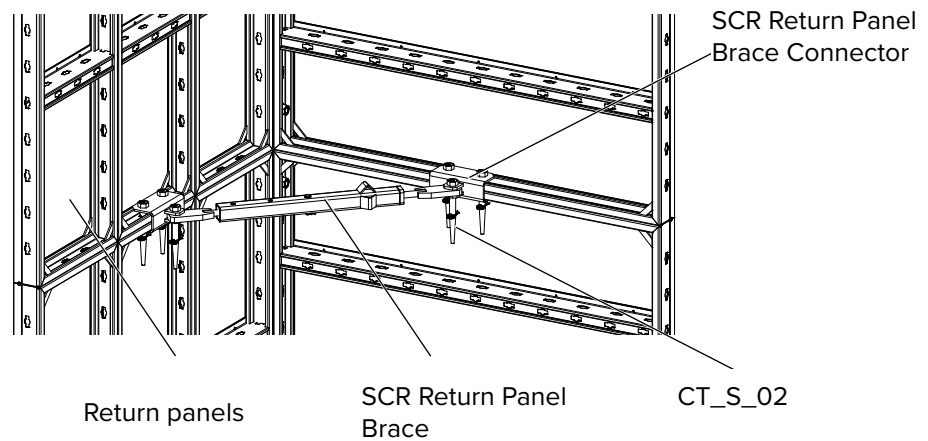


5.4.14 SCR Return Panel Brace

Used in conjunction with the SCR Return Panel Brace Connector (code:612240) to provide additional bracing to the return panels.



The SCR Return Panel Brace is attached to the SCR Return Panel Brace Connector (code:612240) using the G2-CT_S_02 connection type.



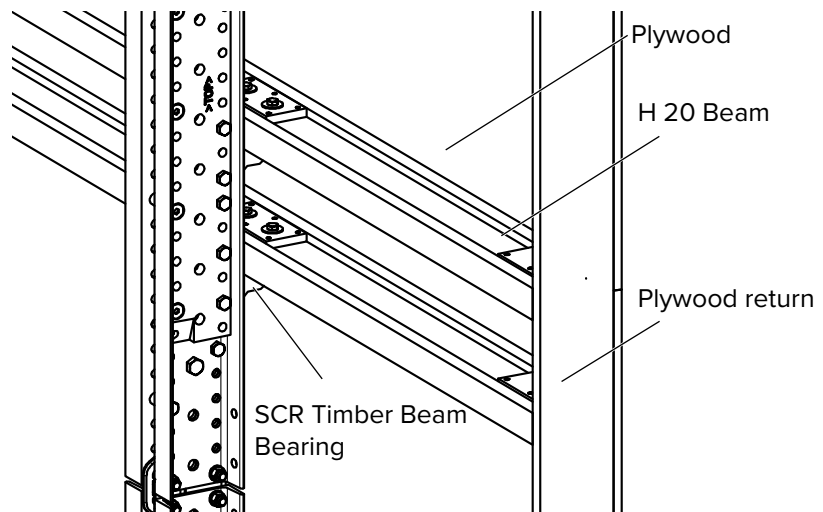
5.4.15 SCR Return Panel Brace Connector

Used in conjunction with the SCR Return Panel Brace (code:612245) to brace the return panels in fixed width units, see above.

5.4.16 H 20 Beam

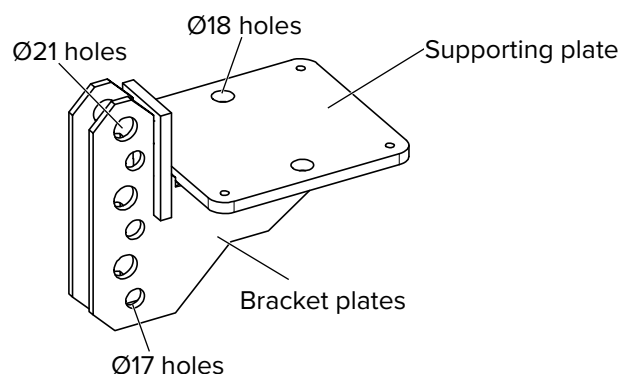
H 20 Beams, or laminated timber beams 200 x 80 mm, with plywood or corrugated sheets screwed into them can be used to form the cladding of the SAFESCREEN units. The H 20 Beams are attached to the IK Walers using the SCR Timber Beam Bearing (code:611250), see page 83.

For more information regarding the layout of the H 20 Beam for cladding, please refer to the supplied design scheme.



5.4.17 SCR Timber Beam Bearing

The SCR Timber Beam Bearing (code:611250) is used to attach the H20 Beams or squared timber beams, that are used as cladding on the SAFESCREEN unit.



It is typically fixed to the IK Waler M using:

- 2no. CT_M20_07, or
- 2no. CT_S_02

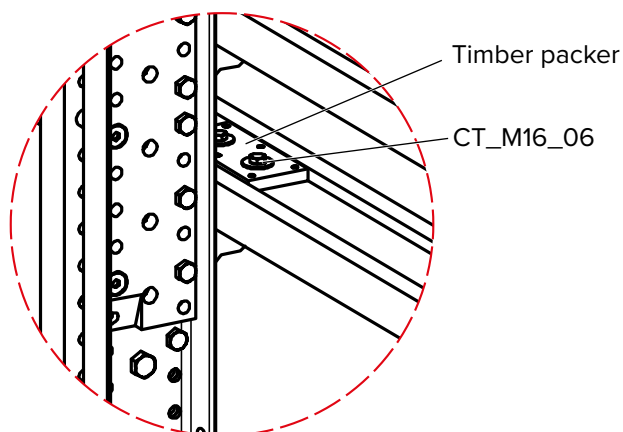
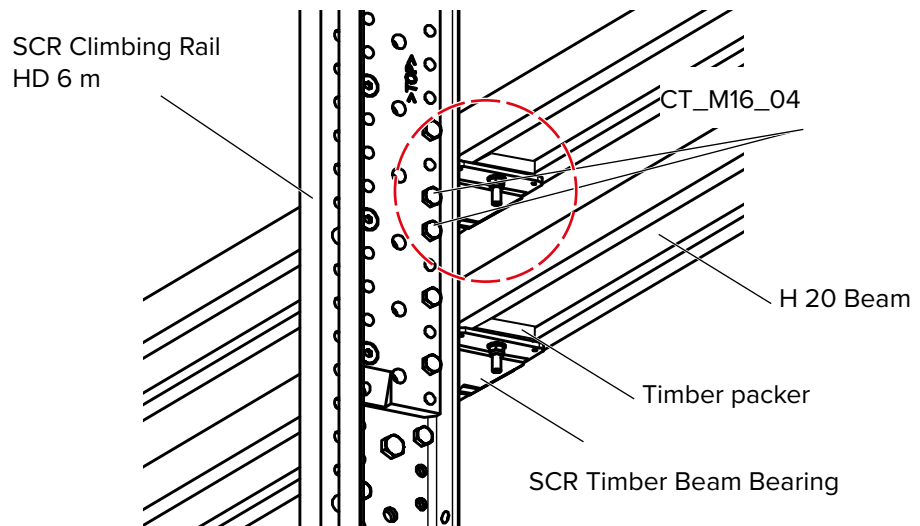
and to the IK Waler L using:

- 2no. CT_M16_04, or
- 2no. CT_S_01.

To fix the SCR Timber Beam Bearing (code:611250) to the H 20 Beams, timber packers are used with 2no. CT_M16_06 connection type.



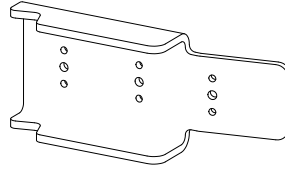
Each H 20 Beam must connect to both rails using a SCR Timber Beam Bearing (code:611250) per connection.



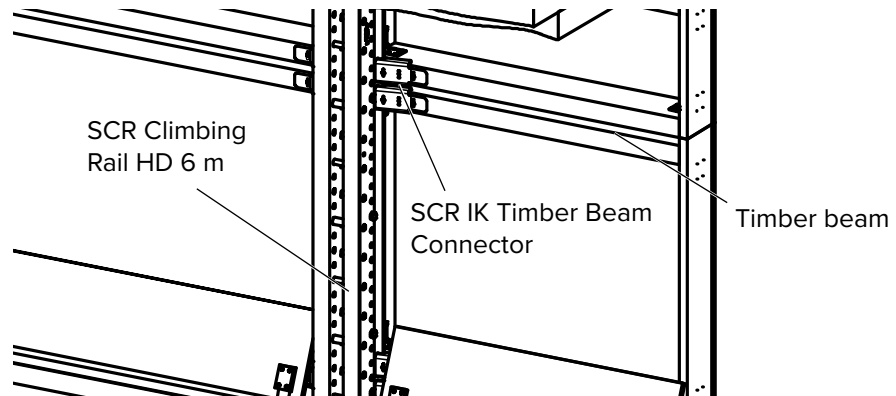
For more information regarding the required fasteners, please refer to the supplied design scheme.

5.4.18 SCR IK Timber Beam Connector

An alternative to using the SCR Timber Beam Bearing (code:611250) is to use the SCR IK Timber Beam Connector (code: 611401). The SCR IK Timber Beam Connector (code: 611401) must be used in pairs (on both sides of the connection of each timber beam with a IK Waler).



The SCR IK Timber Beam Connector (code:611401) can be attached to the timber beams using screws specified in the supplied design scheme.



Always use in pairs. Each H 20 Beam must connect to both rails using 2no. SCR IK Timber Beam Connector (code: 611401) per connection.

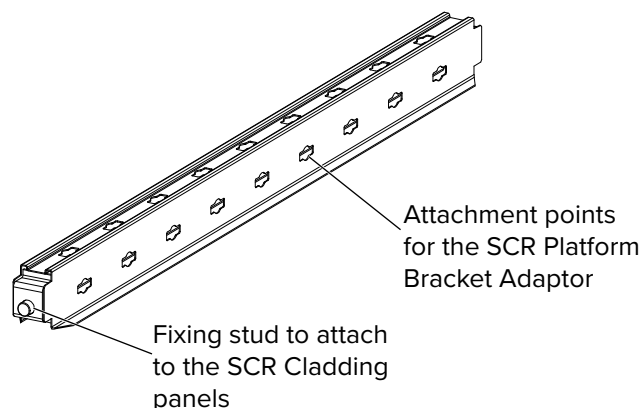
The SCR IK Timber Beam Connector (code: 611401) does not take vertical loads so the bottom H 20 Beam must be supported using the SCR Timber Beam Bearing (code:611250), see page 83.

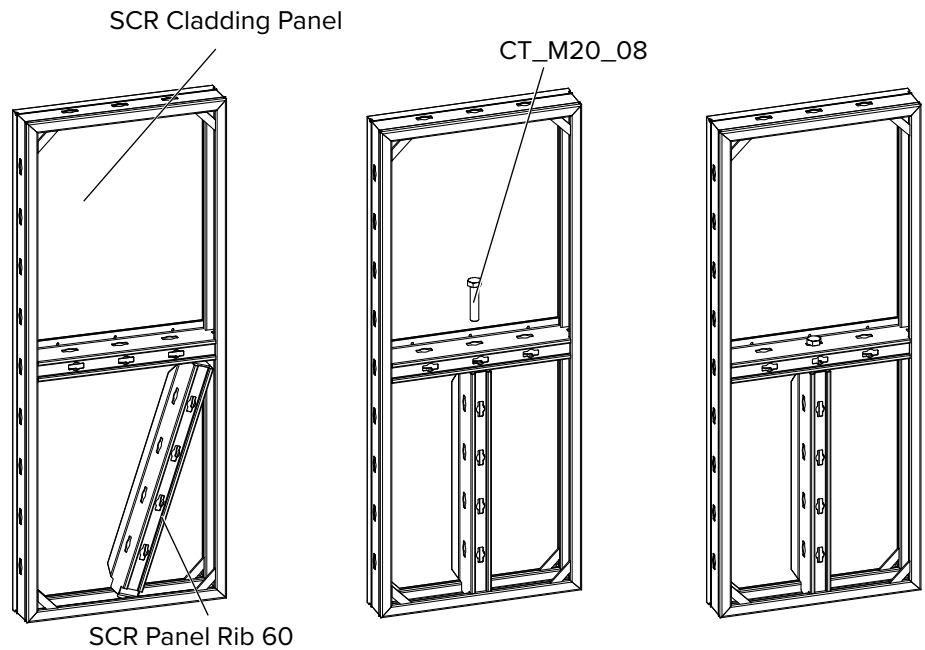
5.5 Platforms

5.5.1 SCR Panel Rib

Used with the cladding panels to stiffen the panels or to create more attachment points for the SCR Platform Bracket Adaptors.

The SCR Panel Rib is attached to the panels by slotting the stud at one end into one of the hole positions on the edge profile of the cladding panel. The SCR Panel Rib is then secured by bolting the captivated nut on the other end of the SCR Panel Rib to the opposite edge profile of the cladding panel using a CT_M20_02 connection type, or for a SCR Panel Rib 60 the rib is fixed by CT_M20_08 to the internal profile of the panel.



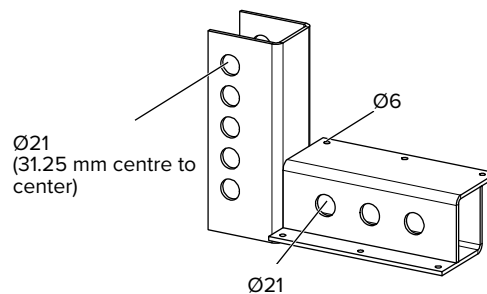


Ensure that the SCR Panel Ribs are positioned so that the slots of the SCR Panel Ribs are aligned with the slots of the SCR Cladding Panels.

See also SCR Platform Bracket Adaptor (page 93), SCR Panel Platform Bracket (code:611580) (page 86) and SCR Panel Platform Bracket Extension (code:612239) (page 87).

5.5.2 SCR Panel Platform Bracket

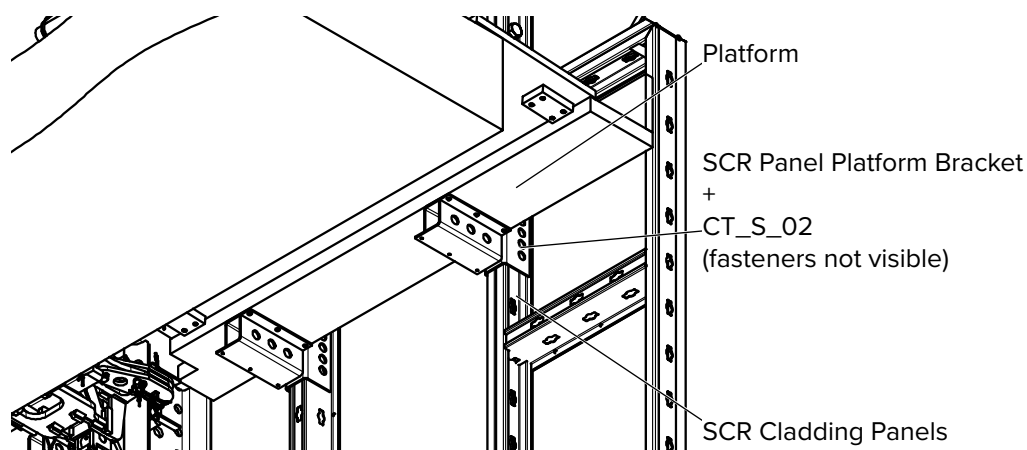
The SCR Panel Platform Bracket (code:611580) is used attached to the SCR Cladding Panels to provide support for a platform.



It is typically fixed to a cladding panel, an additional rib or to a Platform Bracket Adaptor using:

- 2no. CT_M20_07, or
- 2no. CT_S_02

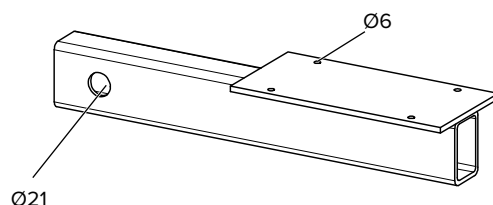
The platform is secured to the SCR Panel Platform Bracket (code:611580) using the CT_WC_02 connection type or as specified by the supplied design scheme.



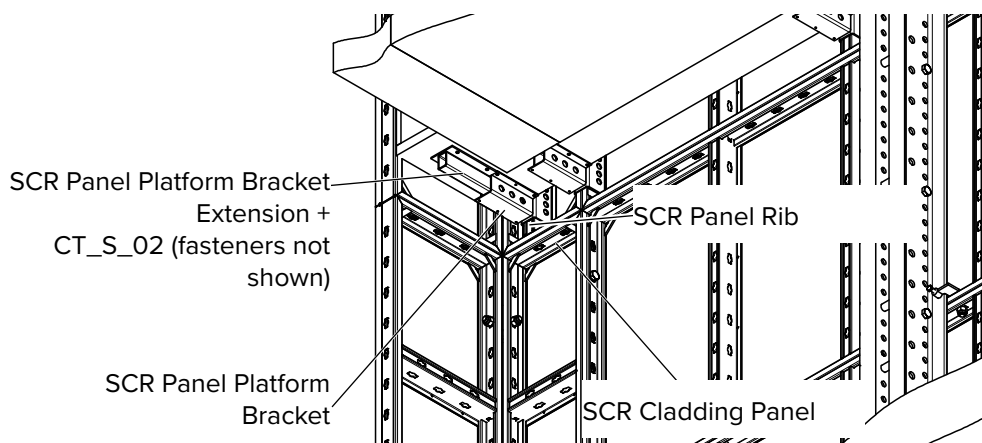
When the SCR Panel Platform Bracket (code:611580) can not be attached to the profile of a SCR Cladding Panel, a SCR Panel Rib (see page 90) can be used to provide additional support points. In SAFESCREEN units with extendable widths an additional SCR Platform Bracket Adaptor (see page 93) to the SCR Panel Rib is required if a SCR Panel Platform Bracket (code:611580) is to be installed in the extendable panels.

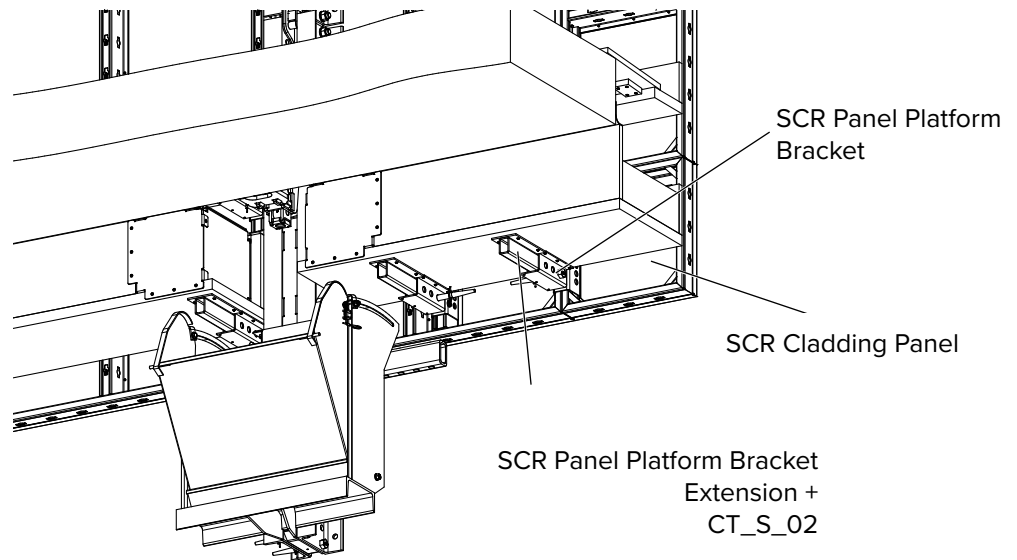
5.5.3 SCR Panel Platform Bracket Extension

The SCR Panel Platform Bracket Extension (code:612239) is used in conjunction with the SCR Panel Platform Bracket (code:611580) to extend the support for a platform. The SCR Panel Platform Bracket Extension (code:612239) is attached to the SCR Panel Platform Bracket (code:611580) using the CT_S_02 connection type or alternatively using the CT_M20_07 connection type.



The platform is secured to the SCR Panel Platform Bracket Extension (code:612239) using the CT_WC_02 connection type or as specified by the supplied design scheme.

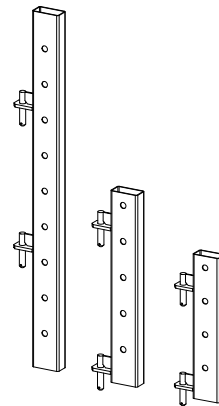




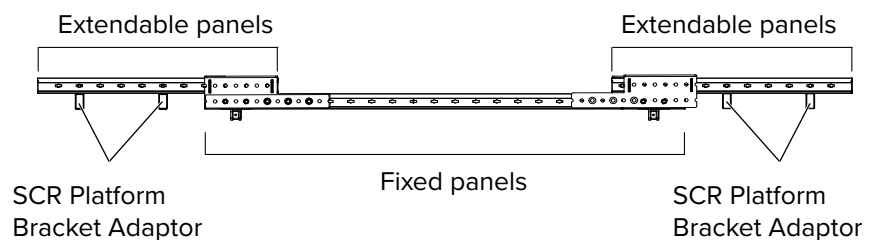
See also SCR Panel Rib (page 90), SCR Platform Bracket Adaptor (page 93) and SCR Panel Platform Bracket (code:611580) (page 86).

5.5.4 SCR Platform Bracket Adaptor

The SCR Platform Bracket Adaptors are typically used in extendable width SAFESCREEN units. Due to the recess caused by the extendable panels, the SCR Platform Bracket Adaptors are used attached to the profiles of the SCR Cladding Panels in the extendable area, to make the SCR Panel Platform Bracket (code:611580) used in that area flush with the rest of the unit.

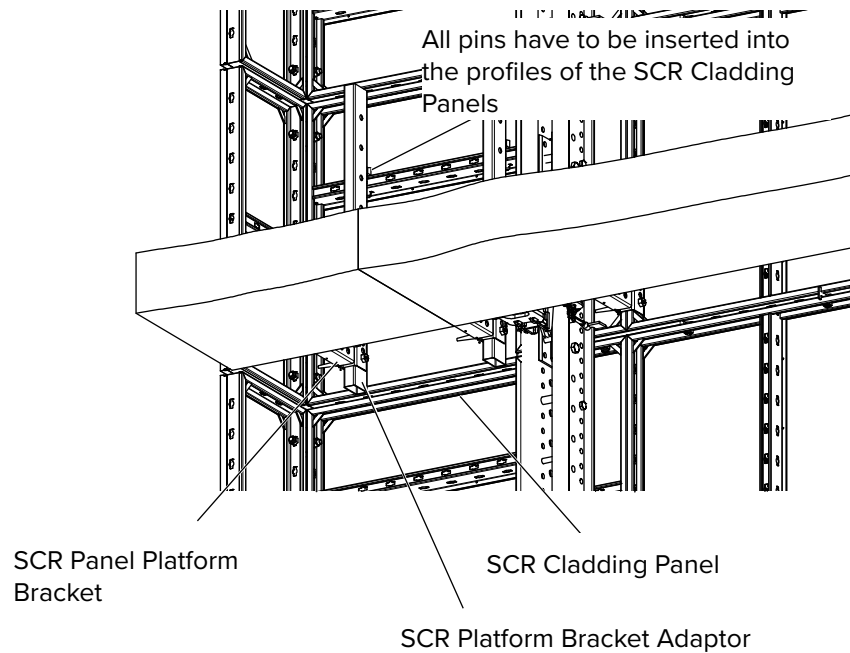


Plan view of SAFESCREEN unit



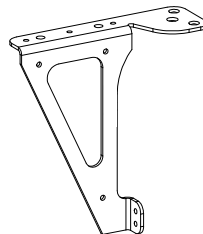
The SCR Platform Bracket Adaptors are attached by inserting the pins into the slots on

the profiles of the SCR Cladding Panels and secured using spring pins.

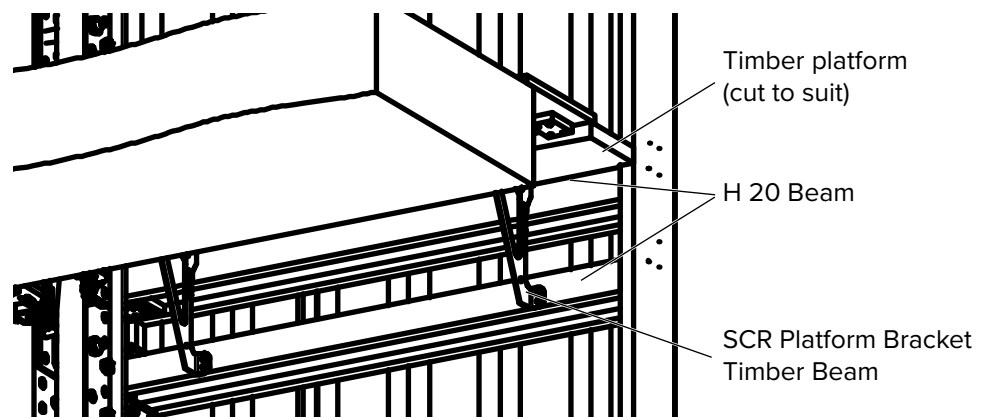


5.5.5 SCR Platform Bracket Timber Beam

The SCR Platform Bracket Timber Beam (code:611255) is used to support timber platforms on the single rail SAFESCREEN units with timber cladding.



The SCR Platform Bracket Timber Beam (code:611255) can be attached to the timber beams at the top using 2no. CT_WC_10, or if not possible then use the CT_M16_03 connection type. The SCR Platform Bracket Timber Beam (code:611255) can be fixed at the bottom using a CT_WC_10 connection type. A 60 x 60 mm timber packer can be used at the bottom to extend the platform towards the slab edge.



For more information regarding the position and quantity of the SCR Platform Bracket Timber Beam (code:611255), please refer to the supplied design scheme.

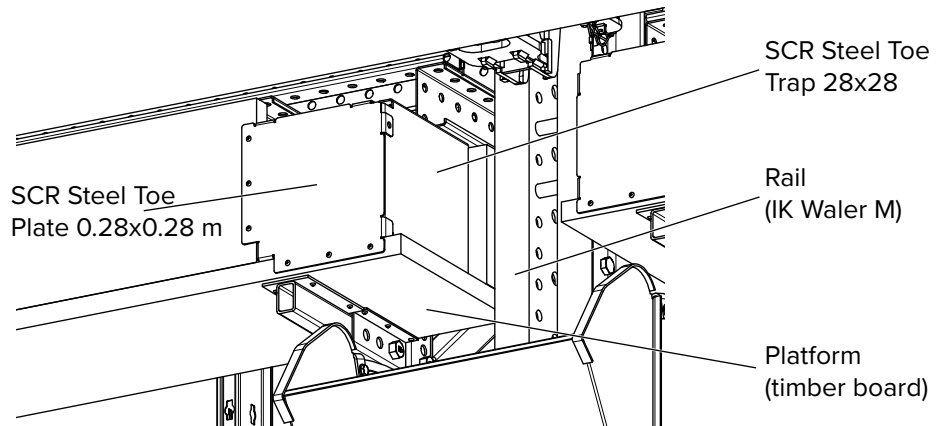
5.5.6 SCR Platform Bracket Timber Beam Long

The SCR Platform Bracket Timber Beam Long (code:611535) is used in a similar manner as the SCR Platform Bracket Timber Beam (code:611255).

5.5.7 SCR Steel Toe Plate 0.28 x 0.28 m

The SCR Steel Toe Plate 0.28x0.28 m (code:611626) is used to form the corner of the toe board of the bottom safety platform at level -2 of the SAFESCREEN unit. It is secured to the timber using the CT_WC_01 connection type.

It must be used in conjunction with the SCR Steel Toe Trap 28x28 (code:611675).



5.5.8 SCR Steel Toe Trap 28x28

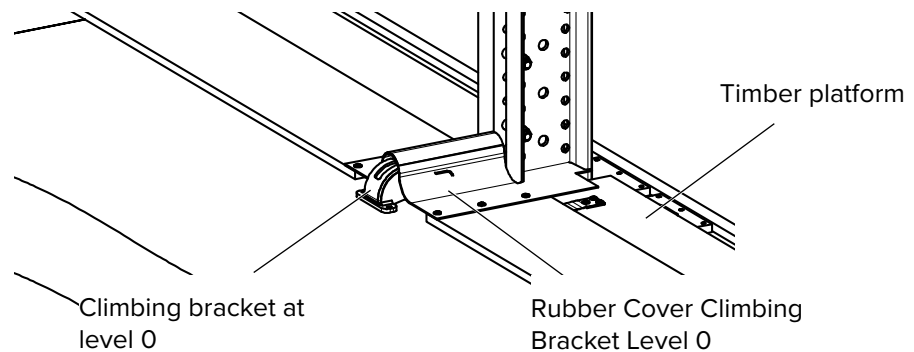
The SCR Steel Toe Trap 28x28 (code:611675) is used to form the corner of the toe board of the bottom safety platform at level -2 of the SAFESCREEN unit.

It must be used in conjunction with the SCR Steel Toe Plate 0.28x0.28 m (code:611626), see page 95.

5.6 Rubber Covers

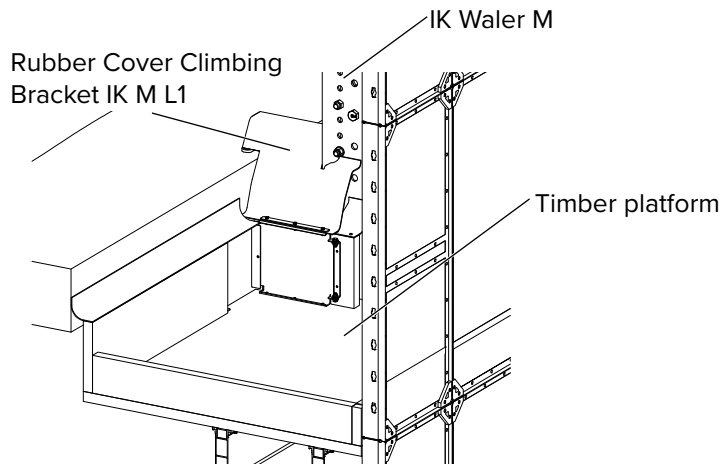
5.6.1 Rubber Cover Climbing Bracket L0

Used in pairs to cover the climbing bracket at level 0, see page 98. Fixed to the foldable timber traps using the CT_WC_01 connection type.



5.6.2 Rubber Cover Climbing Bracket IK M L-1

Used in pairs to cover the climbing bracket at level -1, see page 98. Fixed to the retractable timber platform using the CT_WC_01 connection type.



5.6.3 Rubber Cover IK M L1

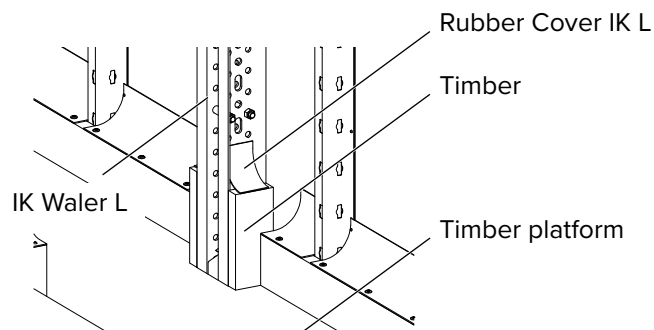
Used in pairs to seal the opening around both sides of the IK Waler M. Fixed to the platform deck or the toe board using CT_WC_01.

5.6.4 Rubber Cover Climbing Bracket IK L L-2

Used in pairs to cover the climbing bracket at level -2, see page 98. Fixed to the retractable timber platform using the CT_WC_01 connection type.

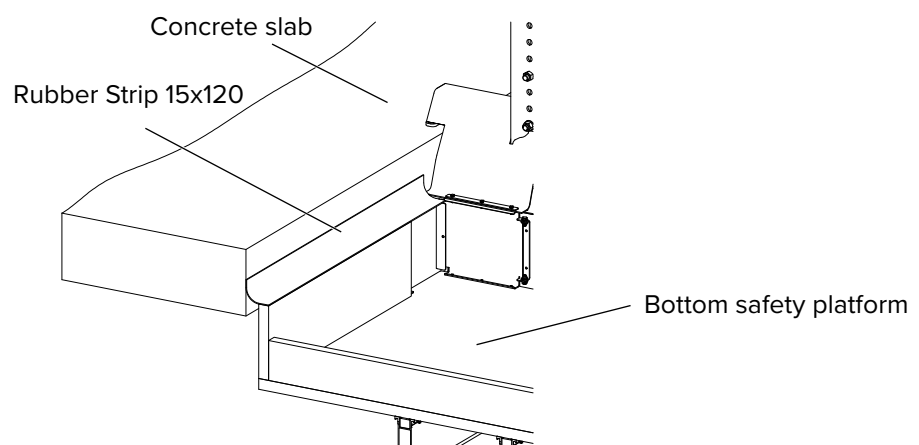
5.6.5 Rubber Cover IK L

Used in pairs to seal the opening around both sides of the IK Waler L. Fixed to the timber platform using nails.



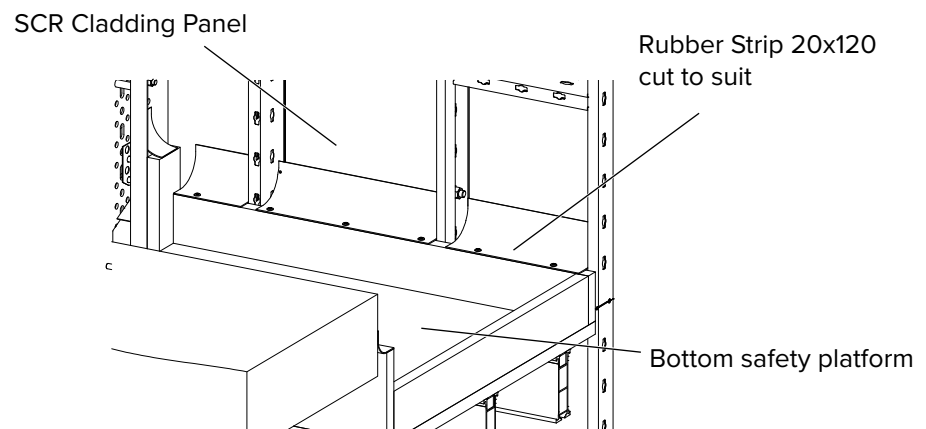
5.6.6 Rubber Strip 15x120

Used to create a seal between the lowest platform and a concrete slab. Fixed to the timber platform using the CT_WC_01 connection type.



5.6.7 Rubber Strip 20x120

Used to create a seal between the lowest platform and the cladding panels. Fixed to the timber platform using nails.



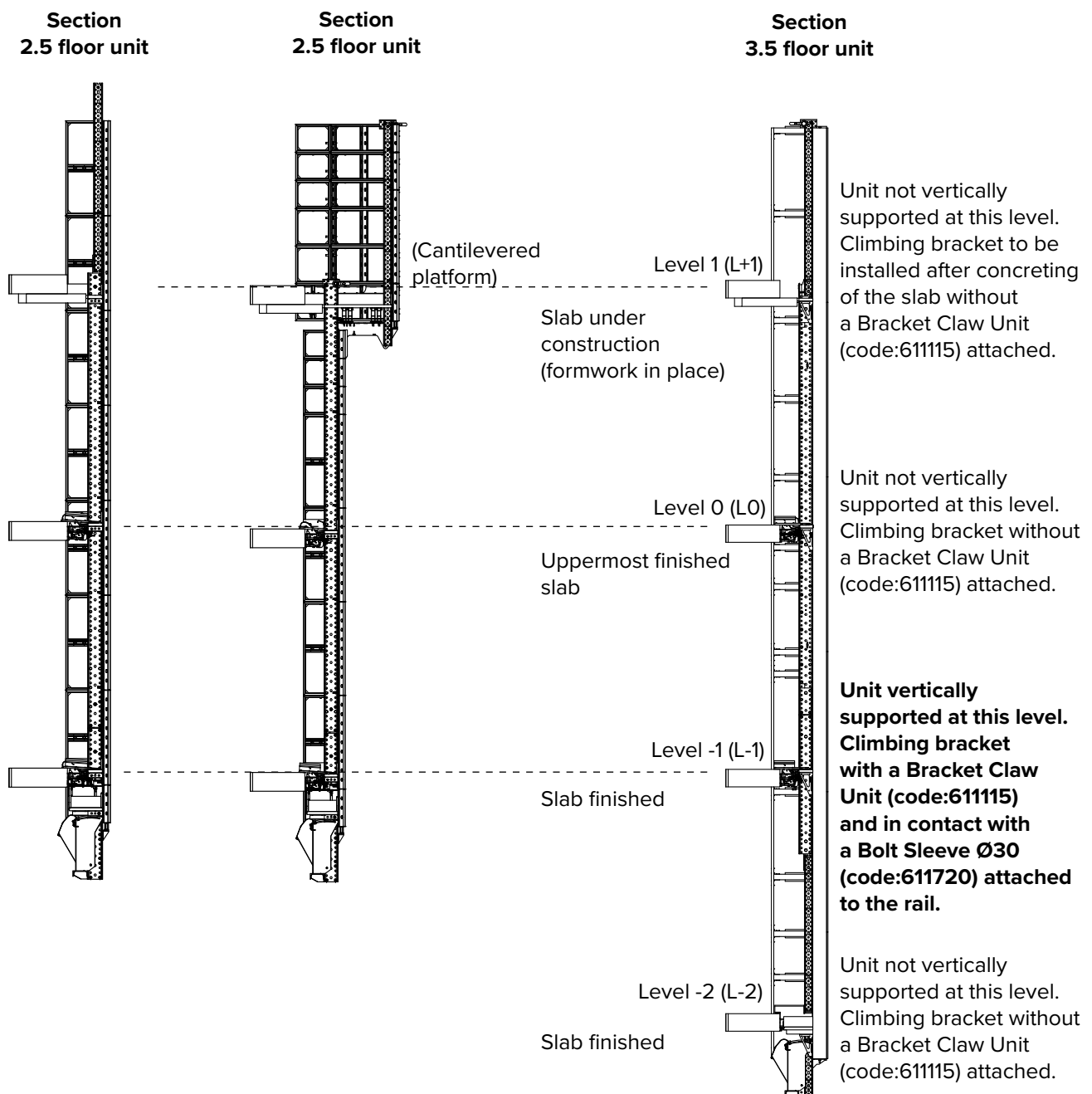
6 Levels and naming conventions

6.1 SAFESCREEN unit levels

Level 0 of the SAFESCREEN unit is the level of the uppermost finished concrete slab and is the position at which the unit is supported horizontally only.

Level -1 is the level at which the unit is typically supported both vertically and horizontally.

Note that the units shown below are in their "working" position. During climbing operations, some climbing brackets will have a Bracket Claw Unit (code:611115) added to them.

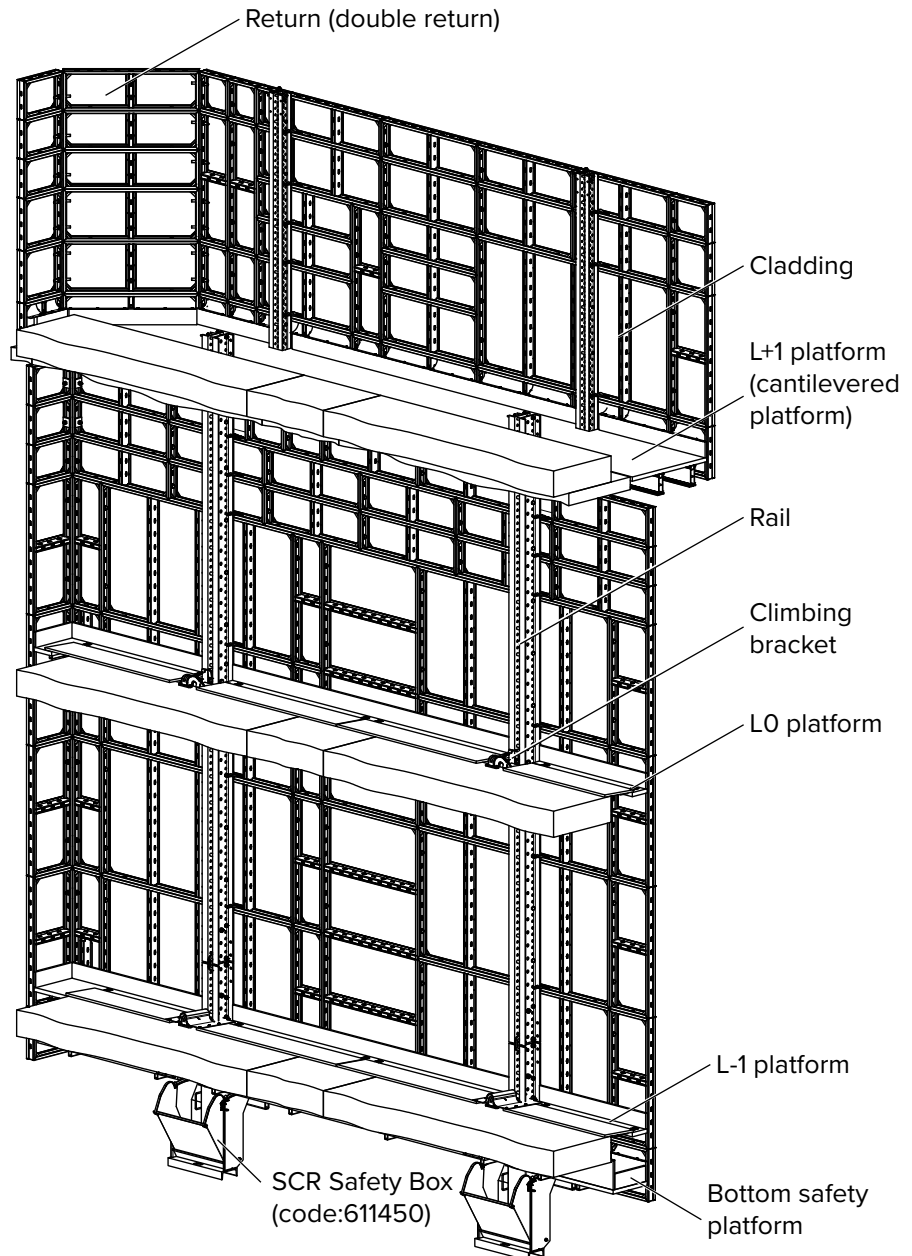


The 2.5 floor SAFESCREEN units cover 2 floors of the concrete structure with an overlap of typically 2.00 m over the top slab.

The 3.5 floor SAFESCREEN units cover 3 floors of the concrete structure with an overlap of typically 2.00 m over the top slab.

6.2 Naming convention

The naming used for the different parts of the SAFESCREEN unit is shown below. The name of some parts may vary depending on the levels of the unit. For reference, the typical section for the configuration shown can be seen in page 98.

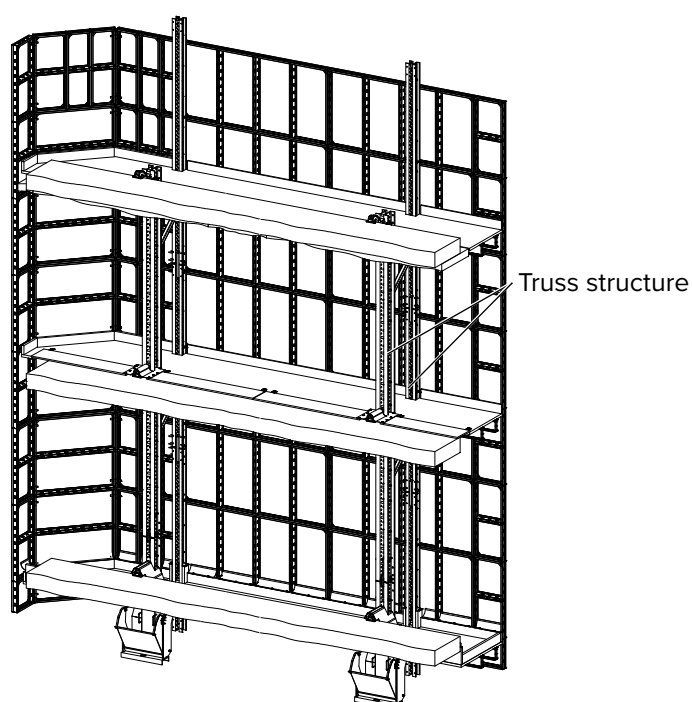
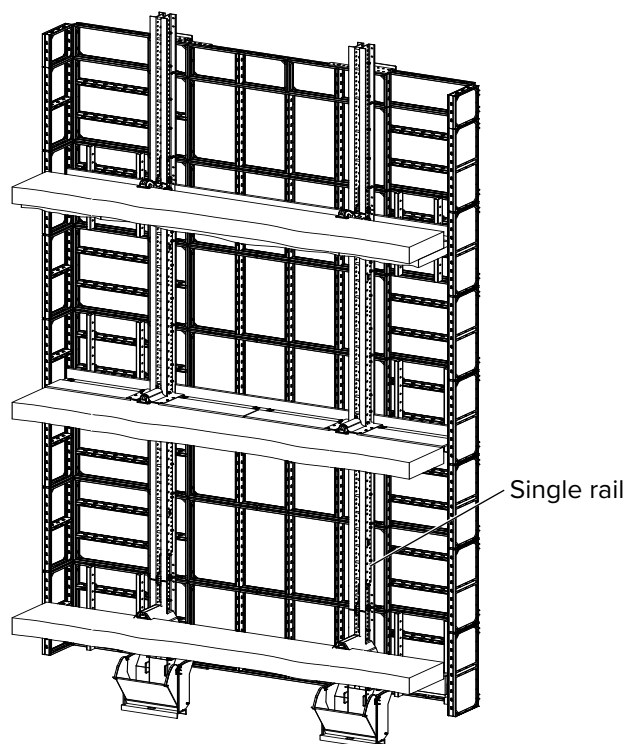


7 Typical configurations

The typical section of a SAFESCREEN unit can vary. Mostly the SAFESCREEN units can be characterised by which type of vertical structure is used and by the type of cladding. Both can vary depending on the job requirements.

7.1 Rails

SAFESCREEN units can be built using either a single rail or a truss structure.



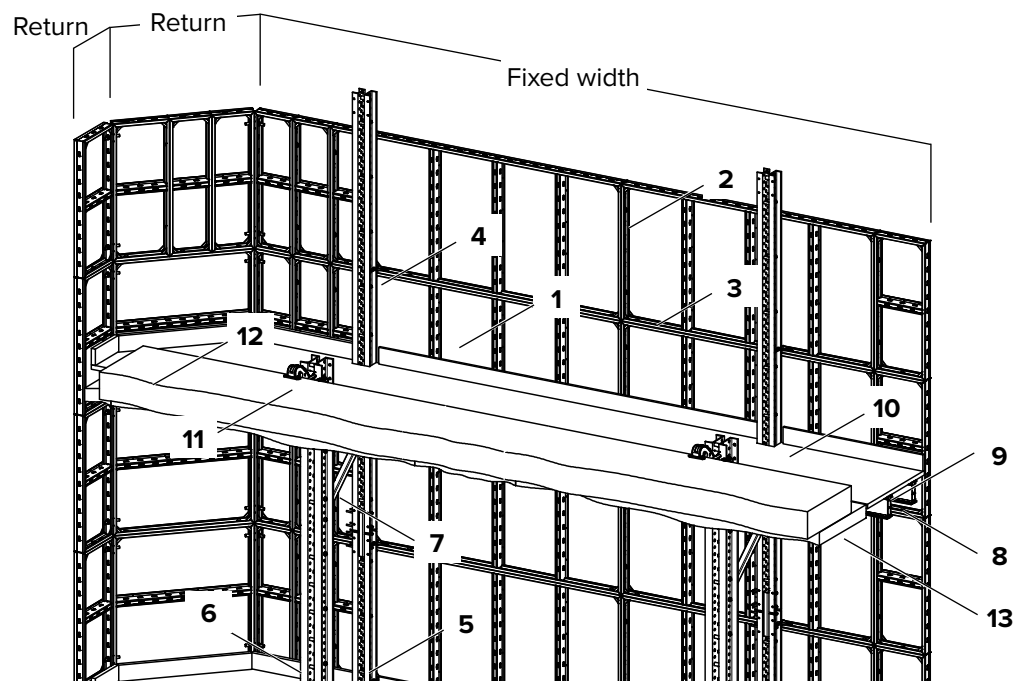
7.2 Cladding

The cladding of the SAFESCREEN units provides not only edge protection but also protection against environmental conditions. The available options are shown in this section. The use of the different types shown might be limited by project specific circumstances such as wind speed and floor height. All shown setups must be subject to statical checking prior to use.

7.2.1 Cladding panels

The SCR Cladding Panels are used to provide a robust option for cladding. The SCR Cladding Panels have standard sizes and are thus able to be combined in various ways to form the cladding area.

Fixed width



1. SCR Cladding Panels
2. Connections as specified by the design scheme
3. No connection of the horizontal joints of the cladding panels unless specified otherwise by the design scheme
4. SCR IK Cladding Panel Flange Connector L (code:611545) or
SCR IK Cladding Panel Web Connector L (code:612216)
5. IK Waler L (may vary depending on site requirements)
6. IK Waler M
7. SCF 60 Diagonal 75x75 (code:612130)
8. DU-AL beams or H 20 beams
9. Plywood as decking
10. Timber as toe board.
11. SCR Slab Edge Bracket (code:611170)
12. Concrete slab
13. Slab formwork

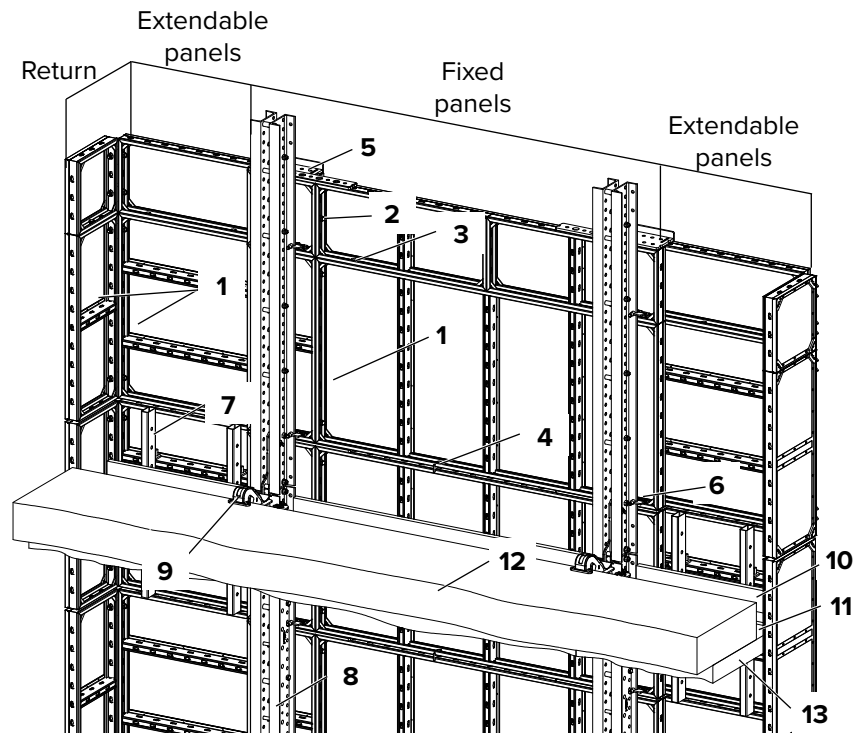
Also included in this unit but not visible is the SCR Platform Beam 0.75 m Rigid (code:612263), see page 71.

The SAFESCREEN unit above has a double return configuration made possible by using the SCR Return Connector 45° (code:611615), see page 81, which is also not visible.

Extendable width

SAFESCREEN units can have retractable sides referred to as extendable width. This allows for large units to be retracted to a width compliant with the maximum allowable transport width, so that they can be partially pre-assembled and transported to site.

Only the SCR Cladding Panels can be used to form an extendable width SAFESCREEN unit.



1. SCR Cladding Panels
2. ISO 4017 M20 x 40 + ISO 10511 M20 Hex. Nut
3. Pin Ø20 - Hex Type (code:608820) + Spring Cotter Pin Ø4 (code:173776)
4. SCR Cladding Panel T-Spacer (code:611548)
5. SCR Extension Panel Bearing (code:611962)
6. SCR IK Cladding Panel Flange Connector M (code:611540) or
SCR IK Cladding Panel Web Connector M (code:611550)
7. SCR Platform Bracket Adaptor
8. IK Waler M
9. SCR Slab Edge Bracket (code:611170)
10. Timber as toe board
11. Plywood as decking
12. Concrete slab
13. Slab formwork

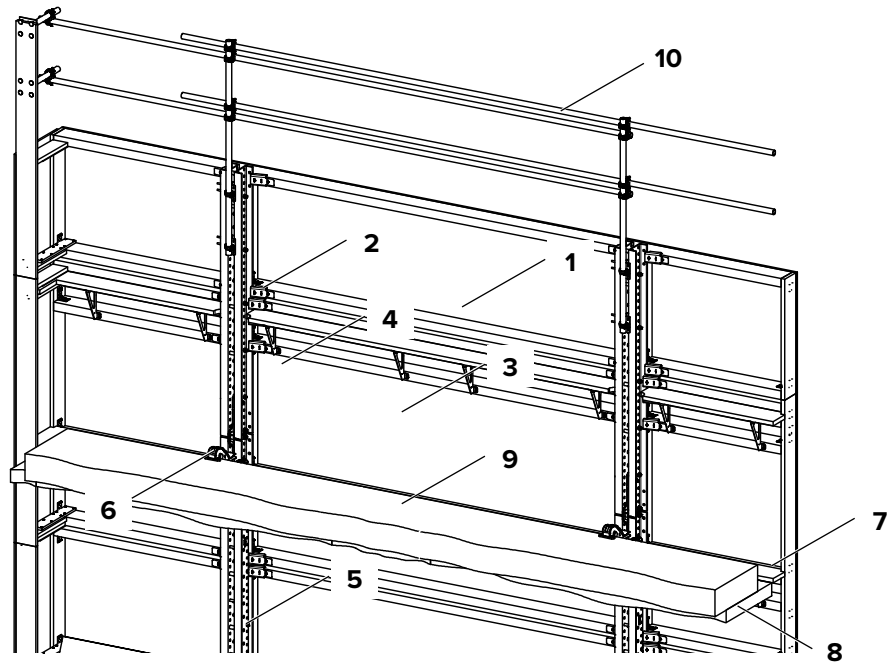
Also included in this unit but not visible are the SCR Extension Panel Stoppers (code:611966), see page 78.

The SAFESCREEN unit above has a single return configuration made possible by using the SCR Return Connector 90° (code:611575), see page 79, which is also not visible.

7.2.2 Timber panels

The option of having pre-assembled timber panels with an infill sheet of plywood is also possible. The timber panels and rails are pre-assembled and delivered to site at which point the SAFESCREEN unit is assembled.

The edge protection shown at the top is only used temporarily on exceptionally high floors and is assembled after the SAFESCREEN unit is attached to the existing concrete structure.



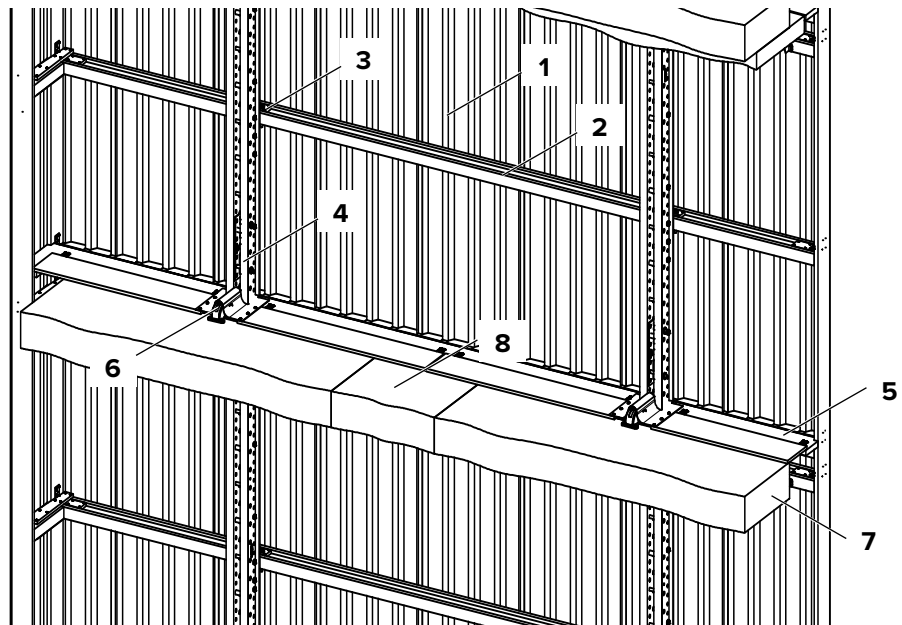
1. Timber panels
2. SCR IK Timber Beam Connector (code:611401)
3. SCR Platform Bracket Timber Beam (code:611255)
4. Plywood as decking
5. IK Waler M
6. SCR Slab Edge Bracket (code:611170)
7. Plywood as decking
8. Table formwork
9. Concrete slab
10. Tube & fittings as additional edge protection

Also included in this unit but not visible are the SCR Timber Beam Bearings (code:611250), see page 83.

7.2.3 Timber beams + corrugated sheet

The other cladding options are the combination of timber beams with plywood or timber beams with corrugated sheet. Due to the fact that both options are similar with the exception of the infill sheet, only the option of timber beams with corrugated sheet is shown here.

Please note that shown below is a typical configuration for illustration purposes only. The SAFESCREEN units may have more beams due to the specific site requirements.



1. Corrugated sheet
2. Timber beams
3. SCR Timber Beam Bearing (code:611250)
4. IK Waler M
5. Plywood as decking
6. SCR Slab Edge Bracket (code:611170)
7. Concrete slab

Also included in this unit but not visible is the SCR Platform Bracket Timber Beam (code:611255), see page 89.

7.3 Platforms

7.3.1 Platforms for single rail units

The layout of the platforms is greatly influenced by many factors. Some of them are:

- Layout of slab formwork (ensure that the SAFESCREEN unit doesn't clash with slab formwork)
- Layout of column formwork (ensure that the SAFESCREEN unit doesn't clash with column formwork and that the traps can be fully closed).
- Local safety considerations such as step height, edge protection requirements, etc.

In a single rail unit the platform brackets are fixed to the cladding structure, therefore the components used to build platforms for the single rail SAFESCREEN units will vary depending on the type of cladding used.

The decking of these platforms is always done using timber boards and / or plywood and made to suit each unit requirement. The fixed part of the platform typically ends at the inner flange of the vertical rail. A 30 mm clearance between the platform and the outer edge of the formwork should be kept. This removes the need for the formwork to be stripped before the SAFESCREEN unit can climb.

Timber cladding

- SCR Platform Bracket Timber Beam (code:611255)

SCR Cladding Panels

- SCR Panel Platform Bracket (code:611580)
- SCR Panel Platform Bracket Extension (code:612239) if required
- SCR Panel Ribs if required
- SCR Platform Bracket Adaptors for extendable width SAFESCREEN units

7.3.2 Platforms for truss units

The components used to build platforms for the truss rail SAFESCREEN units will vary depending on the type of platform.

The decking of these platforms is always done using timber boards / plywood and made to suit each unit requirement.

Fixed platform setup

- DU-AL T200 Secondary / Primary Beams, T 150 beams or H 20 beams

Folding platform setup

- HD Channel
- Extension Channel 138
- Guide Box (code:595142)
- Pivot Plate (595143)

7.4 Loading platform

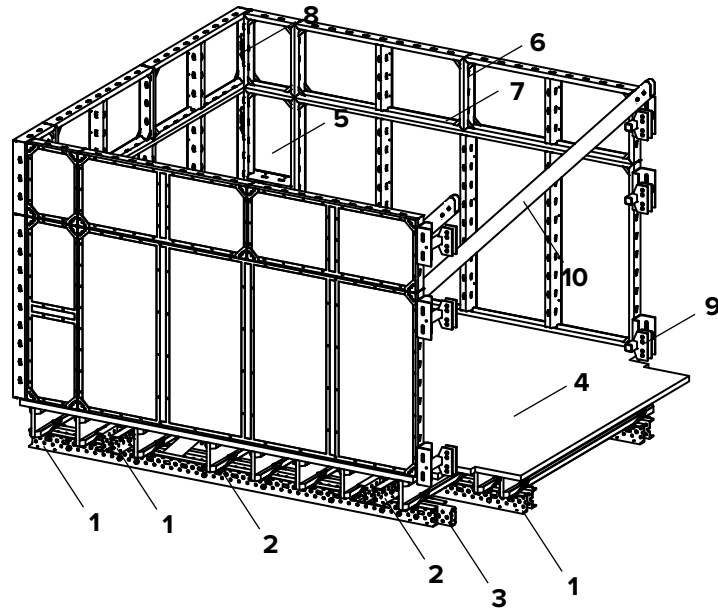
The construction sequence of the concrete structure requires for material to be transported between the different slab levels, especially for slabs inside the perimeter of the screens.

The main processes are:

- Rotation of formwork material from Level L-1 to L0 before erecting the slab formwork

- Rotation of back-propping from level L-2 to level L-1

Loading platforms are used to position materials that are to be moved to the inside of the perimeter of the SAFESCREEN units. The configuration of the loading platform may vary depending on specific requirements, in particular the size of the slab formwork elements.

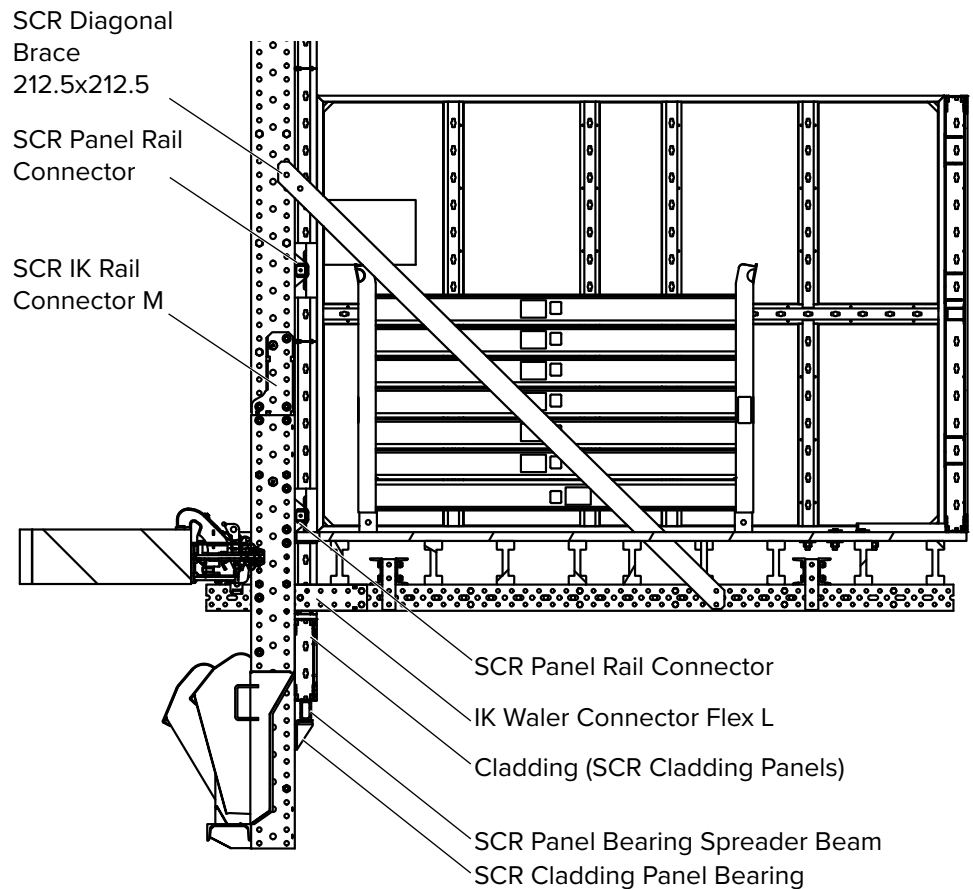


1. IK Waler L
2. H20 Beam + H20 timber beam clamp (code:568048) or DU-AL Beams + DU-AL T150 MKII Anchor Washer Clamp (code:717605)
3. IK Waler Connector L 25 (code:608445) *
4. Plywood as decking (double layer - slip resistance surface)
5. SCR Cladding Panels
6. ISO 4017 M20 x 40 + ISO 10511 M20 Hex. Nut
7. CT_M20_03 connection type
8. SCR Inner Corner Panel Connector (code:611755)
9. SCR Panel Rail Connector (code:611680) or SCR Panel Connector L (code:612660)
10. SCR Diagonal Brace 212.5x212.5 (code:611762)

* - Note that the IK Waler Connector L 25 (code:608445) is only used to attach the loading platform to an IK Waler L. To attach a loading platform to an IK Waler M, an IK Waler Connector Flex L (code:608490) is required.

Also included in this unit but not visible is the SCF 60 Cross Connector L (code:612210), see page 141, and the SCR G2 Panel Joint Reinforcement Plate (code:611903) and the SCR Panel Deck Connection Washer (code:611902).

Seen below is a cross-section of a typical connection of a loading platform to a SAFESCREEN unit. A stack of formwork panels is shown in the loading area to illustrate the functionality.



7.5 Ladder access

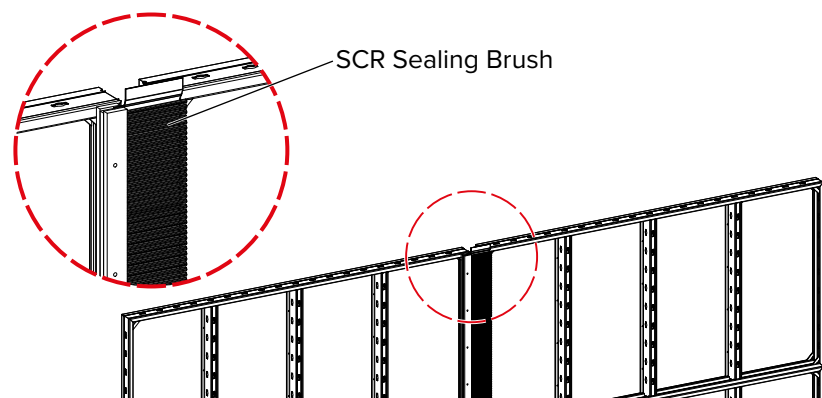
Ladder access solutions are available. Please contact your Hünnebeck design office.

7.6 Sealing the units

To prevent debris from falling from the SAFESCREEN units the following options are available. The options shown are typical and specific site requirements may change.

7.6.1 Vertical sealing

SCR Sealing Brushes can be used to seal adjacent SAFESCREEN units. For the connection to the SAFESCREEN unit, refer to the supplied design scheme specific to each job requirement.



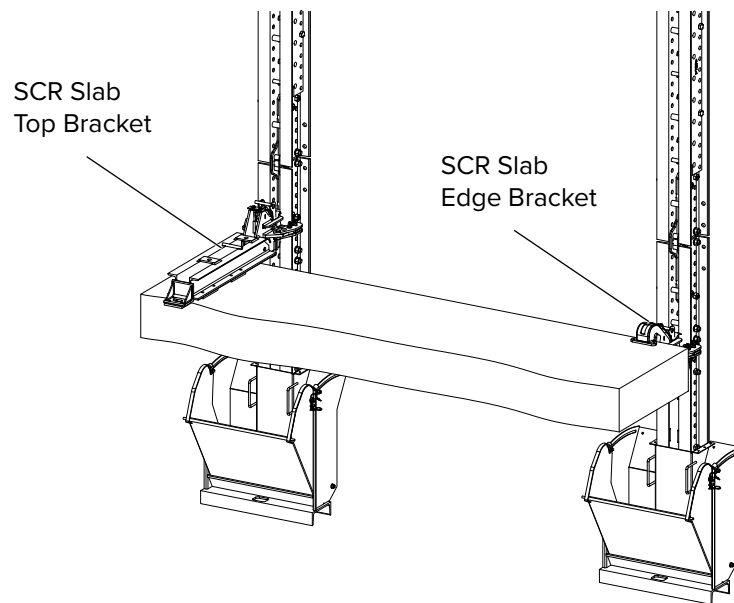
8 Typical solutions

The typical solutions shown represent typical arrangements that can be achieved using the SAFESCREEN system. They may not be applicable to all situations and may not meet all job requirements. Some components may also be omitted for clarity.

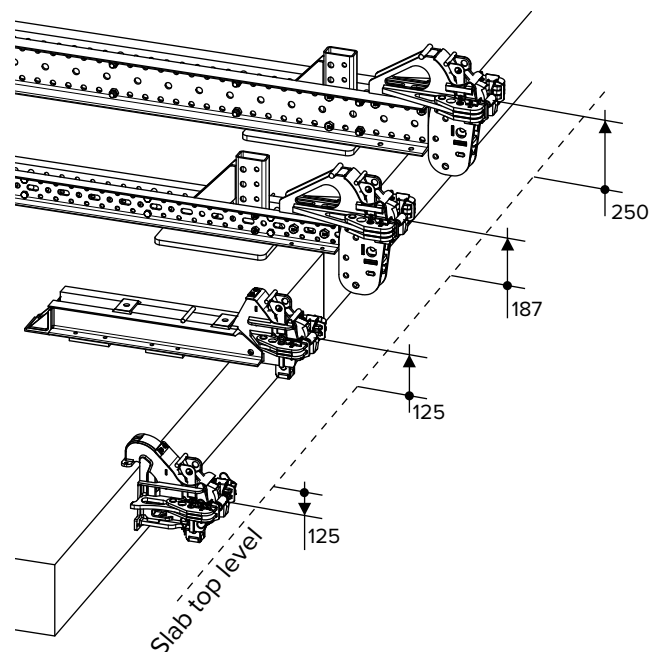
A separate statical calculation is required for each application.

8.1 Combination of SCR Slab Edge Bracket and SCR Slab Top Bracket

Due to the pitch of the bobbins it is possible to use different climbing brackets for the same SAFESCREEN unit as shown below.

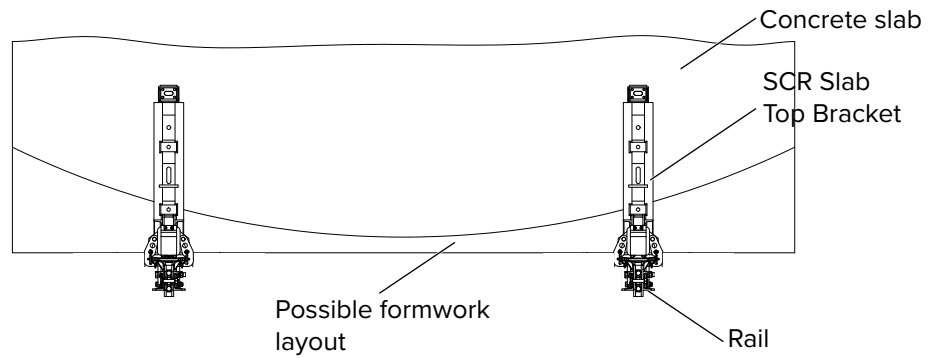


Shown below is the height differences between the different climbing brackets. Dimensions shown are distances between the centre of the support bobbin to the top of the slab (dashed line).



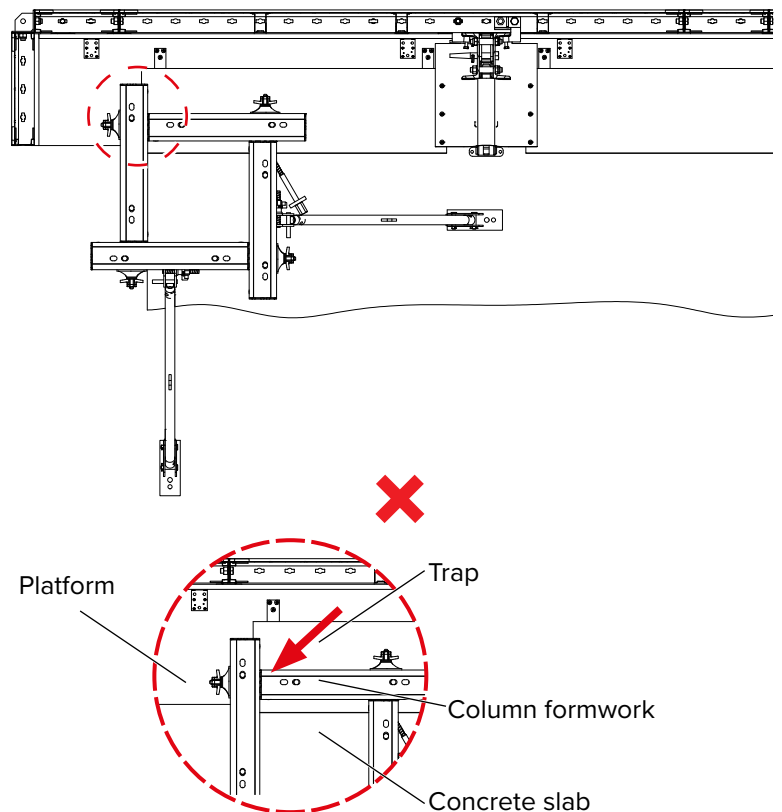
8.2 Circular slab edges

SAFESCREEN units can also be used in circular slabs. Shown below is a simple example of a typical solution, however this will vary depending on specific job requirements. For more information contact your Hünnebeck design office.



8.3 Column formwork at slab edge

Care must be taken during the design stage to avoid clashes with any existing column formwork. Shown below is a situation where typical column formwork will clash with the SAFESCREEN unit. These situations must be avoided.

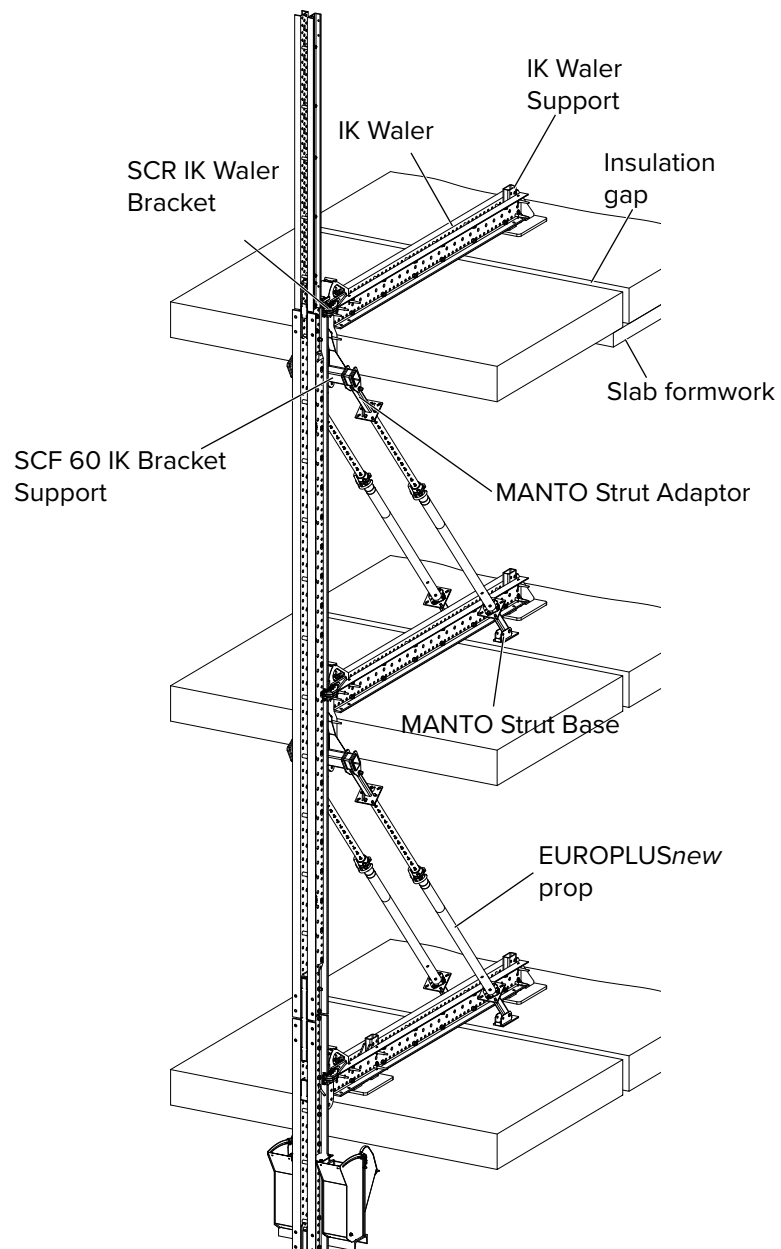


8.4 Balconies

In many buildings there are areas of the slabs that are not able to carry the loads of the SAFESCREEN or where the possibilities to anchor the SAFESCREEN are limited due to the design of the structure. These may be (but are not limited to):

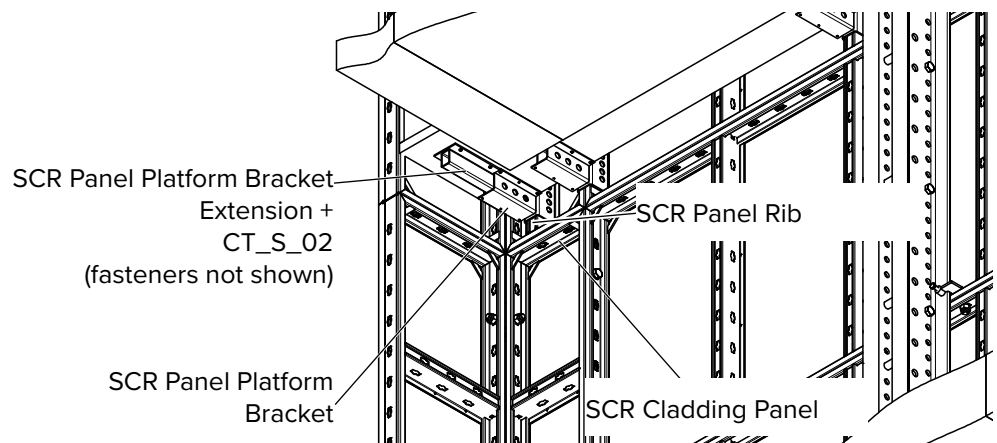
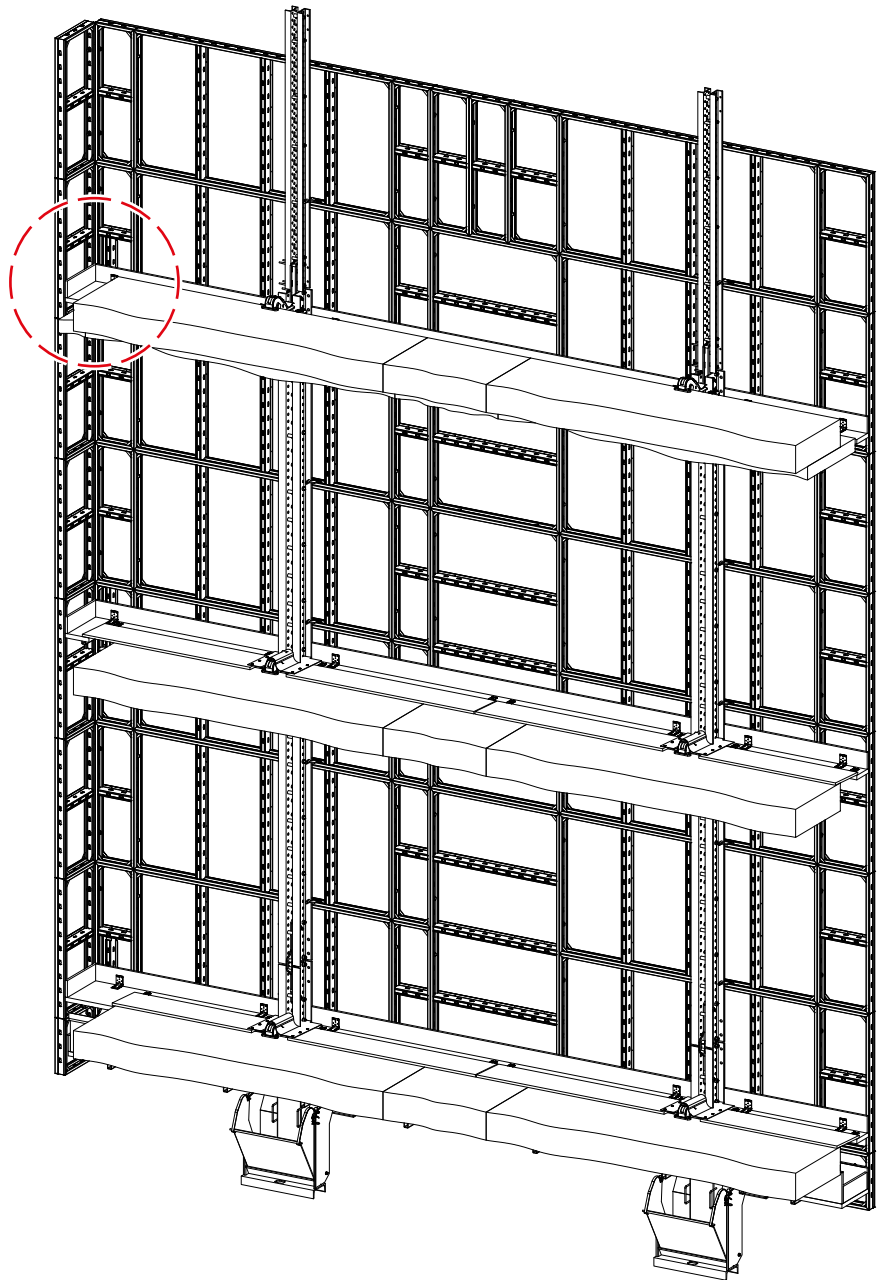
- prefabricated balconies with integrated insulation
- openings in the slabs
- recesses in the facade
- upstand beams
- embedded steel items in the slab

The HÜNNEBECK SAFESCREEN system offers a variety of options to deal with these sorts of situations. For further information, consulting and support please contact your local design office.

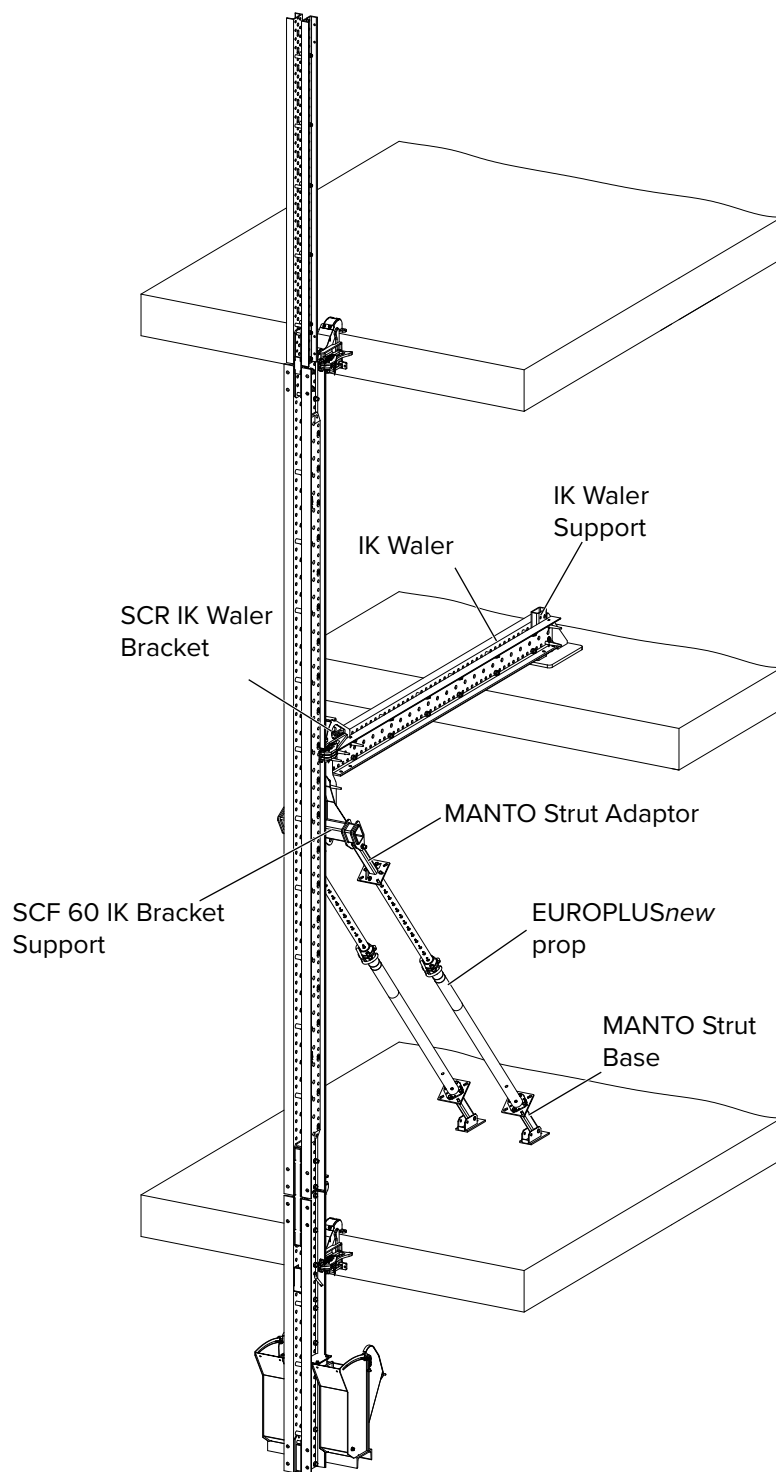


Please note that the assembly is shown incomplete for clarity and better understanding, especially with respect to the horizontal bracing of the cantilevered IK Waler.

8.5 Corners



8.6 Offsets and openings



Please note that the assembly is shown incomplete for clarity and better understanding, especially with respect to the horizontal bracing of the cantilevered IK Waler.

Please note that the use of the SCR Safety Box (code:611450) might be restricted in the example shown above. For more information contact your HÜNNEBECK design office.

8.7 Other

Other solutions are available. Please contact your Hünnebeck design office.

9 Assembly

The SAFESCREEN units can be partially pre-assembled or fully pre-assembled, depending on the site requirements, prior to transportation.

The typical assembly options are:

- on site assembly (no pre-assembly)
- partial pre-assembly (some assembly done off-site)
- extendable cladding single rail (most of the SAFESCREEN unit pre-assembled off-site and ready for transportation)
- extendable cladding truss units with folding platforms (fully pre-assembled individual units, folded and ready for transportation individually).

Some residual on-site assembly might be required to prepare or complete the SAFESCREEN units, in which case the relevant steps shown in the assembly sequence of the supplied unit must be followed.

All assembly sequences shown illustrate the procedure used for typical configurations only.

Please note that unless otherwise stated, all bolts and nuts are grade 10.9 and the nuts grade 10.

9.1 Safety and working area

9.1.1 Safety

Only competent and trained persons should be involved in the assembly and checking operations.

It is the responsibility of the Customer to ensure that all operatives involved in the assembly and use of SAFESCREEN system have been made aware of the relevant documentation and that they understand the information contained in the documentation.

If in doubt, contact the Hünnebeck design office.

The Health & Safety issues regarding manual handling are not covered by this document.

All major defects of any item must be reported immediately.

Material deliveries are to be checked on arrival to site / place of destination as well as before each use to ensure that they are in good condition and functioning correctly.

9.1.2 Working area

Prior to any assembly, an assembly plan should be established for each unit with reference to the supplied Hünnebeck design scheme drawings.

At the start of work an adequate area for the SAFESCREEN unit assembly process and access around it, must be prepared. This typically includes:

- Zone 1: to build rails, trusses and full units, with suitable access around it.
- Zone 2: storage of equipment, items required for assembly.
- Zone 3: workstation for platform assembly and plywood cutting.
- Zone 4: storage for assembled frames and platforms.
- Zone 5: storage for fully assembled units.

Zone 1 should be of adequate size to be able to assemble the largest unit required. Zones 1 and 3 should have a hard, level and even floor.



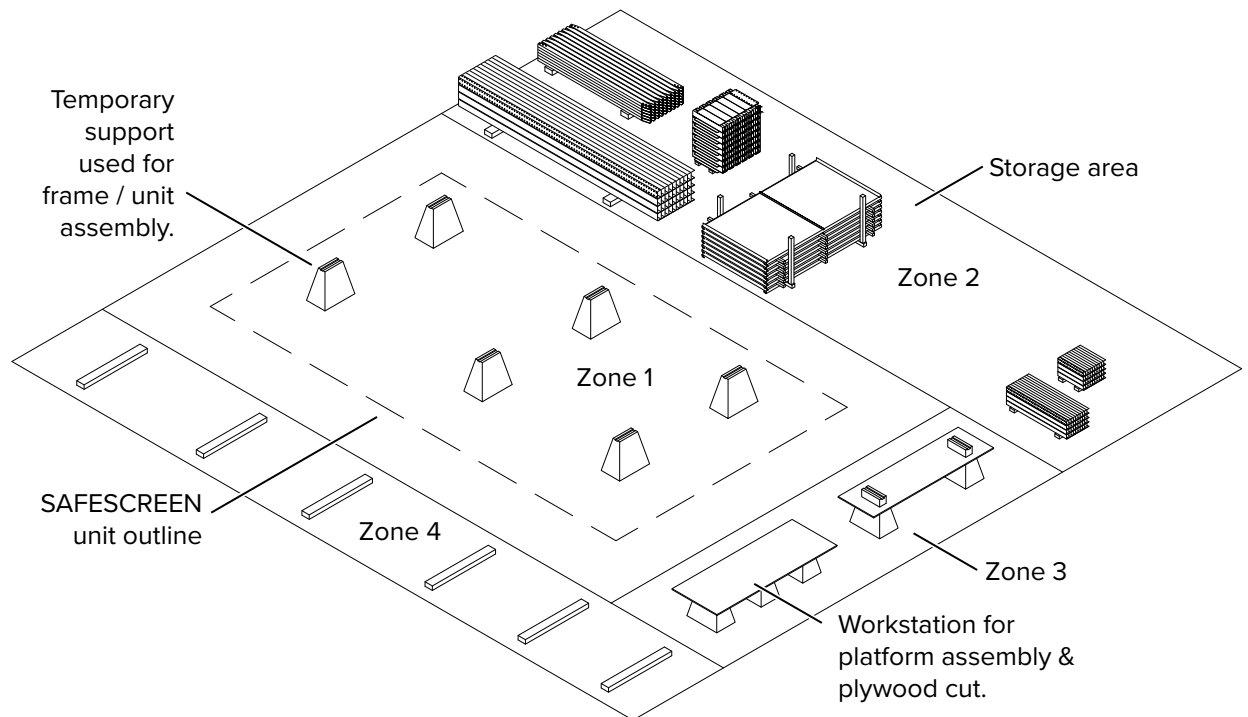
WARNING

Risk of collapse or overturning!

Use adequate trestles / packers for frames and workstation for platforms. This will allow a safe and easy work.

In some cases, stepladders or additional working platforms to assist with the assembly may be required. Make sure they stand on a firm base and are securely fixed whenever required.

Customer to ensure crane coverage and sufficient capability is available for assembly zone and the temporary storage area of the SAFESCREEN units.



9.1.3 Tools

Required tools for the assembly / disassembling of SAFESCREEN units (supplied by site):

- Spanners *;
- Ratchet Spanners * (preferably with keyed ends for guidance when aligning holes);
- Impact drivers * - to suit (consider cordless drivers, however note that a number of battery packs will be required);
- Sockets sets * (long to short);
 - * Spanner / socket sizes:
 - 36 mm for M24 bolts
 - 30 mm for M20 bolts
 - 24 mm for M16 bolts;
 - 19 mm for M12 bolts;
 - 10 mm for M6 bolts
 - 5.5 mm is required for self tapping screws
- Torque wrench (400 Nm)
- Cordless hammer drill with a set of drill bits;
- Hammer
- Hand saw

- Circular saw;
- Wood sealant and brushes;
- Measuring tapes
- Level
- Waterproof marker pens
- Buckets (colour coded for the different fixings to allow easy identification)
- Steel trestles
- Timber bearers.

9.2 Assembly of the rails and truss setup

This section shows the typical assembly of the single rails and truss setup. The components shown are for illustration purposes only.

9.2.1 Assembly of the vertical members

For job specific details such as dimensions, positioning, fixing positions and others, refer to the supplied design scheme.

Some of the following steps may require the use of a suitable lifting device or a crane.



The web holes of the Walers are made from one side of the flange with a precise dimension. Because of the manufacturing process, the tolerances are somewhat higher from the other side of the flange.

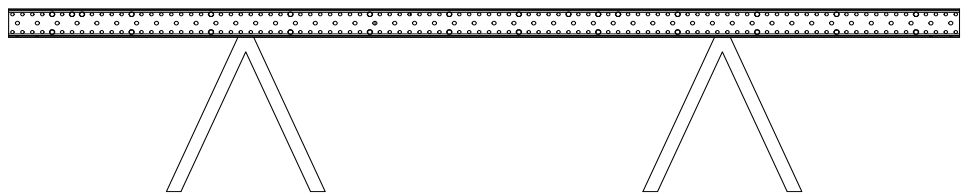
The exact side of the IK Walers must be placed on the supports facing down to guarantee that they are flush.

On INFRA-KIT **Walers M**, the exact side of the flange is always the side **without** holes in the flanges.

On INFRA-KIT **Walers L**, the exact side of the flange is always the side **with** holes in the flanges.

The IK Walers M are to be used with their exact side facing the building.

Step 1 Place the IK Walers on top of adequate temporary support.



Step 2 If required remove the bolts and spacers as indicated in the supplied design scheme. This might require loosening further bolt connections to be able to remove the spacer sleeves.

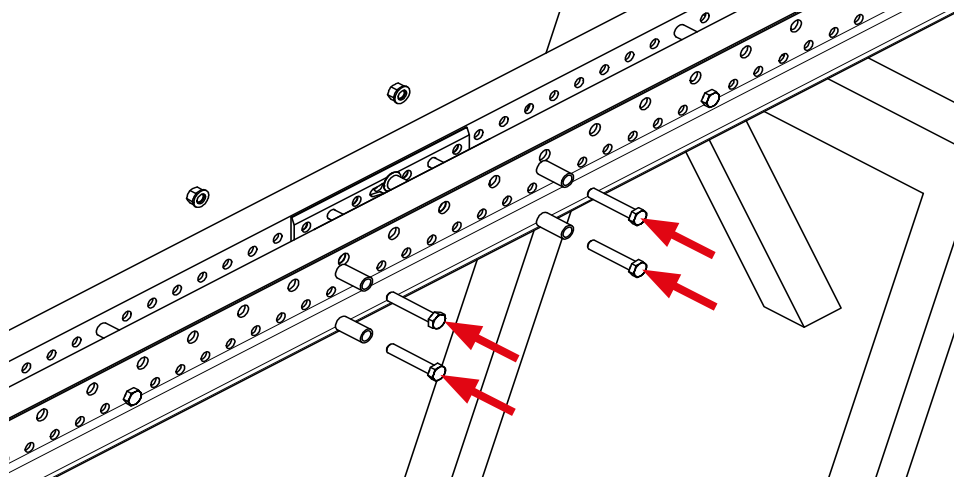
Note that the removed spacer sleeves and bolts need to be kept for re-assembly prior to the return of the material.



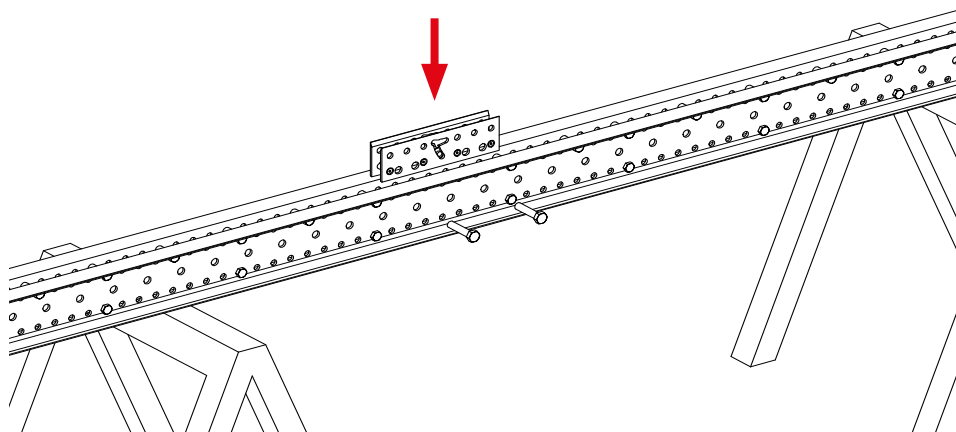
Ensure that all structurally relevant bolts are installed and sufficiently tensioned.

Torque: 300 Nm for IK Waler M and 180 Nm for IK Waler L.

Step 3 Install main Bolt Sleeve Ø30 (code:611720) where required.



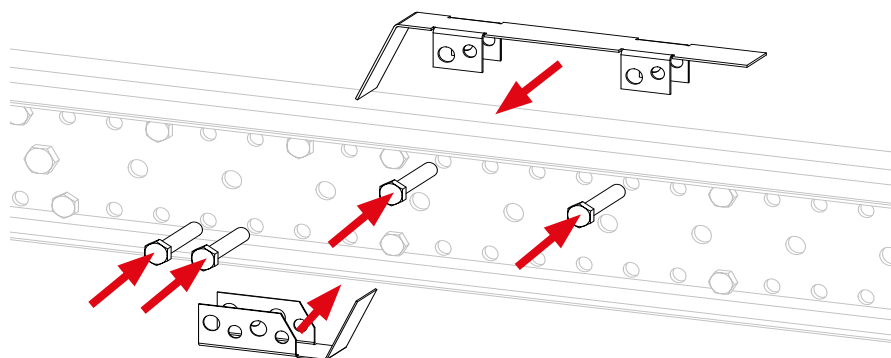
Step 4 Install the Movable Support Bobbin (code:611820) where required.



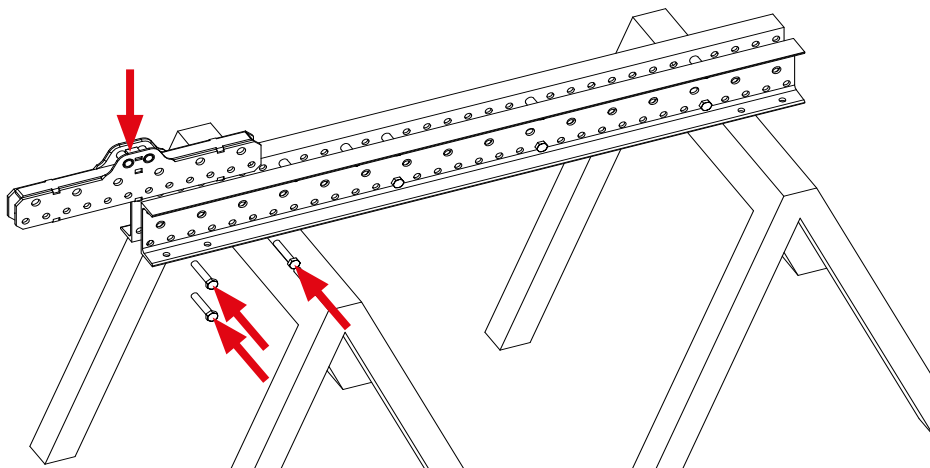
Note that all bolts to be tensioned with 270Nm.

Step 5 Install the designated bobbin for lifting, Bolt Sleeve Ø30 (code:611720), where required.

Step 6 Install the sealing plates, SCR Waler Sealing Plate Long (code:611624) and SCR Waler Sealing Plate Short (code:611882), where required.



Step 7 Install IK connectors in the short length rails where required.



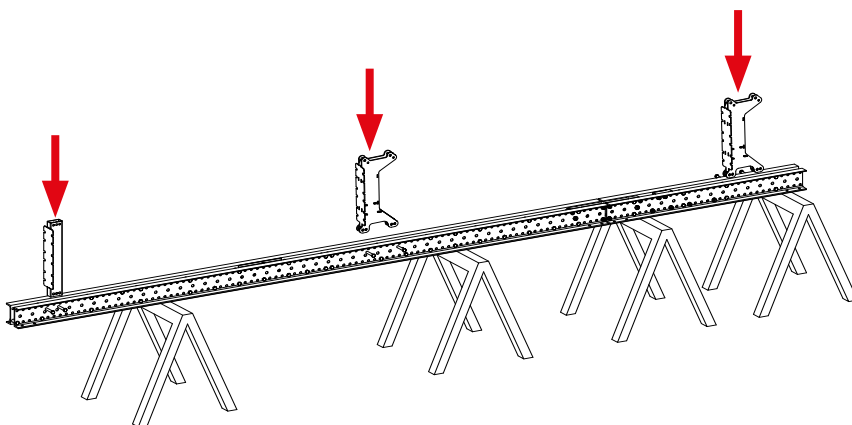
From this point forwards the use of a crane is required.

Step 8 Join rail sections as per the supplied design scheme.

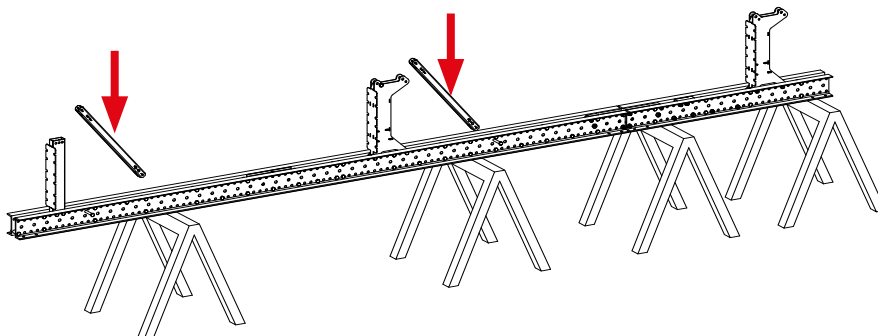
For single rails units ignore steps 9–14. Steps 9–14 refer to the assembly of the IK Walers used for the back profiles of the truss units.

Step 9 Assemble the IK Walers used for the back profile of the truss setup. See steps 1–8.

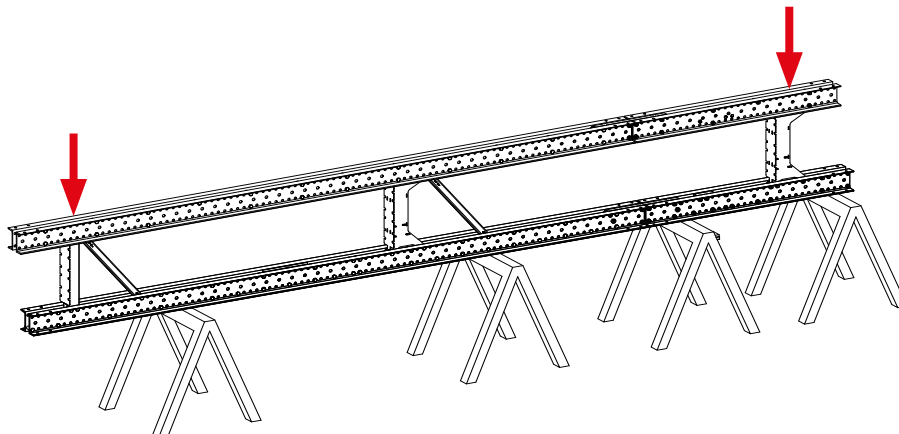
Step 10 Install platform beams.



Step 11 If required install diagonals.



Step 12 Lift the outer IK Waler and position above the rails assembled in steps 1–8.



WARNING

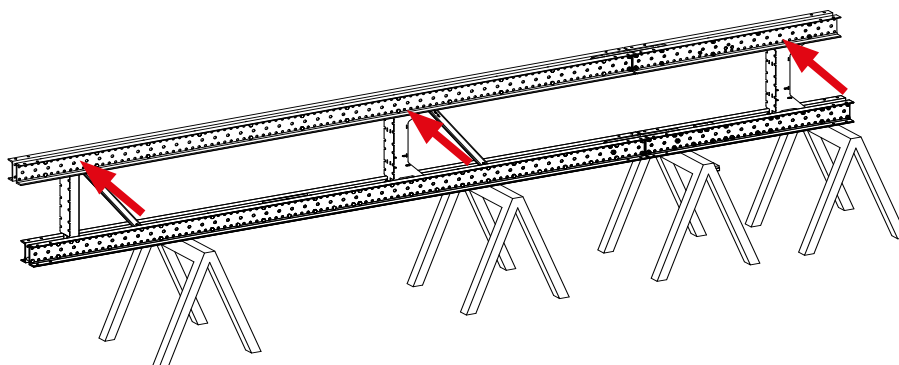
Risk of collapse or overturning!

Stabilize assembly to prevent it from falling.



Use adequate support for the back profiles of the truss when attaching to the rail.

Step 13 Attach the IK Walers to the platform beams.



Step 14 Attach the IK Walers to the diagonals.



If truss is to be temporarily stored, it must be in an upright position with adequate support.

9.2.2 Assembly of the cladding

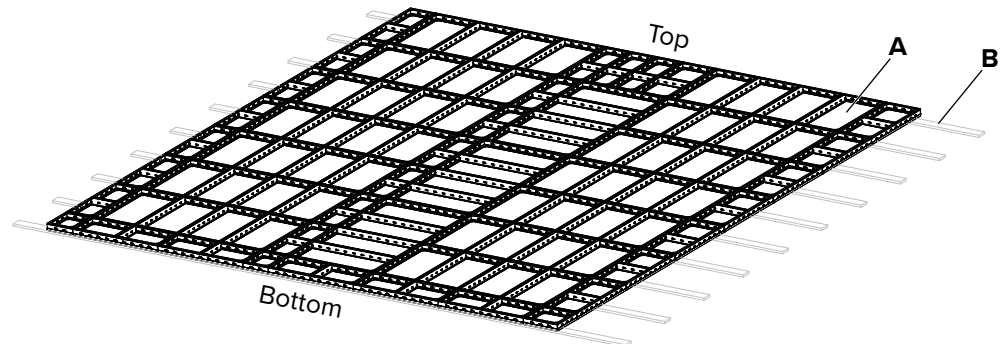
Fixed width perforated panels

NOTICE

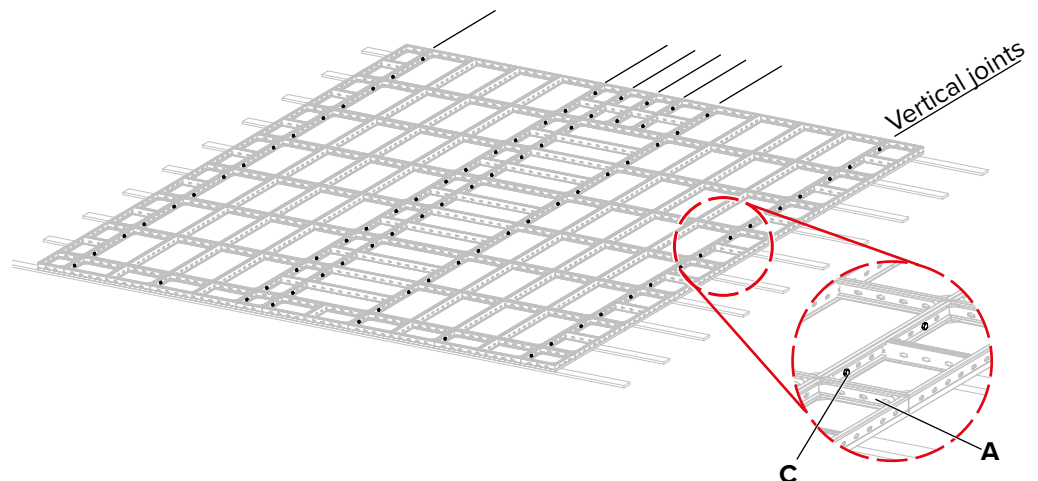
Risk of damage to the equipment!

Do not stand on the sheet infill of the SCR Cladding Panels. Lay scaffold boards on the profiles of the panels to provide access.

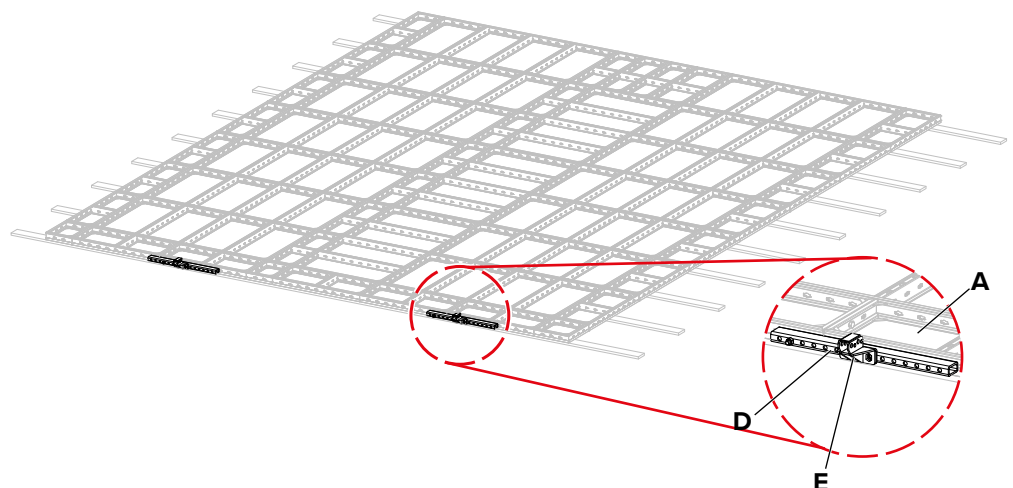
Step 1 Lay the SCR Cladding Panels (A) on top suitable timber spreaders (B).



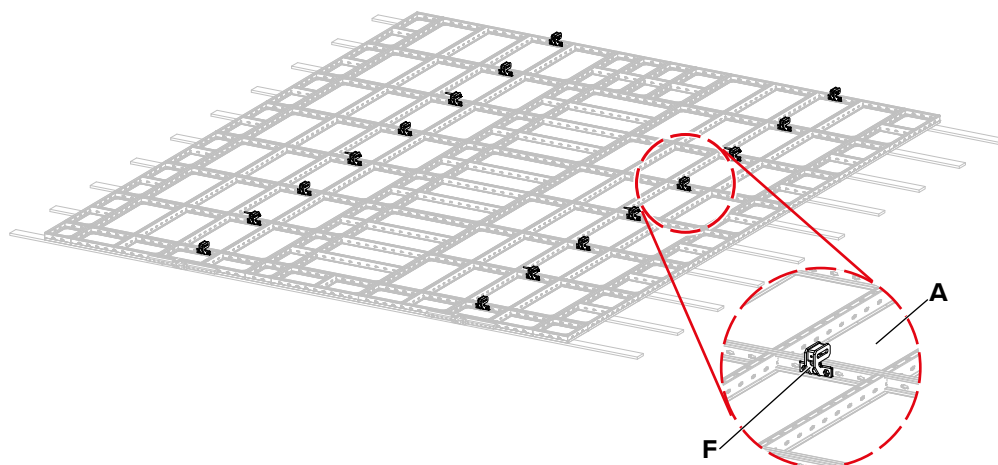
Step 2 Connect the vertical joints of the SCR Cladding Panels (A) where indicated by the supplied design scheme (C).



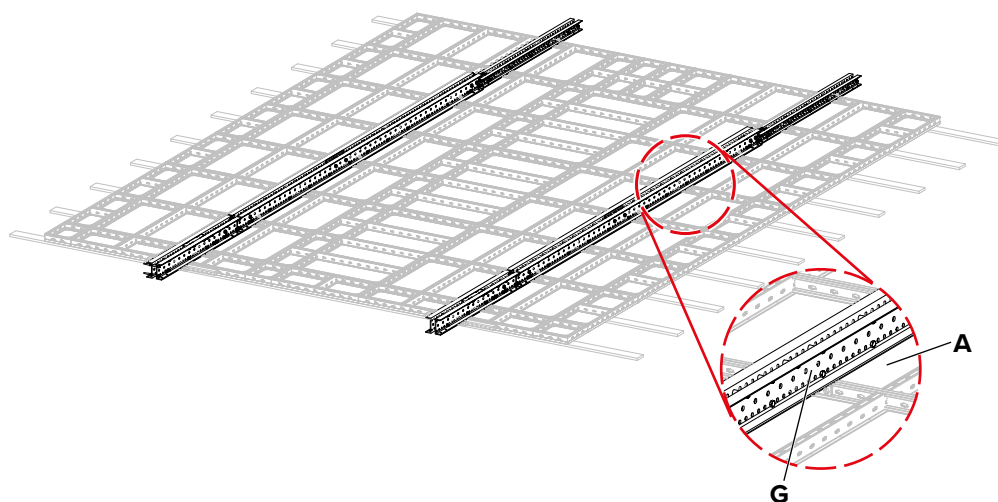
Step 3 Attach the SCR Panel Bearing Spreader Beam (code:612059) (D) + the SCR Cladding Panel Bearing (code:612056) (E) to the bottom row of the SCR Cladding Panels (A) as per the supplied design scheme.



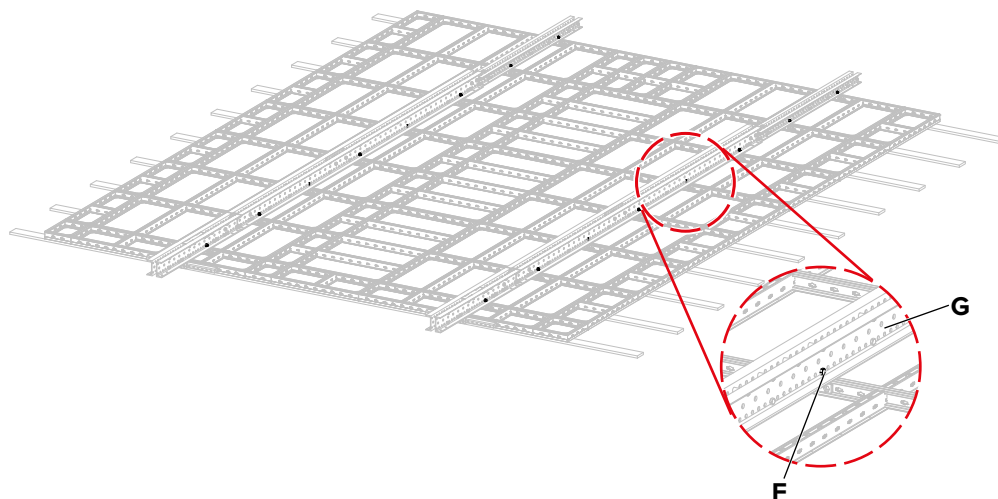
- Step 4** If specified in the supplied design scheme, attach the SCR Web Cladding Panel Connectors (**F**) to the SCR Cladding Panels (**A**) where indicated by the supplied design scheme.



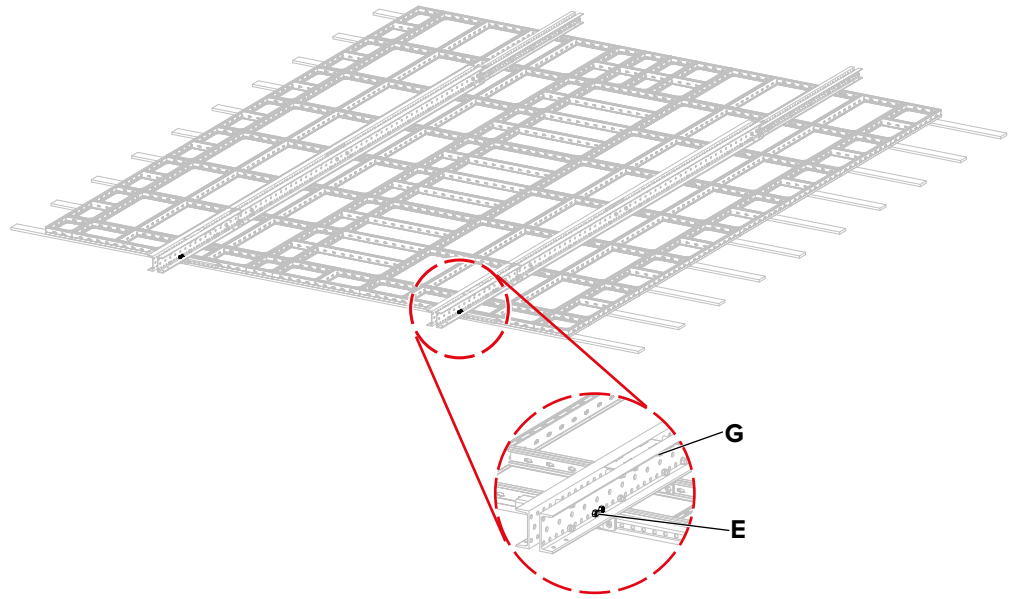
- Step 5** Lift and position the rails (G) on top of the SCR Cladding Panels (A) as per the design scheme.



- Step 6** If SCR Web Cladding Panel Connectors (**F**) were used in step 4, connect the rails (**G**) to the SCR Web Cladding Panel Connectors (**F**). If SCR IK Cladding Panel Flange Connectors were specified in the design scheme, attach them now.



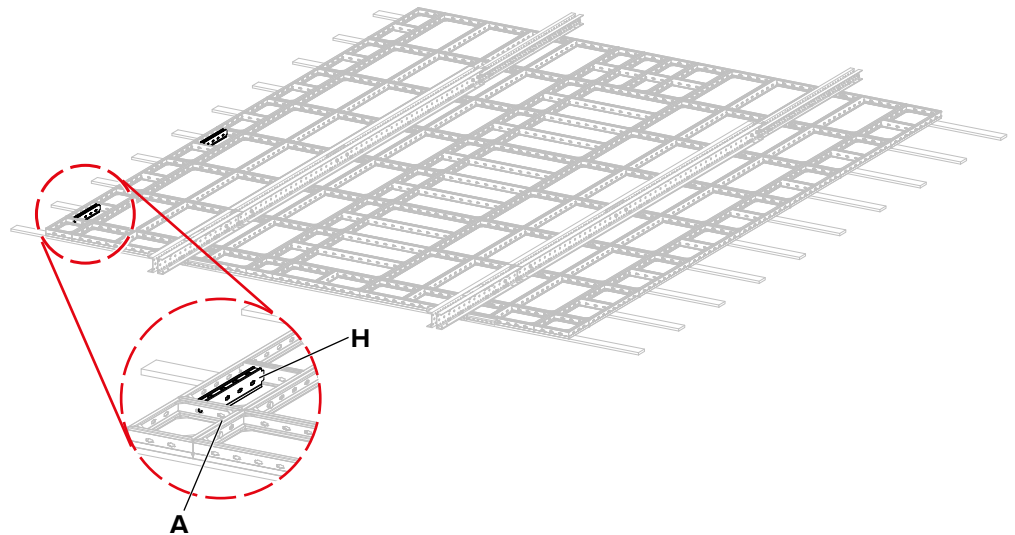
Step 7 Connect the SCR Cladding Panel Bearings (code:612056) (**E**) to the rails (**G**).



Step 8 If specified by the design scheme, attach the IK Flange Connectors to the SCR Cladding Panels.

Step 9 Secure the SCR IK Flange Connectors to the rails by tightening the included M12 bolts.

Step 10 If required by the design scheme, attach the SCR Panel Ribs (**H**) to the SCR Cladding Panels (**A**).

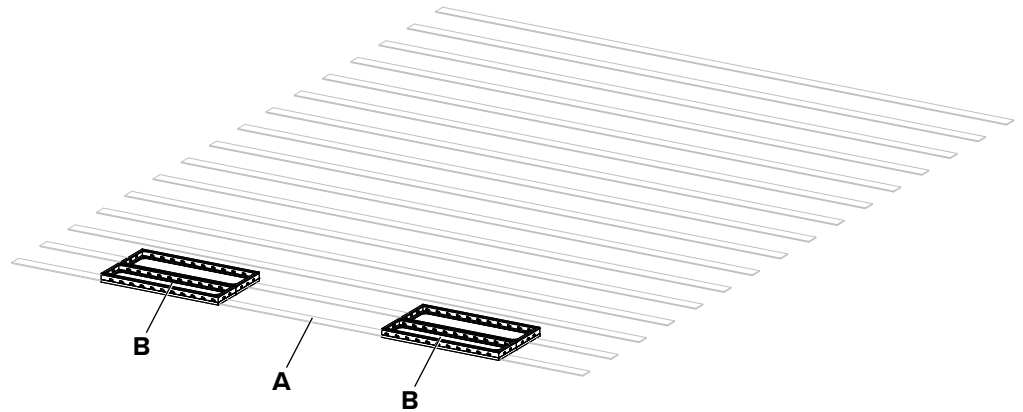


Before installation, some residual assembly may be required depending on the site requirements, such as:

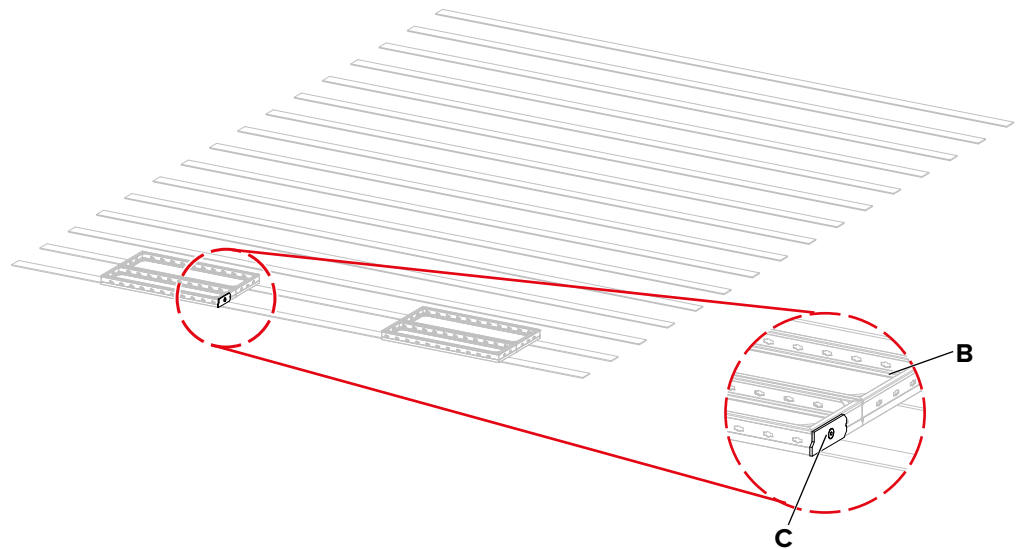
- Returns
- Safety boxes
- Safety level platforms.

Extendable width perforated panels

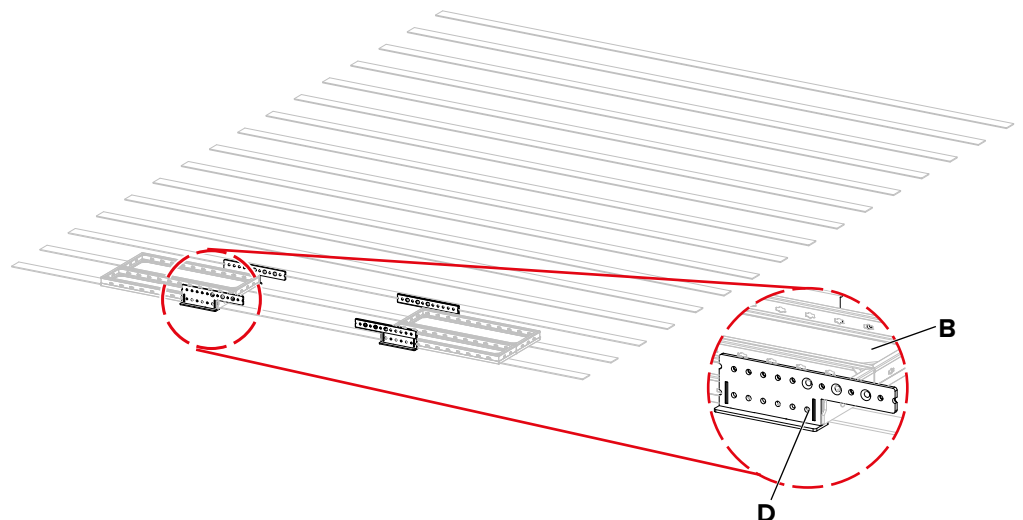
- Step 1** Lay 19 or 21 mm (3/4") thick strips of plywood (**A**) on the ground so that both sides of the SAFESCREEN unit extension panels can be supported.
- Step 2** Place the SCR Cladding Extension Panels (**B**) on top of the plywood (**A**). Panel to be supported as shown.



- Step 3** Attach the SCR Extension Panel Stoppers (code:611966) (**C**) to the SCR Cladding Extension Panels (**B**).

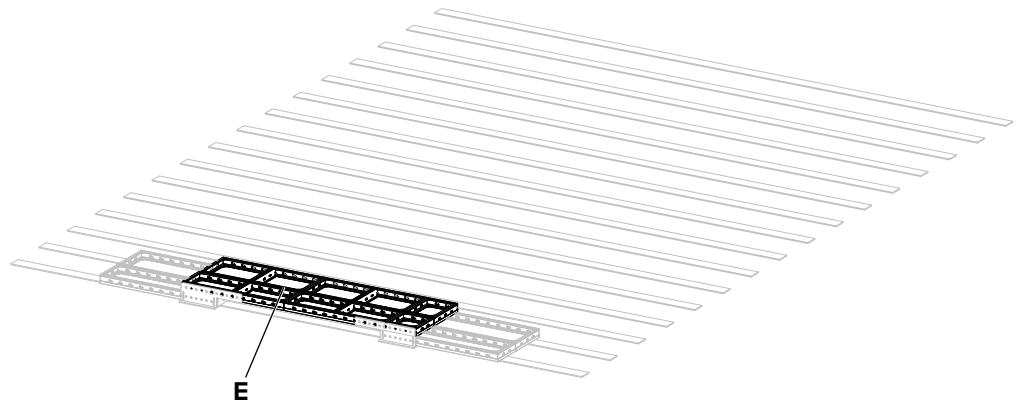


- Step 4** Place the SCR Extension Panel Bearings (code:611962) (**D**) in position. Do not secure to the SCR Cladding Extension Panels (**B**).



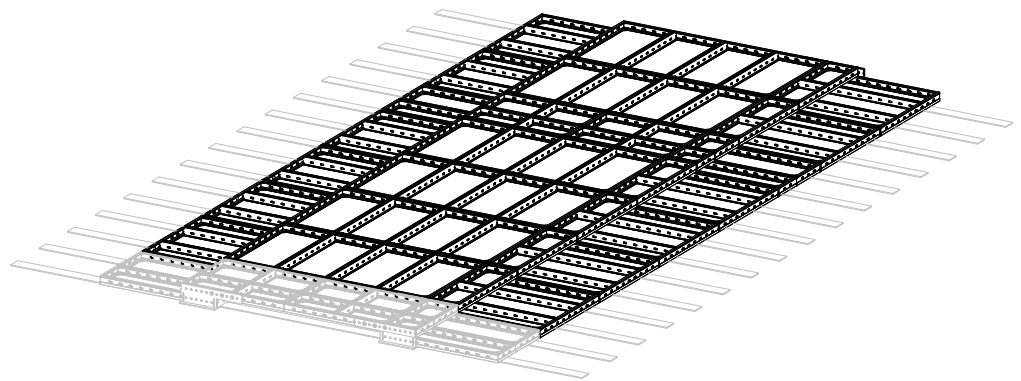
Step 5 Build a row of SCR Cladding Panels (**E**) to be used as the central cladding section separately.

Step 6 Move the SCR Cladding Panels (**E**) built in the previous step into position.

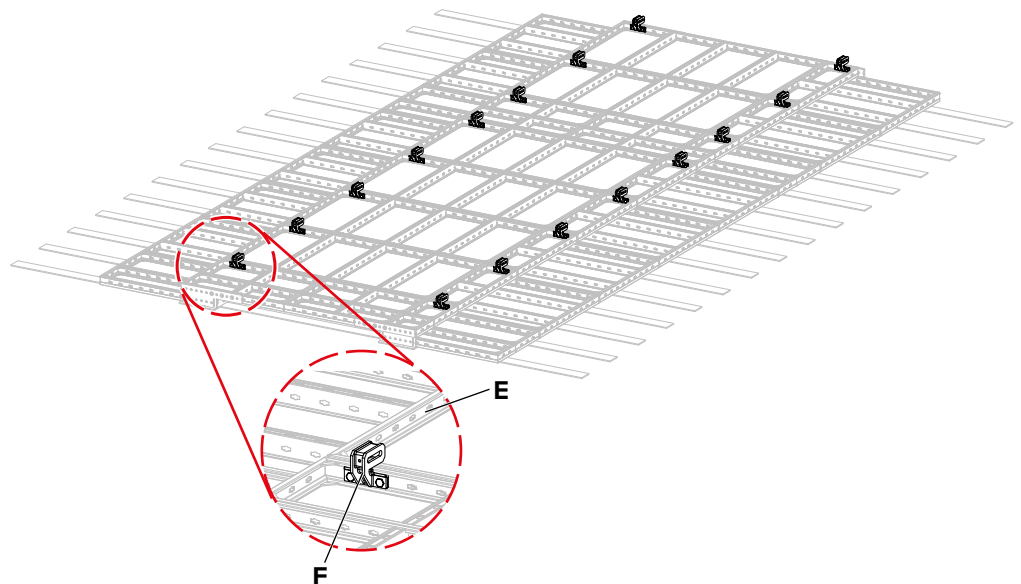


Step 7 Repeat steps 1–6 for the next rows of the cladding panels.

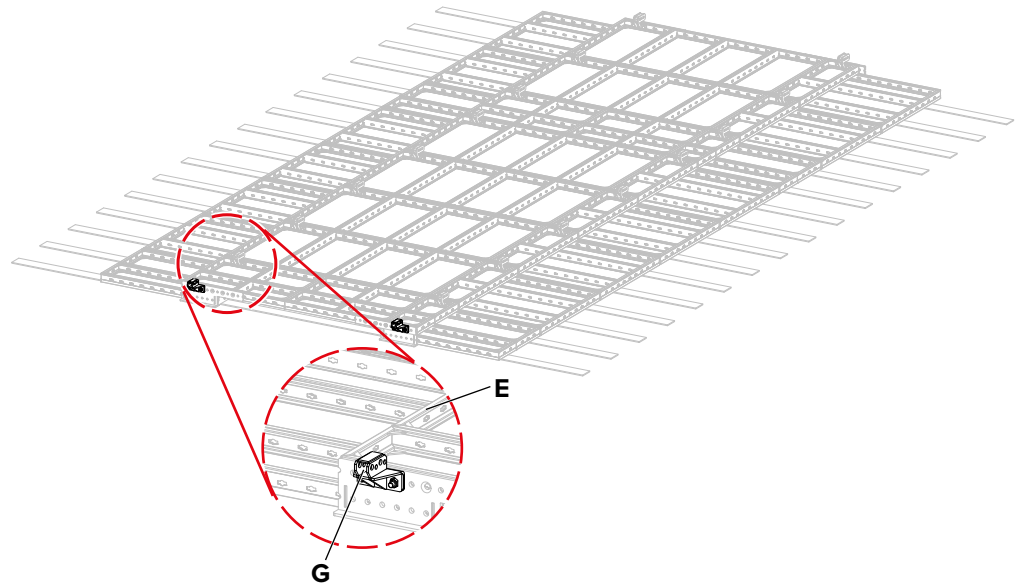
Note that the horizontal rows of the SCR Cladding Panels (**E**) shall only be connected through the SCR Extension Panel Bearings (code:611962) (**D**) as per the design scheme.



Step 8 Attach the SCR IK Web Connectors (**F**) to the SCR Cladding Panels (**E**) as per the design scheme.



Step 9 Secure the SCR Extension Panel Bearing (code:611962) (**G**) to the SCR Cladding Panels (**E**).



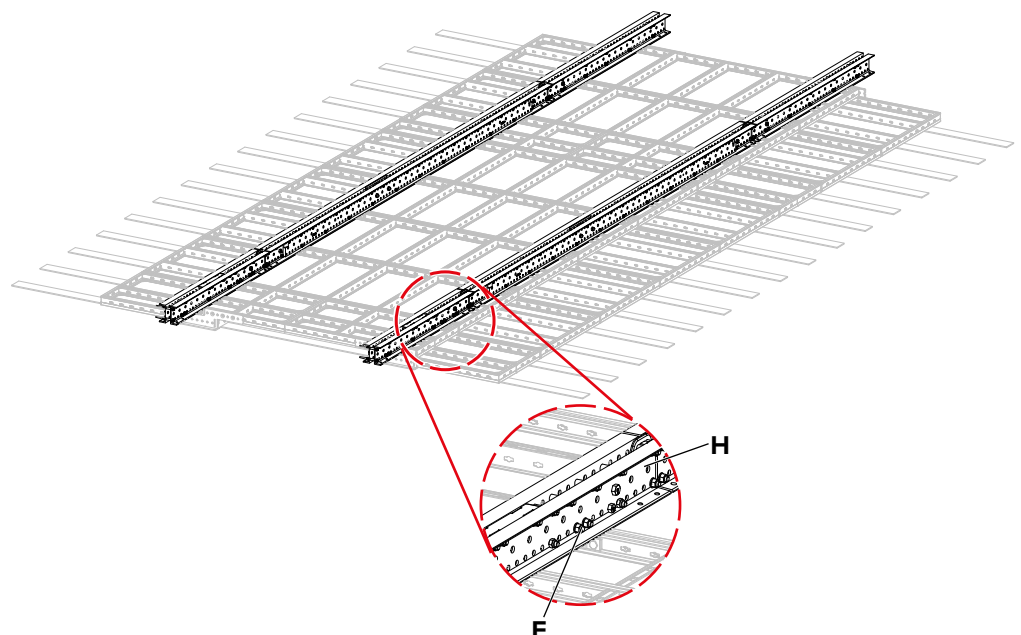
If the fixing of the SCR Cladding Panel Bearing (code:612056) is obstructed by a panel joint or panel rib above, please proceed as follows:

- Fix the SCR Cladding Panel Bearing (code:612056) to the SCR Extension Panel Bearing (code:611962) through one of the countersunk holes in the SCR Extension Panel Bearing (code:611962). Fix with SCF60/SCR-G2-CT_CSK_M20_04 or with SCR Panel Bearing Spreader Beam (code:612059) use SCF60/SCR-G2-CT_CSK_M20_04.
- Fix the SCR Extension Panel Bearing (code:611962) to the panel in 2no. positions using 2no. SCF60/SCR-G2-CT_M20_04.

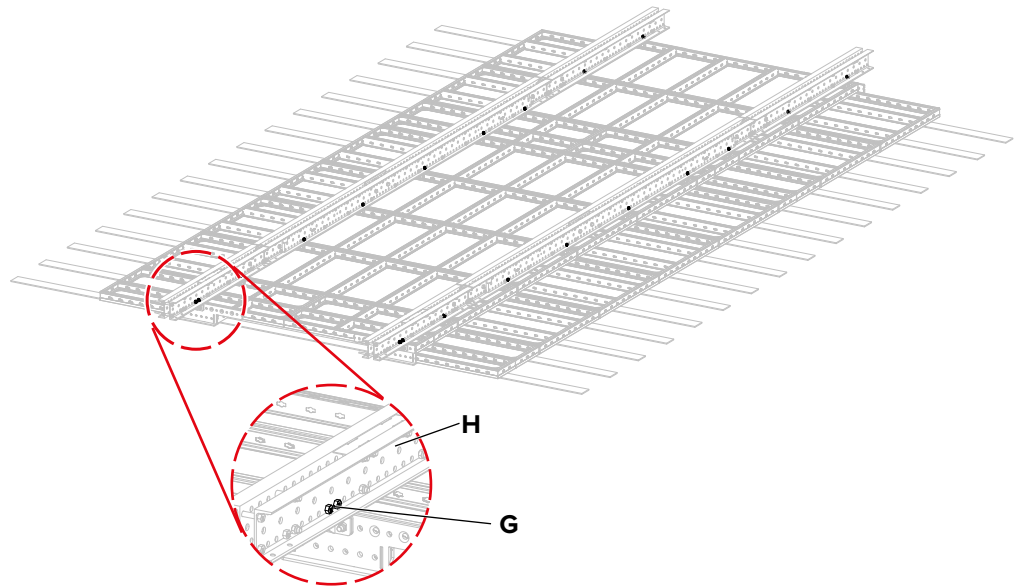
Step 10 If required attach the SCR Panel Bearing Spreader Beam (code:612059) + SCR Cladding Panel Bearing (code:612056) to the bottom row of the SCR Cladding Panels.

Step 11 Lift and position the rails (**H**) build separately into position.

Step 12 Attach the rails (**H**) to the SCR IK Web Connectors (**F**). If required by design scheme, fix the SCR IK flange connectors now.

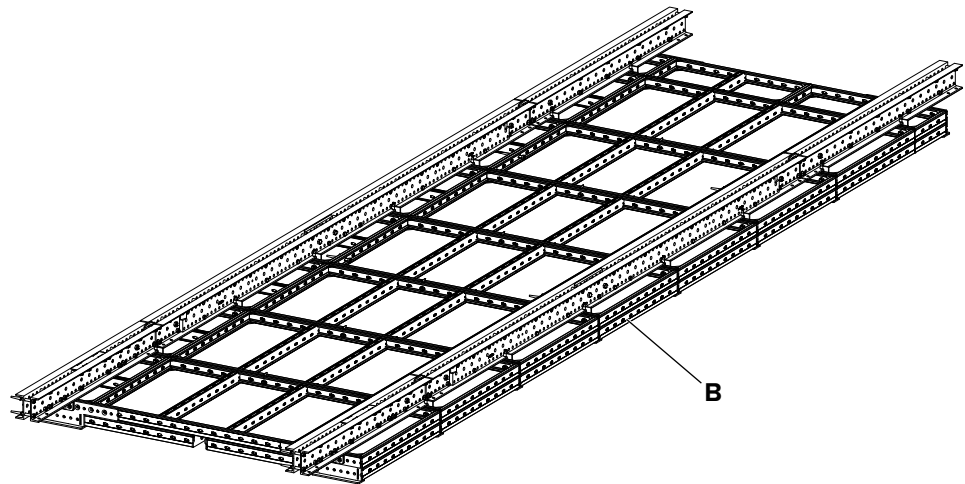


Step 13 Attach the rails (H) to the SCR Extension Panel Bearings (code:611962) (G).



Step 14 If required by the design scheme, attach the SCR Panel Ribs to the SCR Cladding Panels.

Step 15 Retract the wing sections of the SAFESCREEN unit by pushing the SCR Cladding Extension Panels (B).



The SCR Cladding Extension Panels must not be pushed beyond the SCR Cladding Panels. The outer corners of the SCR Cladding Extension Panels and the SCR Cladding Panels must be flush and the corner openings must align.

Step 16 Secure the SCR Cladding Extension Panels to the SCR Cladding Panels using the SCR Cladding Panel Transport Pin (code:612124) to prevent the SCR Cladding Extension Panels from sliding out during transportation.

At this moment the platforms can be installed as per the supplied design scheme. Platform type may vary depending on the type of vertical members. For the different platform options see page 132.

The SAFESCREEN unit is now ready for storage if required. Before installation, some residual assembly may be required depending on the site requirements, such as:

- Returns
- Safety boxes
- Safety level platforms.

Timber panels

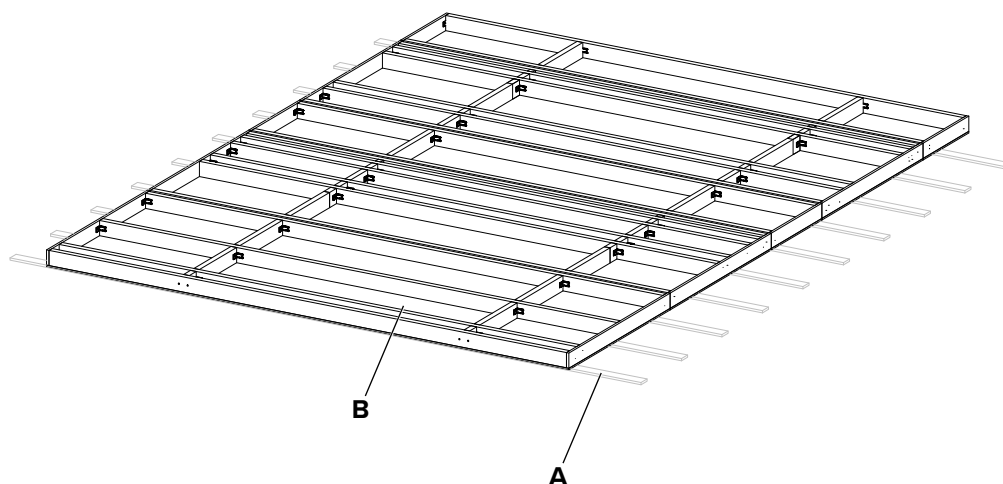
Pre-assembled timber + plywood panels can be used for cladding the SAFESCREEN units. Typically the SAFESCREEN units with this type of cladding are entirely built on site with the exception of the rails and the timber panels, which are typically pre-built and sent to site.

Step 1 On a flat and level surface, place timber spreaders (**A**) to support the SAFESCREEN unit.

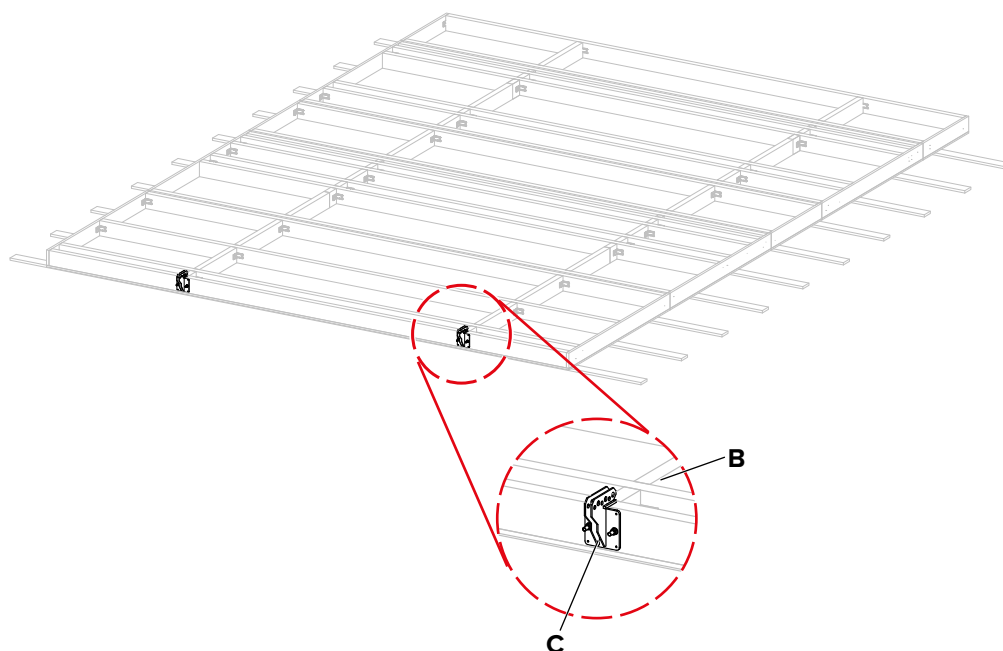


For more information regarding the size and possible support points of the SAFESCREEN unit, refer to the supplied design scheme.

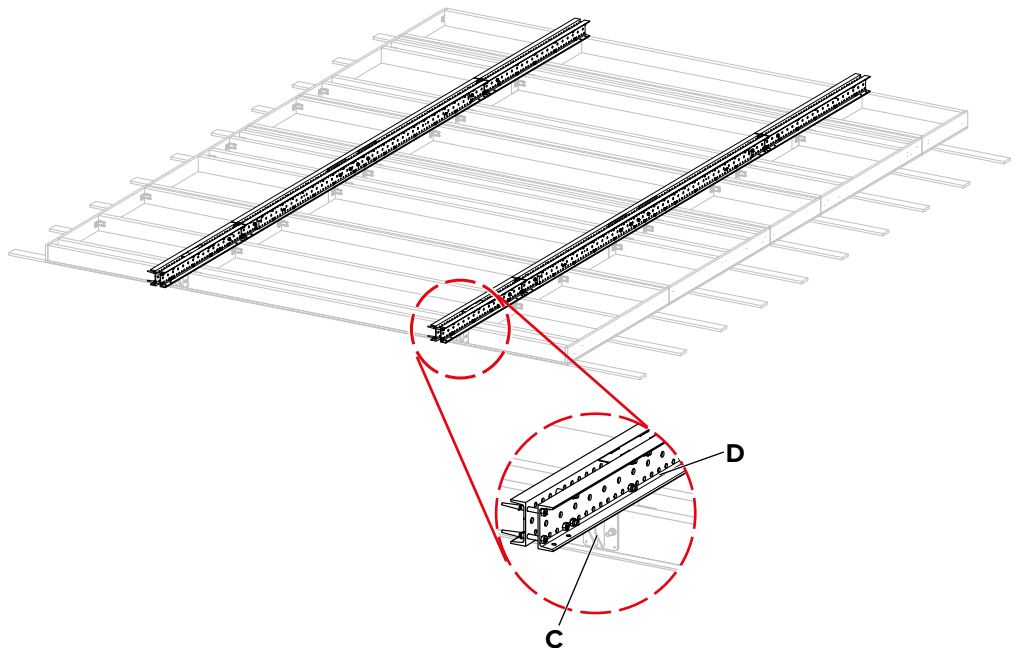
Step 2 Lay down and position the timber panels (**B**) as per the supplied design scheme.



Step 3 Attach the SCR Timber Beam Bearings (code:611250) (**C**) to the timber panels (**B**) at the support positions. Secure the SCR Timber Beam Bearings (code:611250) (**C**) to the timber panels (**B**) using 2no. CT_M16_07 connection type.

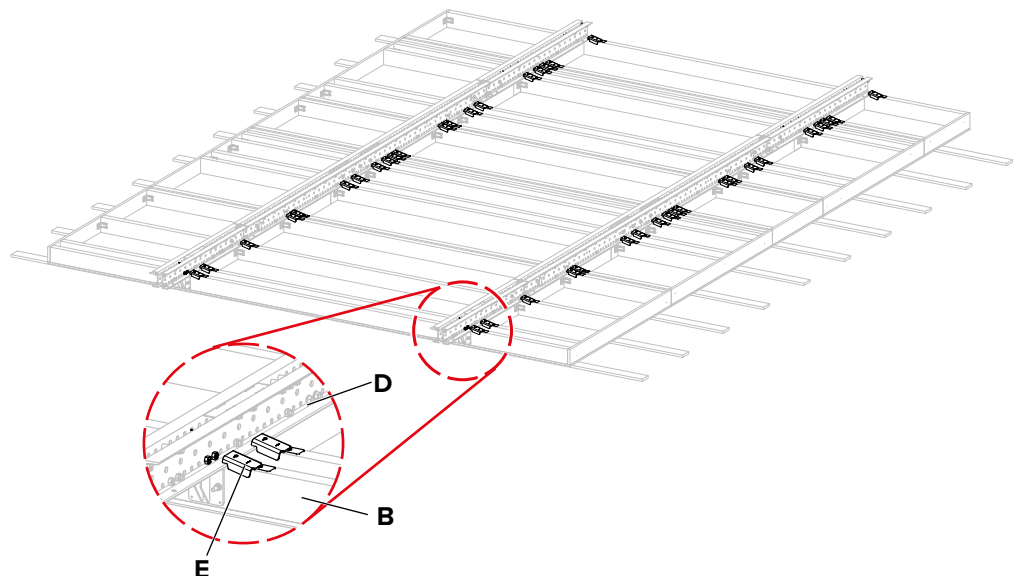


Step 4 Lift the rails (**D**) assembled previously (see page 115) and position on top of the timber panels (**B**). The plates of the SCR Timber Beam Bearings (code:611250) (**C**) must be positioned between the profiles of the rail. Ensure IK Walers are parallel to each other.



For illustration purposes the rails shown are single rails. However the SAFESCREEN unit may require truss rails (in which case appropriate side support is required). For the correct type and position of the rails, refer to the supplied design scheme.

- Step 5** Attach the SCR Timber Beam Bearings (code:611250) (C) to the rails (D) using 2no. CT_M20_07 per connection.
- Step 6** Attach the timber panels (B) to the rails (D) using SCR IK Timber Beam Connectors (Code:611401) (E). Secure the SCR IK Timber Beam Connectors (Code:611401) (E) to the timber panels (B) using screws as specified by the supplied design scheme.



The SCR IK Timber Beam Connectors (Code:611401) must always be used in pairs. The SCR IK Timber Beam Connectors (Code:611401) must be attached to both sides of the rail.

At this moment the platforms can be installed as per the supplied design scheme. Platform type may vary depending on the type of vertical members. For the different

platform options see page 132.

The SAFESCREEN unit is now ready for storage if required. Before installation, some residual assembly may be required depending on the site requirements, such as:

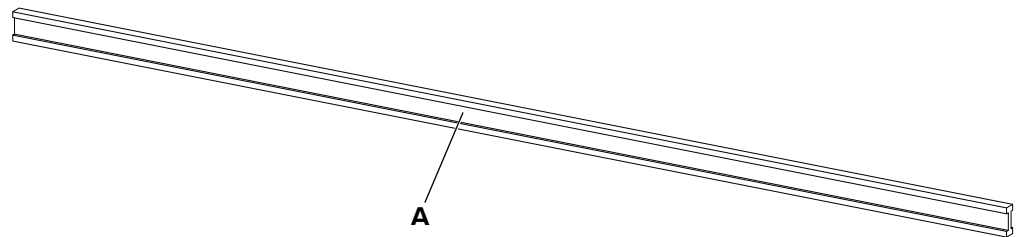
- Returns
- Safety boxes
- Safety level platforms.

Timber beams with plywood or corrugated sheet

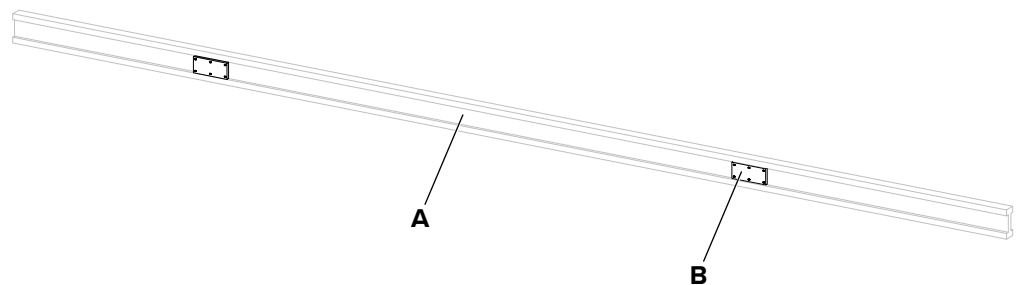
Timber beams + plywood or timber beams + corrugated sheets can be used for cladding the SAFESCREEN units. Typically the SAFESCREEN units with this type of cladding are entirely built on site.

The following sequence shows only the corrugated sheet as cladding but the assembly sequence for both types of cladding are similar.

- Step 1** Cut the timber beams (A) to the required length as specified in the supplied design scheme.

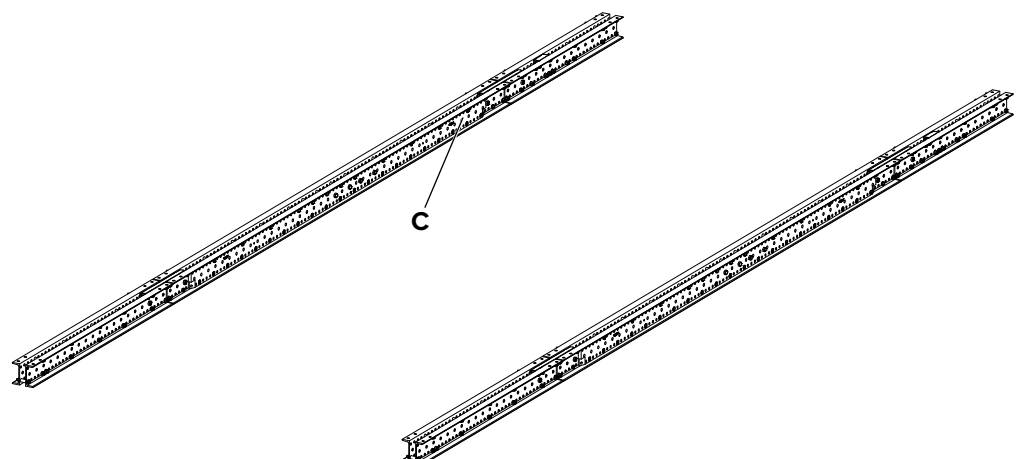


- Step 2** Position timber packers (B) on the timber beams (A) as per design scheme.



- Step 3** Drill holes through the timber beams and the timber packers as per design scheme.

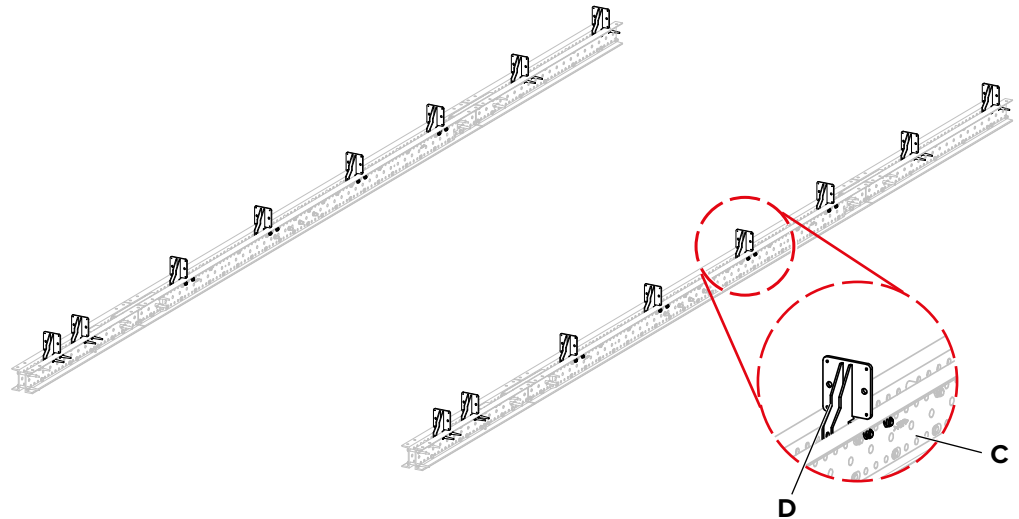
- Step 4** Lift and position the rails (C) in a separate area.





For illustration purposes the rails shown are single rails however the SAFESCREEN unit may require truss rails (in which case appropriate side support is required). For the correct type and position of the rails, refer to the supplied design scheme.

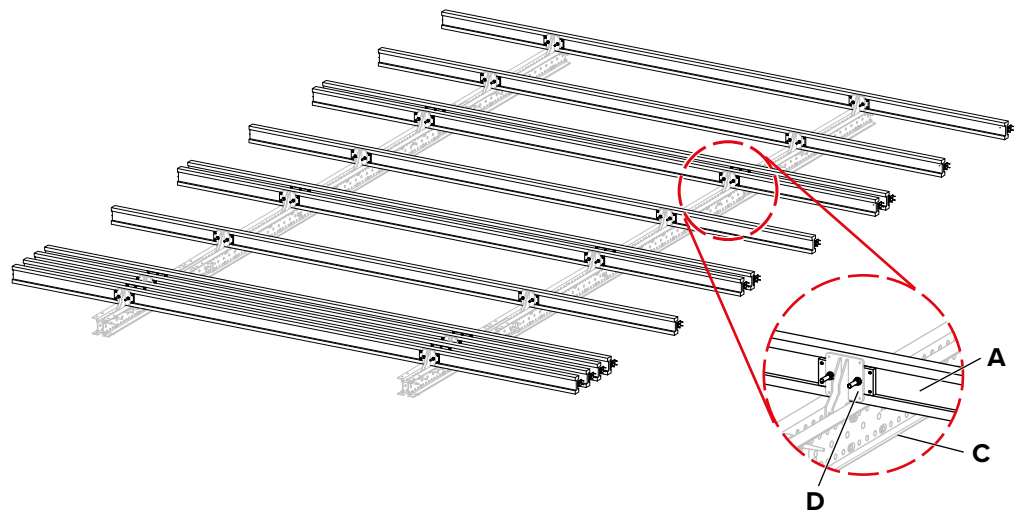
Step 5 Attach the SCR Timber Beam Bearings (code:611250) (**D**) to the rails (**C**).



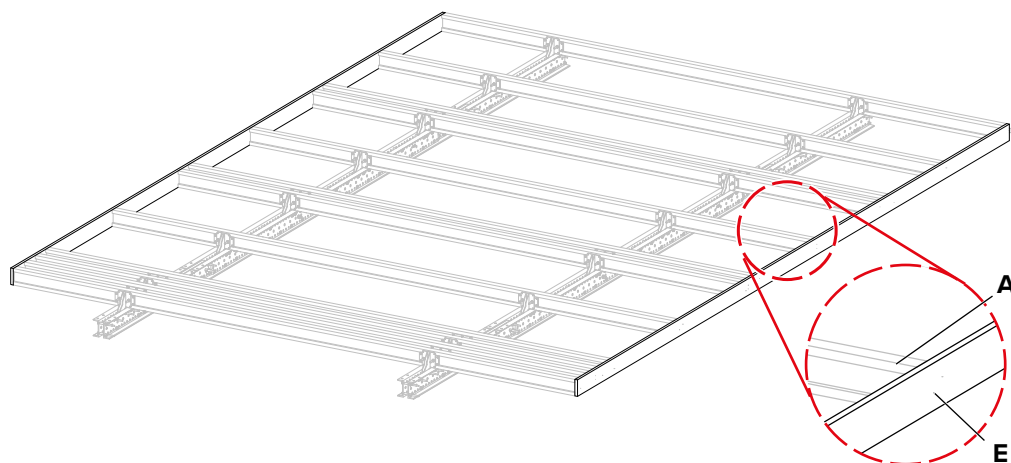
Step 6 Position the timber beams (**A**) on the rails (**C**) as per design scheme and attach the timber beams (**A**) to the SCR Timber Beam Bearings (code:611250) (**D**).



Timber beams that are not directly connected to a SCR Timber Beam Bearing (code:611250) must be propped to the nearest timber beam that is attached to a SCR Timber Beam Bearing (code:611250) in order to transfer the vertical loads.



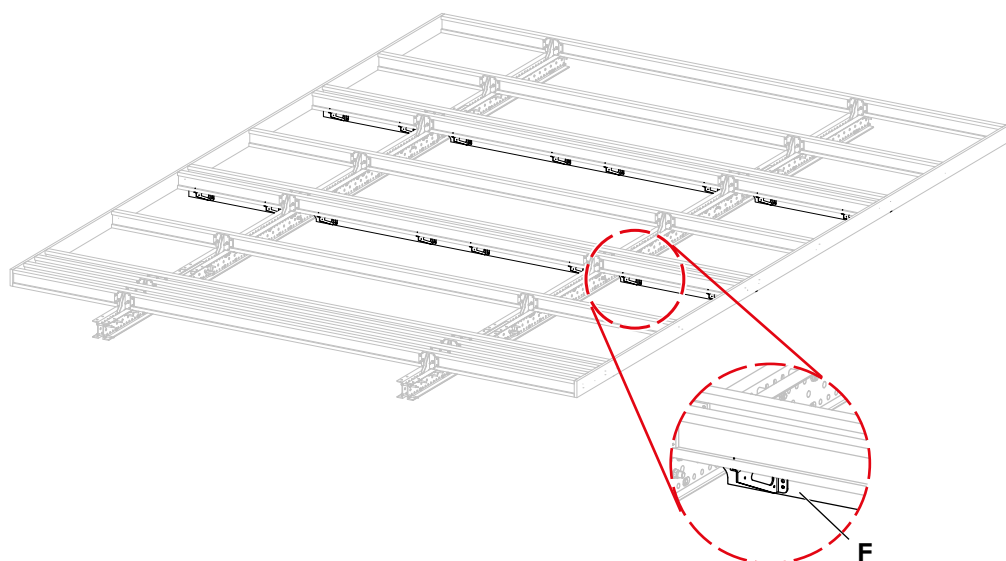
Step 7 Attach timber boards (E) to the end of the timber beams (A).



For the specific method, refer to the supplied design scheme.

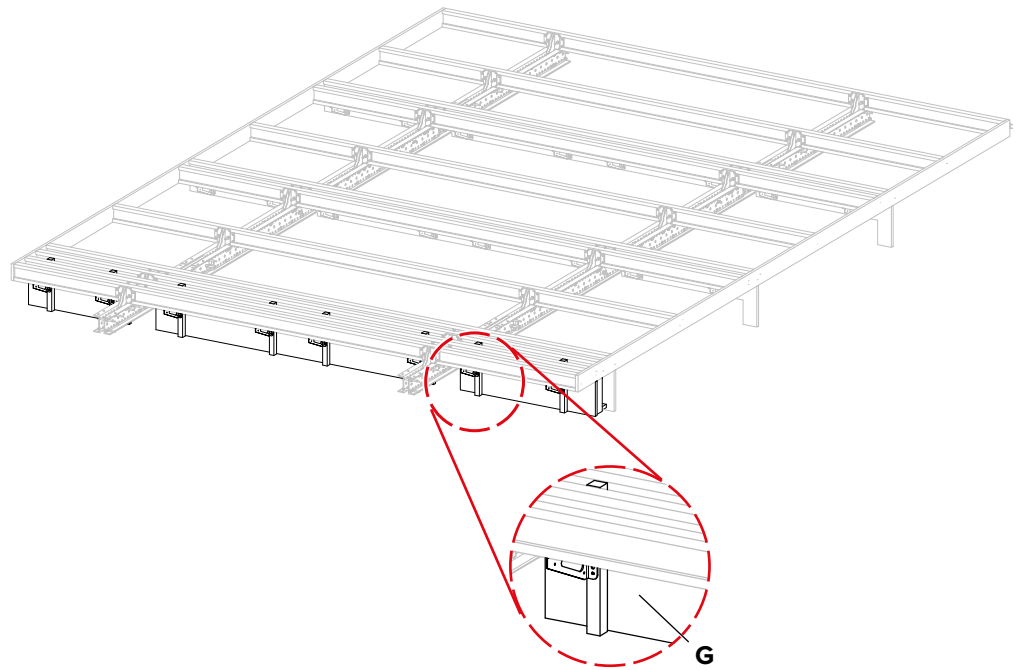
Step 8 Install the platforms (F) as per the supplied design scheme.

Platform type may vary depending on the type of vertical members. For the different platform options see page 132.

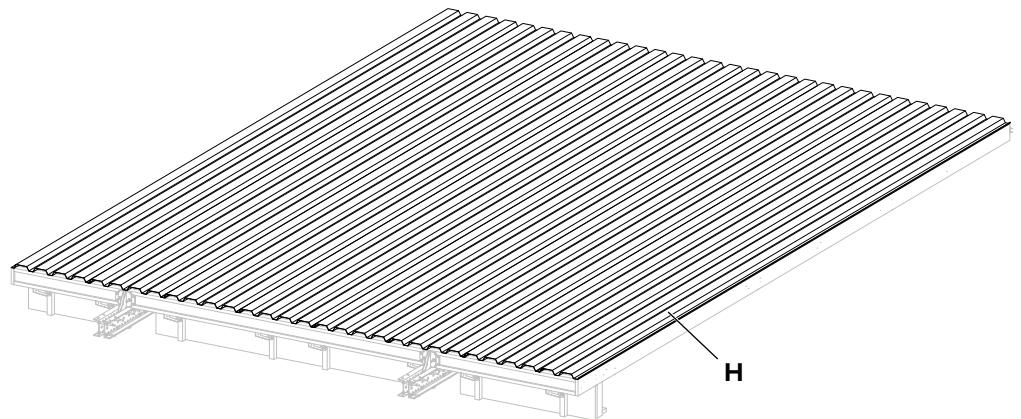


Step 9 Install the safety level platform (G) as per the supplied design scheme.

Timber packers may be required to protect the safety level platform during temporary storage.



Step 10 Attach the corrugated sheets (**H**) as per the supplied design scheme.



The SAFESCREEN unit is now ready for storage if required. Before installation, some residual assembly may be required depending on the site requirements, such as:

- Returns
- Safety boxes

9.2.3 Assembly of the platforms

For details such as dimensions, positioning, fixing positions and others, refer to the supplied design scheme.

Platforms for single rail units

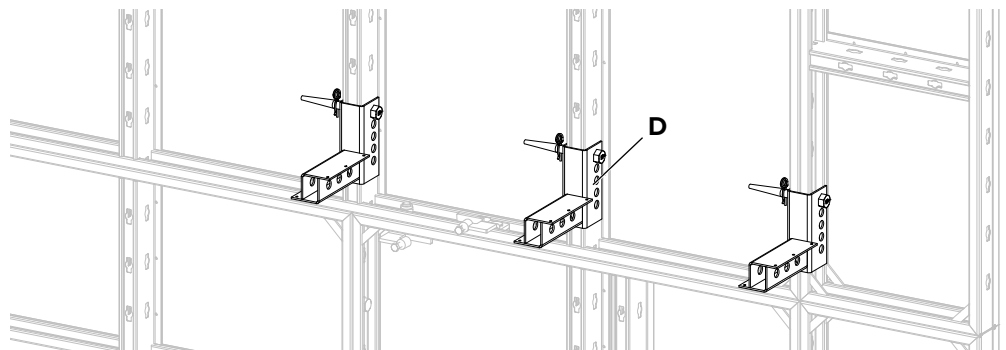
Note that for extendable cladding units, only the platform section between the rails can be pre-installed before transportation to site.

Units with corrugated sheets as cladding must be positioned with the rails facing down and the cladding beams must be attached to the rails before attaching the platforms. The corrugated sheet is then attached to the cladding beams.

Step 1 Cut the timber boards for the platform (A) and the toe boards (B).

Step 2 Cut the plywood for the traps (C).

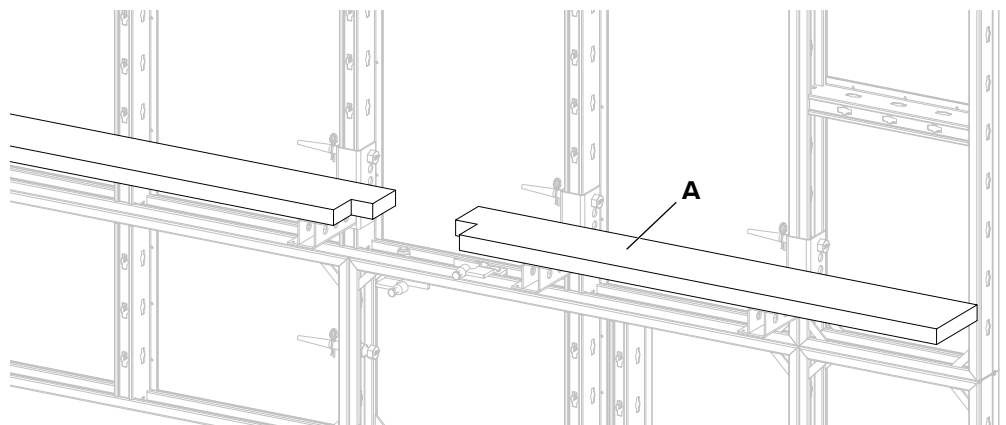
Step 3 Attach the supporting brackets (D).



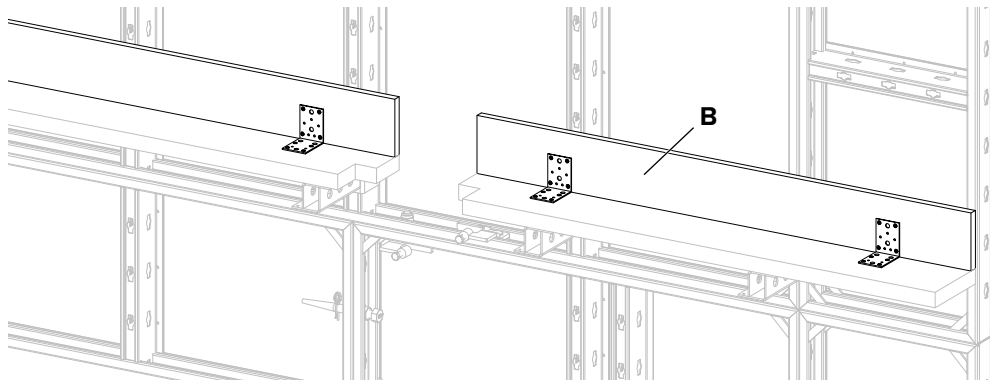
For illustration purposes the supporting bracket shown above is the SCR Panel Platform Bracket (code:611580), however the supporting brackets will vary depending on the cladding:

- SCR Cladding Panels: SCR Panel Platform Bracket (code:611580) secured with the CT_S_02 connection type.
- Timber beams + plywood or corrugated sheet: SCR Platform Bracket Timber Beam (code:611255) secured at the top using 2no. CT_WC_10, or if not possible then use the CT_M16_03 connection type. The SCR Platform Bracket Timber Beam (code:611255) can be fixed at the bottom using a CT_WC_10 connection type. A 60 x 60 mm timber packer can be used at the bottom as support.

Step 4 Attach the platform (A) to the supporting brackets.

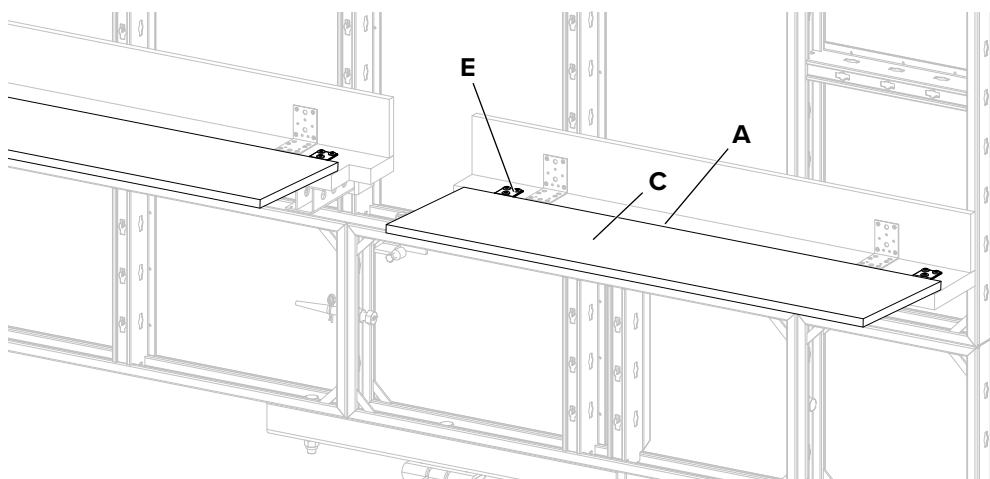


Step 5 Attach the toe boards (**B**) where required to the platform.

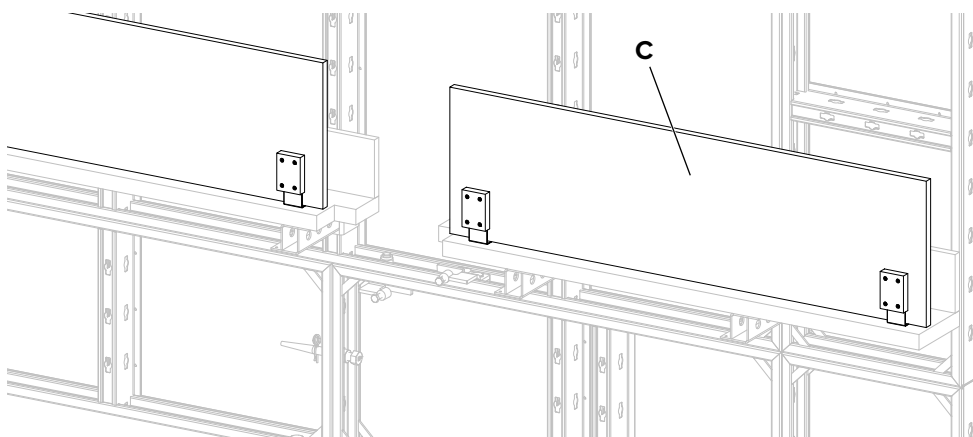


Step 6 Attach the hinge belts (**E**) to the traps (**C**).

Step 7 Attach the traps (hinge belts) (**E**) to the platform (**A**).



Step 8 Secure the traps (**C**) to the cladding in the folded up position.



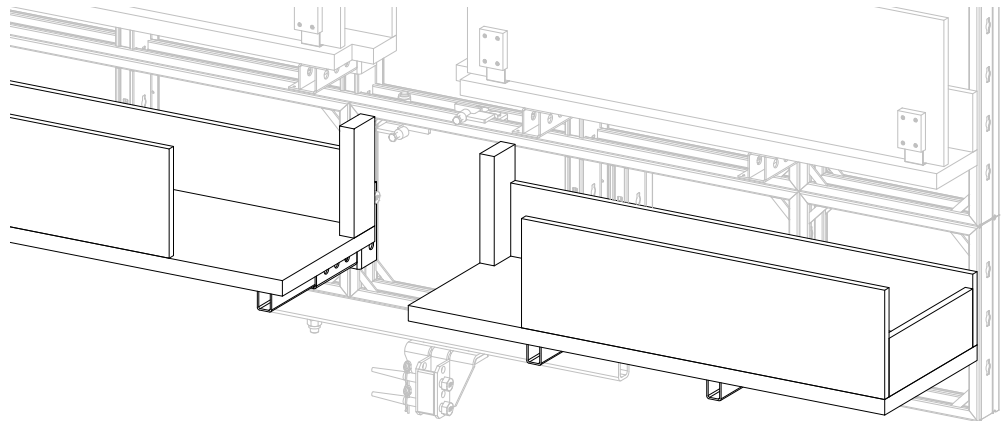
Safety level platforms for single rail units

Note that for extendable cladding units, only the platform section between rails can be pre-installed before transportation to site.

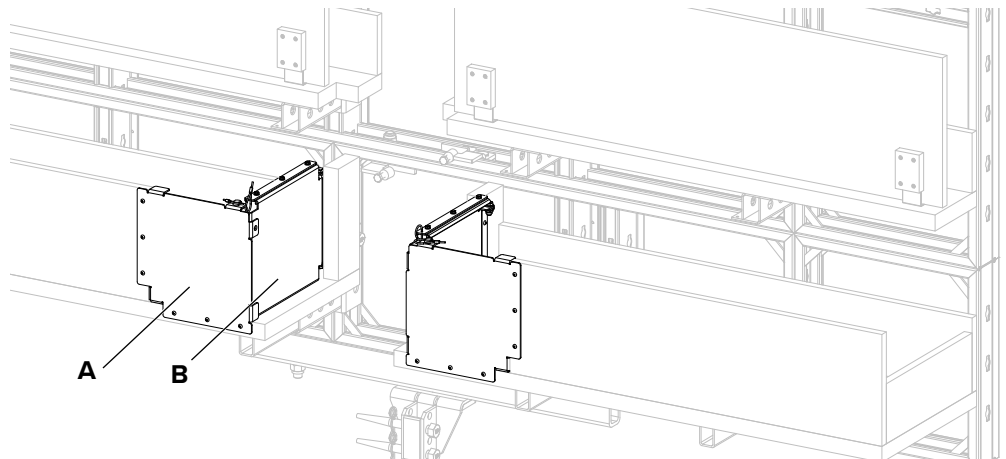
Units with corrugated sheets as cladding must be positioned with the rails facing down and the cladding beams must be attached to the rails before attaching the platforms. The corrugated sheet is then attached to the cladding beams.

If pre-assembled SAFESCREEN units are to be temporarily stored on site or transported to site, the section of the safety level platform that goes beyond the footprint of the SAFESCREEN unit must be transported and stored separately.

Step 1 Follow steps 1–5 of the sequence for the assembly of the platforms for single rail units.



Step 2 Install the SCR Steel Toe Plate 0.28 x 0.28 m (code:611626) **(A)** and the SCR Steel Toe Trap 28x28 (code:611675) **(B)**. Ensure that the SCR Steel Toe Trap 28x28 (code:611675) can be opened freely.

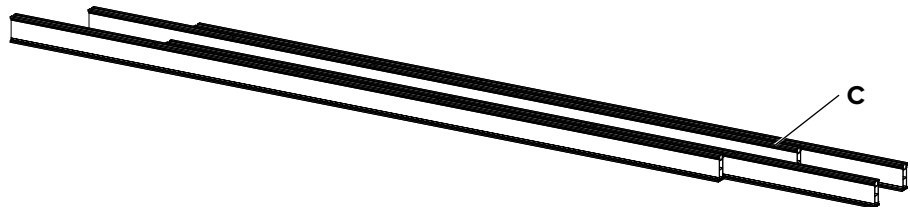


Fixed platforms for truss units

Note that fixed platforms are typically used in fixed width SAFESCREEN units. Units with corrugated sheets as cladding must be positioned with the rails facing down before attaching the platforms to allow for the cladding to be attached on top.

Step 1 Cut the plywood for the decking (A) and the toe boards (B).

Step 2 Lay the beams (C) on an even surface as per design scheme.



WARNING

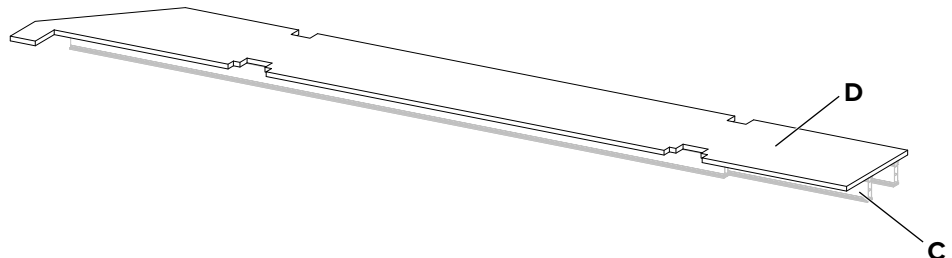
Risk of falling due to collapse!

Regardless of the decking material, the cantilever of the decking material towards the building has to be statically checked.



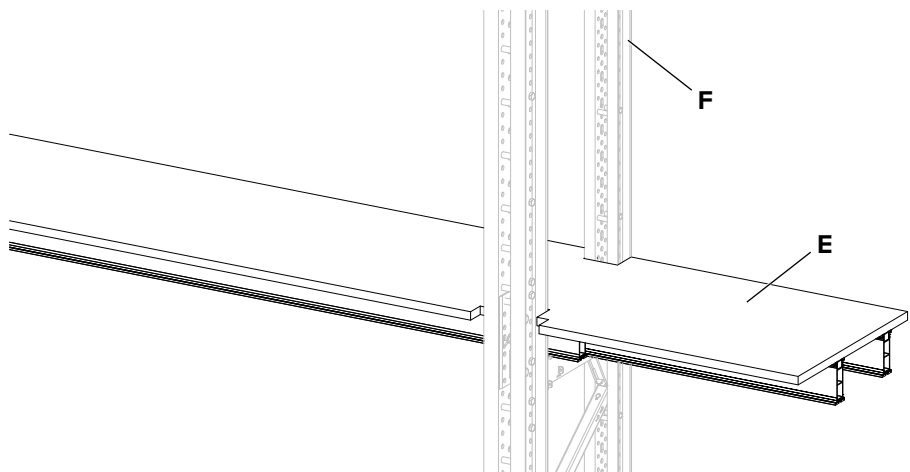
Use a spare platform beam as template.

Step 3 Attach plywood (D) to the beams (C).

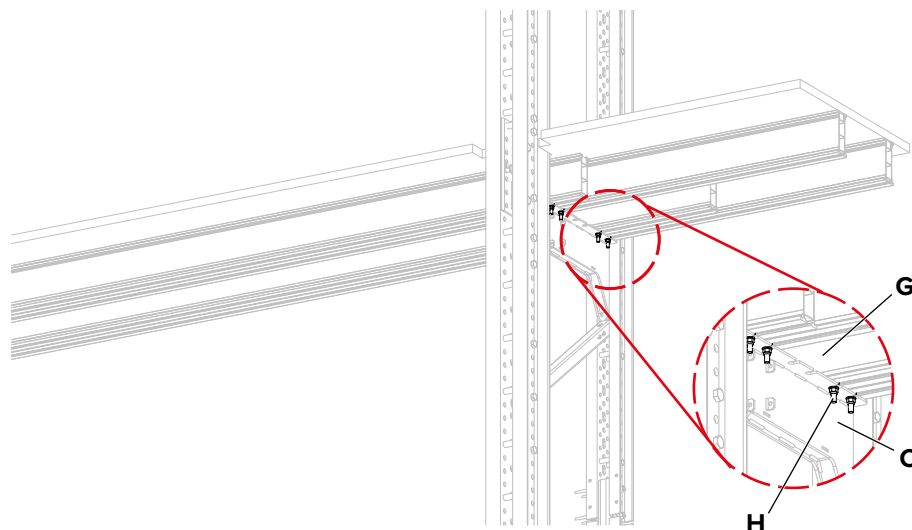


When using H 20 beams, do not attach the plywood to the wing sections of the platform.

Step 4 Position the assembled platform (E) in place on the trusses (F).



Step 5 Attach the assembled platform (E) to the platform beams (G) using the appropriate fasteners (H).

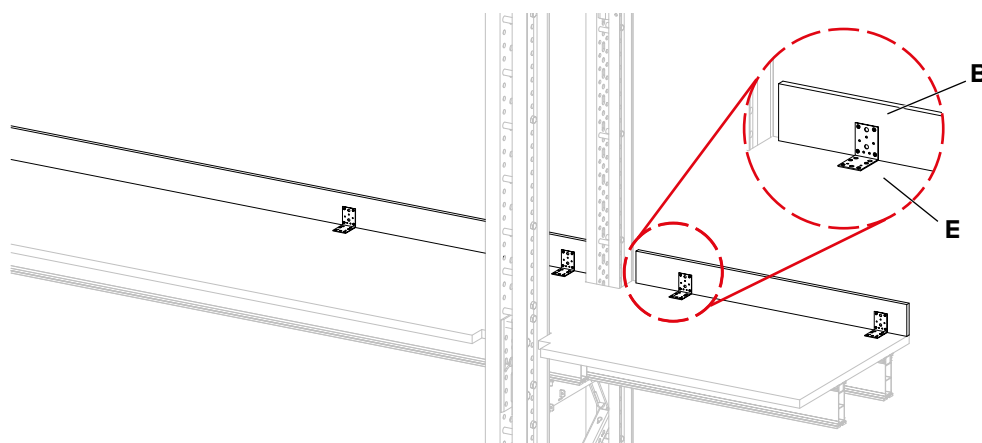


For illustration purposes DU-AL beams are shown above, however the beams used may vary, in which case the following fixings should be used:

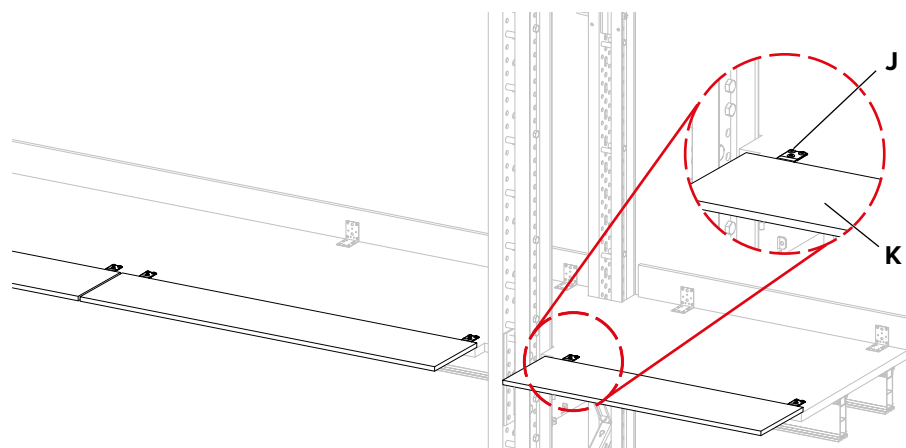
- DU-AL Aluminium Beams: T Bolt & Hex. Nut & Washer (code: 718099).
- H 20 Beams: H 20 Timber Beam Clamp (code:568048).

Step 6 If required, attach the plywood to the wing sections of the platform.

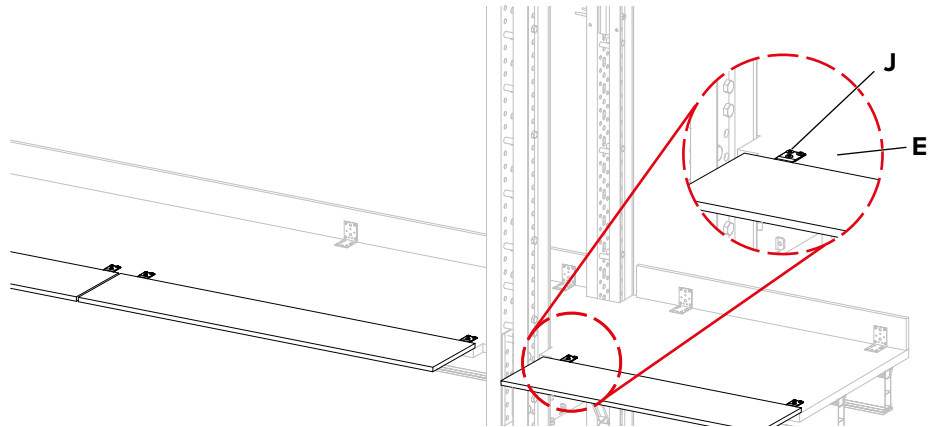
Step 7 Attach the toe board (B) to the platform (E).



Step 8 Attach the hinge belts (J) to the traps (K).



Step 9 Attach the trap (hinge belts) (**J**) to the platform (**E**).

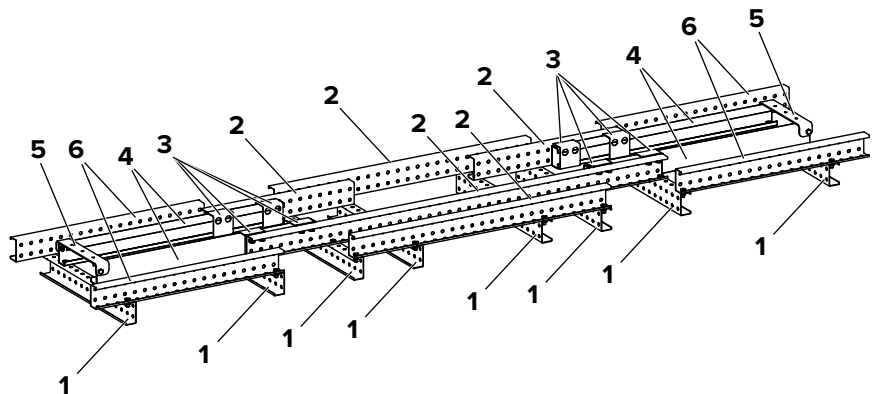


Step 10 Retract and secure the trap (**K**) to the cladding in the folded up position.

Folding platforms for truss units

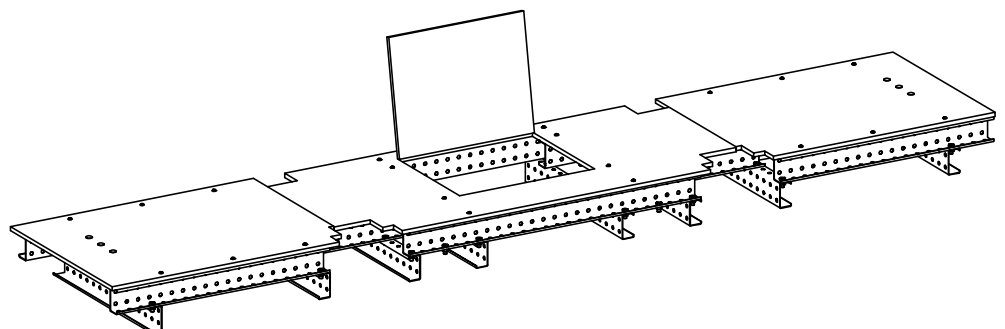
Note that folding platforms are typically used in extendable width SAFESCREEN units.

Below is a view of the components of a typical folding platform (plywood not shown for clarity).



1. HD Channel - transversal channels
2. HD Channel - main longitudinal
3. Guide Box (code:595142)
4. Extension Channel 138
5. Pivot Plate (code:595143)
6. HD Channel - longitudinal

It is possible to have folding platforms with a latch for ladder access.

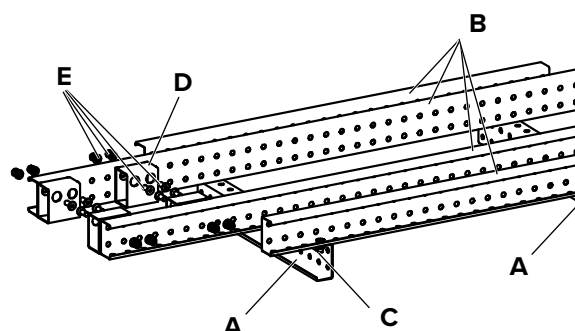


Shown below is the assembly sequence of a typical folding platform for reference.

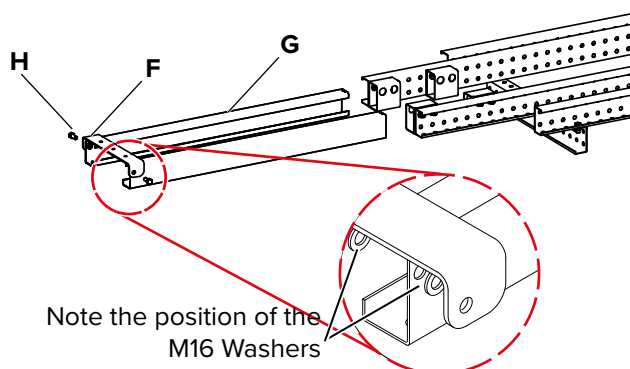


The folding platform may vary depending on the site requirements. For the required list of components, refer to the design scheme supplied for more information.

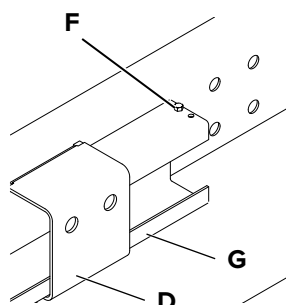
- Step 1** On a flat and level surface, place the transversal HD Channels (**A**) at the correct distance from each other.
- Step 2** Place longitudinal HD Channels (**B**) on top of the transversal HD Channels (**A**) at the correct position.
- Step 3** Secure using the CT_M16_01 connection type (**C**).
- Step 4** Position the Guide Box (code:595142) (**D**) and secure using 2no. CT_M16_02 connection type (**E**).



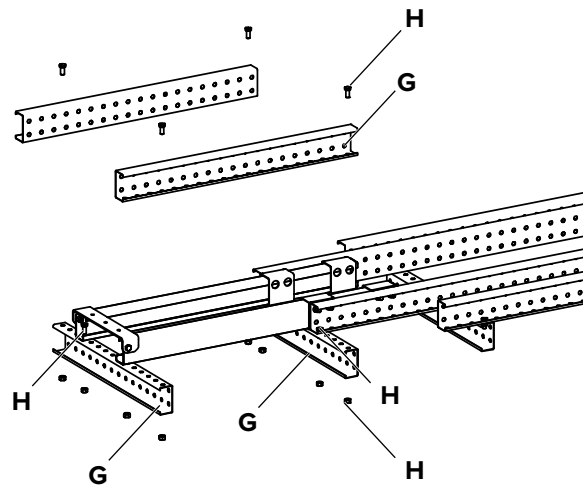
- Step 5** Repeat step 4 for the other positions of the Guide Boxes (code:595142).
- Step 6** Attach the Pivot Plate (code:595143) (**F**) to 2no. Extension Channel 138 (**G**). Secure using the CT_M16_02 connection type (**E**).



- Step 7** Insert the 2no. Extension Channel 138 (**G**) into the Guide Boxes (code:595142) (**D**).
- Step 8** Secure the 2no. Extension Channel 138 (**G**) using an additional CT_M6_01 connection type (**F**) to prevent over-extending past the Guide Box (code:595142) (**D**).

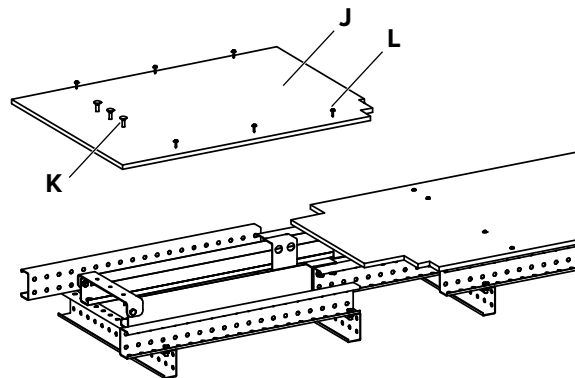


Step 9 Attach additional HD Channels (**G**) using the CT_M16_01 connection type (**H**).



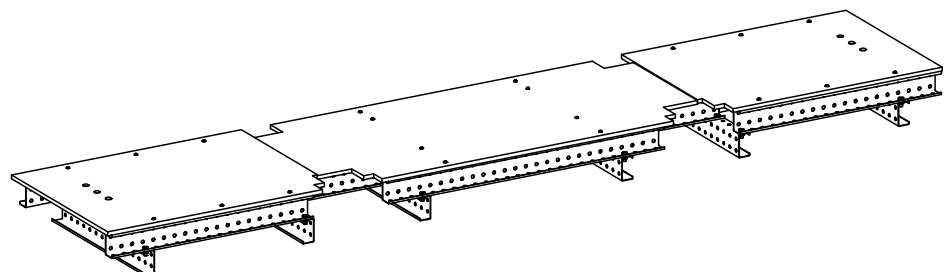
Step 10 Cut the plywood to suit each section of the folding platform.

Step 11 Place the plywood (**J**) on top of the respective section of the folding platform. Secure using the CT_M12_02 connection type (**K**) and drilling screws (**L**).



Before fixing the plywood check that longitudinal beam and transversal beams are square to each other.

Step 12 Repeat steps 04–11 for the other side of the folding platform.



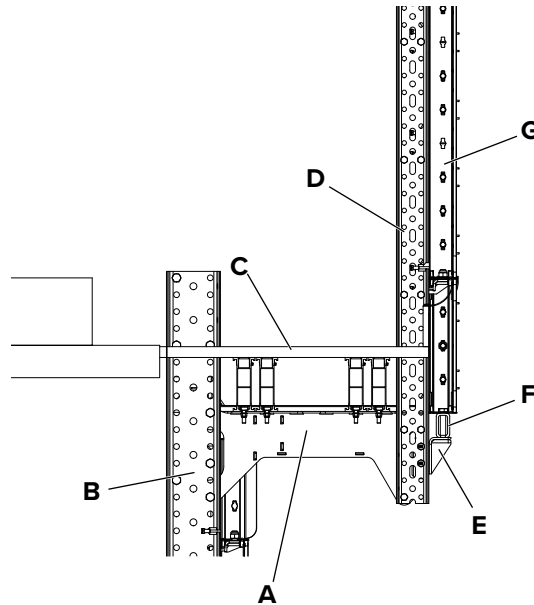
The assembly of the folding platform is now complete.

Cantilevered platform

If a SAFESCREEN unit is required to have a cantilevered platform, the assembly of the cladding must stop at the point where the cantilevered platform is to be positioned.

If the SAFESCREEN unit is built with the cladding facing down, the unit must be rotated so that the cladding is facing upwards so that the cantilevered platform can be assembled. For more information regarding lifting, see page 146.

The following sequence assumes that the SAFESCREEN unit has been rotated and that it has been placed on top of suitable temporary support.



- A. SCR Platform Beam 0.75 m Rigid (code:612263)
- B. IK Waler M (rail)
- C. Platform
- D. IK Waler L
- E. SCR Cladding Panel Bearing (code:612056)
- F. SCR Panel Bearing Spreader Beam (code:612059)
- G. SCR Cladding Panels

Note that the illustration above shows a unit in its vertical position and it is used only to reference the components used in a typical configuration of a cantilevered platform. The assembly of the cantilevered platform is done during the on-site assembly while the SAFESCREEN unit is in a horizontal position.



Ensure that the SAFESCREEN unit is stable and capable of supporting the additional components. Additional temporary supports especially against overturning may be required (not shown below).

- Step 1** Attach a SCR Platform Beam 0.75 m Rigid (code:612263) (A) to the rails of the SAFESCREEN unit built previously (B). Secure using the appropriate fasteners.



The fasteners used to secure the SCR Platform Beam 0.75 m Rigid (code:612263) vary depending on the IK Waler used to form the rails.

To attach to an IK Waler L, secure using 2no. CT_M16_04 per connection.

To attach to an IK Waler M, secure using 2no. CT_M20_07 per connection.

For more information regarding the position of the SCR Platform Beam 0.75 m Rigid (code:612263) and required fasteners refer to the supplied design scheme.

Step 2 Attach the outer IK Waler L (**D**).

Step 3 If required attach the diagonals.

Depending on the size of the SCR unit there might be diagonals or additional stiffening members required for lifting the unit up from the horizontal. If the design scheme allows for, these diagonals or members might be removed to facilitate movement on the platforms. If so, the diagonals have to be re-fitted before lifting the unit from the building and putting it back into the horizontal

Step 4 Attach the platform (**C**) as per the supplied design scheme.

Platform type may vary depending on the type of vertical members. For the different platform options see page 132.

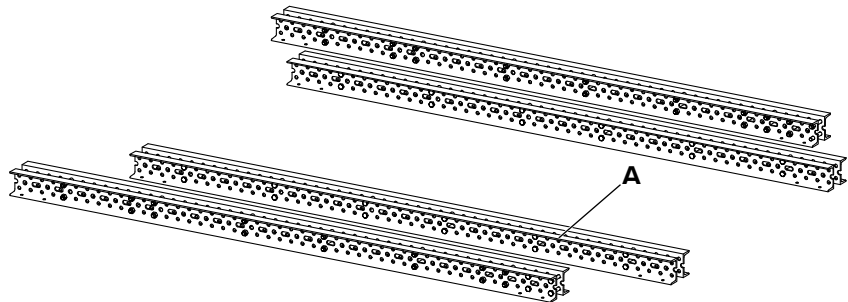
Step 5 Attach the cladding of the cantilevered platform.

The cantilevered platform cladding is built separately following the sequence of the relevant type of cladding.

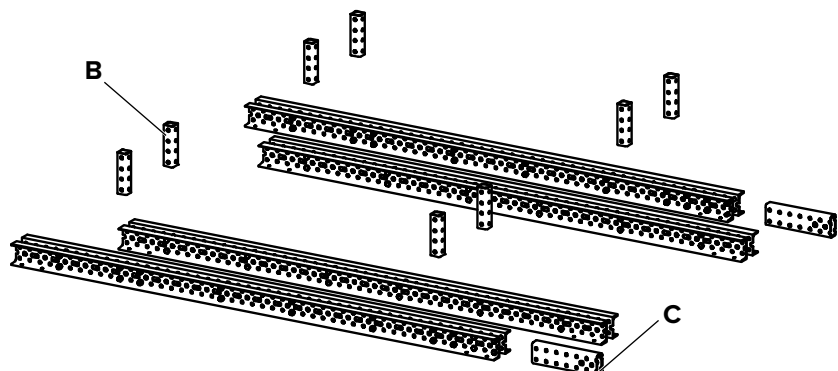
Loading platform

Step 1 On a flat and level surface, position the timber bearers to support the loading platform.

Step 2 Position the primary beams (IK Waler L) (**A**) as per the supplied design scheme.



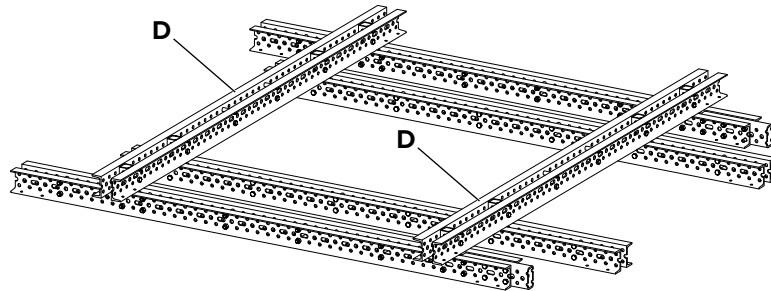
Step 3 Attach the required quantity of the SCF 60 Cross Connector L (code:612210) (**B**) and secure each using the CT_M16_04 per connection.



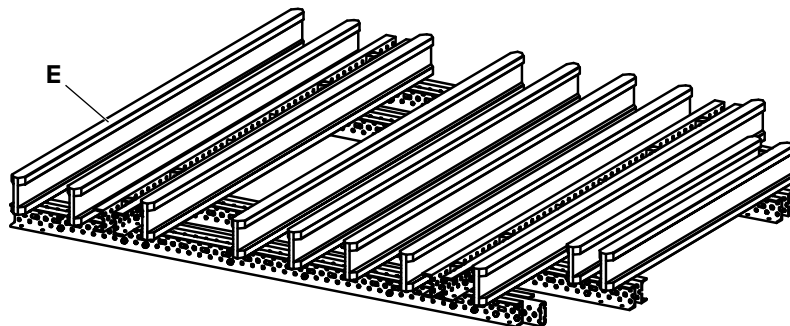
Step 4 Attach an IK Waler Connector L 25 (code:608445) (**C**) to the end of both outer primary beams (**A**) using 4no. CT_M16_04 or CT_S_01 per connection.

Note that to the IK Waler Connector L 25 (code:608445) is only used to attach the loading platform to an IK Waler L. To attach a loading platform to an IK Waler M an IK Waler Connector Flex L (code:608490) is required.

- Step 5** Position the secondary beams (IK Waler L) **(D)** on top of the primary beams **(A)** as per the supplied design scheme. Secure to all positions of the SCF 60 Cross Connector L (code:612210) **(B)** using the CT_M16_04 per connection.



- Step 6** Place the H 20 Beams 2.90 m * (code:581792) **(E)** on top of the primary beams **(A)** and secure each connection using a H 20 timber beam clamp (code:568048).



* - In some regions a T200 Beam 3.00 m (code:717230) and T-bolt (code:006354) are used.

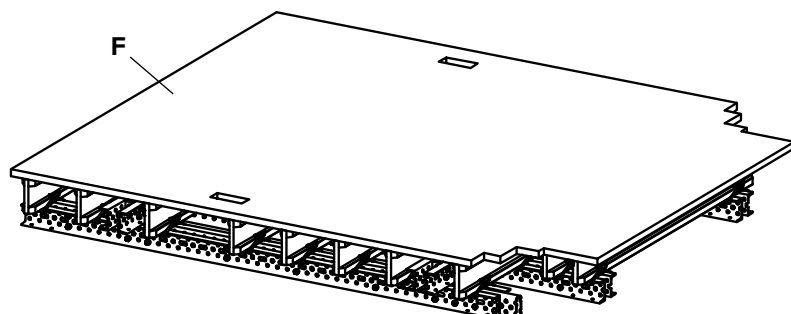
- Step 7** Use plywood **(F)** cut to suit, to form the decking of the loading platform. Secure to the H 20 Beams **(E)** using screws.



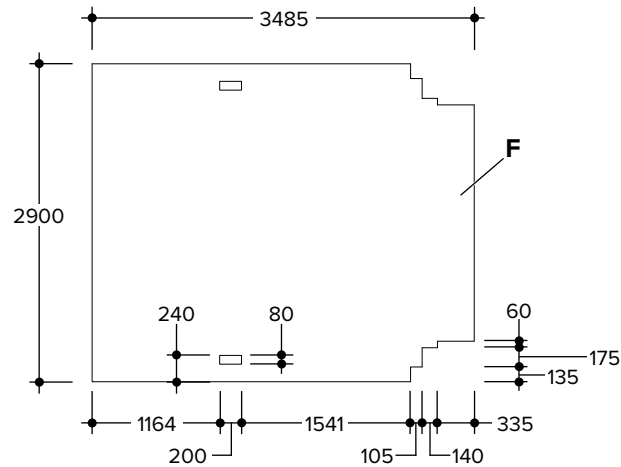
Ensure the platform base (beam setup) is square before fixing the plywood.



To ease the assembly of components later on, the plywood used for the decking should be installed with all the required cut-outs.



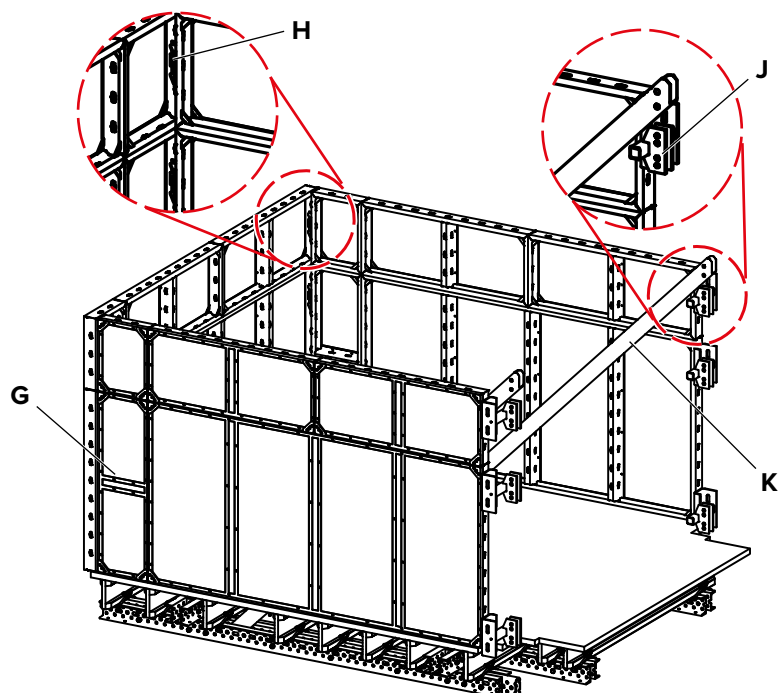
Plywood dimensions for a typically sized loading platform are shown below.



The decking of the loading platforms must be done using a double layer of plywood. High loads caused by wheel movement are likely to occur.

Plywood sheet joints must be staggered.

- Step 8** Attach the required SCR Cladding Panels (**G**) to each other and to the decking of the loading platform. For more information regarding the connections, refer to the supplied design scheme specific to the job requirements.
- Step 9** Secure the SCR Cladding Panels at the corners using the SCR Inner Corner Panel Connector (code:611755) (**H**) at the positions shown in the supplied design scheme. Secure using 2no. CT_M20_03 per connection.
- Step 10** Attach the SCR Panel Rail Connector (code:611680) (**J**) as per the supplied design scheme. Secure using 2no. CT_M20_03 per connection.
- Step 11** Attach the diagonals (**K**) specified on the supplied design scheme to the primary beams (**A**) and secure using 2no. CT_M20_07 or CT_S_02 per connection



The typical assembly is now completed.

Attaching the loading platform to the SAFESCREEN unit

To attach the loading platform to the SAFESCREEN unit, the unit must be positioned on top of suitable temporary support and with the cladding facing upwards. Operatives must be able to have access to the underside of the SAFESCREEN unit.

It may be required to use additional temporary support to prop the rails on the positions where the loading platform will be attached.

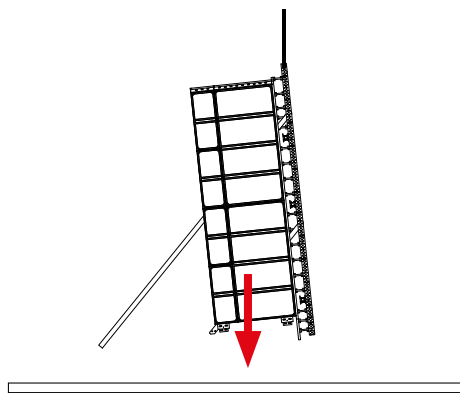
For more information regarding lifting the SAFESCREEN units see page 146.

In the following sequence it is assumed that the SAFESCREEN unit is prepared to receive the loading platform, as described above.

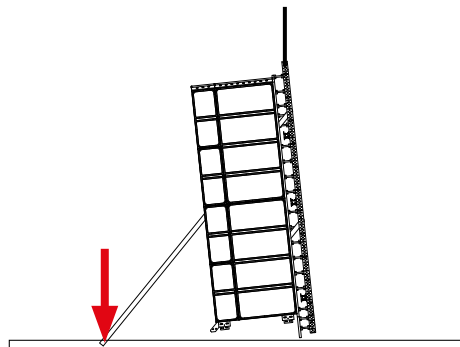
Step 12 Attach the crane slings to the end of the primary beams of the loading platform.

Step 13 Lift the loading platform in a controlled manner.

Step 14 Position the loading platform above the SAFESCREEN unit.



Step 15 Lower the loading platform until the diagonals can be attached to the rail.



Step 16 Secure the diagonal using the required fasteners (typically CT_S_02 or CT_M20_07).

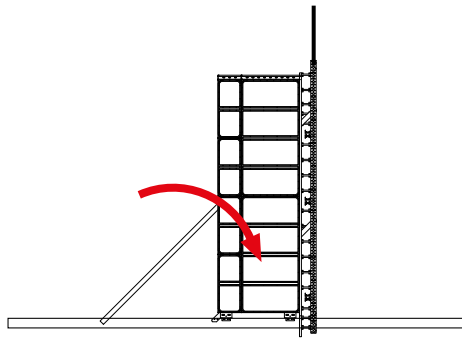


The fasteners required to secure the diagonals vary depending on the IK Waler used to form the rails, refer to the supplied design scheme.



Use only one fastener per diagonal to connect the diagonals to the rails and do not securely tighten the fasteners to allow for the loading platform to rotate around this connection.

Step 17 Lower the platform in a controlled manner, so that the loading platform can rotate around the connection of the diagonals to the rail, until the opposite end of the loading platform is resting on top on the rail.



Ensure that all connection positions are properly aligned.

Step 18 Attach all the IK Waler Connector L 25 (code:608445) to the rails of the SAFESCREEN unit.

Note that the IK Waler Connector L 25 (code:608445) is only used to attach the loading platform to an IK Waler L. To attach a loading platform to an IK Waler M an IK Waler Connector Flex L (code:608490) is required.

Step 19 Tighten the fasteners used to connect the diagonals to the rail.

Step 20 Add the rest of the fasteners required to secure the connection between the diagonals and the rail.

Step 21 Attach the SCR Panel Rail Connector (code:611680) to the rail using the required fasteners.



The fasteners required to secure the SCR Panel Rail Connector (code:611680) vary depending on the IK Waler used to form the rails, refer to the supplied design scheme.



Ensure that the loading platform is securely attached to the SAFESCREEN unit before releasing the crane slings.

Step 22 Release the crane slings from the loading platform.

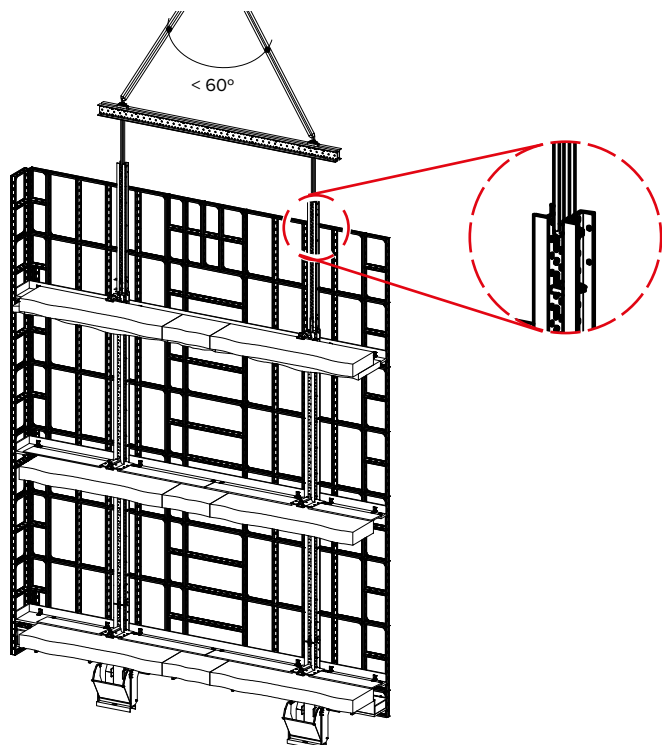
10 Lifting

Mechanical lifting should only be carried out by competent and trained persons.

Only persons engaged in the lifting and moving should be allowed near the operation when mechanical lifting must be carried out.

- Use adequate forklifts
Do not lift objects / assemblies longer than 7.00 m with forklifts.
Ensure floor is level and even.
Transport object in a controlled and safe manner.
- Use chains / slings when crane lifting / transporting pre-assembled frames, platforms and fully assembled units.
- Ensure lifting straps are of sufficient length and of adequate capacity.
- Check the weight of the lifted item and working load limits of lifting devices.
- Ensure the lifting pathway is clear for unit lift.
- Attach crane slings to the designated lifting points as per the supplied design scheme.
- Avoid fixing slings around the rails or other sharp edges, as this can cause damage to the channels and / or the slings.
- Avoid resting slings against the edges of the panels during lifting.
- If required use a lifting beam.
- Do not exceed a 60° spreading angle for the crane slings.
- Ensure that the load is stable and secure at all times during crane lifting / transporting operations.

All relevant regulation regarding mechanical lifting must be adhered to at all times.



11 Transport

11.1 Unit types and requirements

Due to the UK's Road Regulations, the maximum unit width that can be transported on the road without a escort vehicle is 2.90 m.

There are few different ways the SAFESCREEN units can be loaded to comply with this regulation:

- Fixed units (up to 2.90 m)
In general, units with fixed platforms and panels up to 2.90 m in width can be delivered to site as built.
- Fixed units (over 2.90 m)
These can be supplied flat packed in pre-assembled elements such as vertical members, platforms, panels, etc.
- Expandable units
Folding platforms require folding and securing to the frame. Perforated panels are required to be fully closed. This type of unit, once fully closed, must not exceed 2.90 m in width.
- Loading platforms
These can be supplied flat packed in pre-assembled elements such as frames, platforms, panels, etc.



The road regulations may vary depending on the region. Refer and comply to the relevant local regulations.

11.2 Delivery / return typical check list

11.2.1 Checking Procedure

Material deliveries are to be checked on arrival to site / place of destination as well as before each use to ensure that they are in good condition and functioning correctly.

The inspection includes a visual check and functional check of all components and check of assembled parts, according to relevant assembly drawings.

Checks must be done by authorised personnel only.

Highlight and report any deviation, at any stage, to the senior staff member. Senior staff must take appropriate action in regards to any deviation reported.

The following is a typical checklist. Job specific checklist may vary.

11.2.2 Check List (Typical)

Inspected Unit (refer to SAFESCREEN assembly card, if attached):

Unit type: _____
 Unit no.: _____
 Drawing no.: _____
 Item: _____

Visual Inspection:



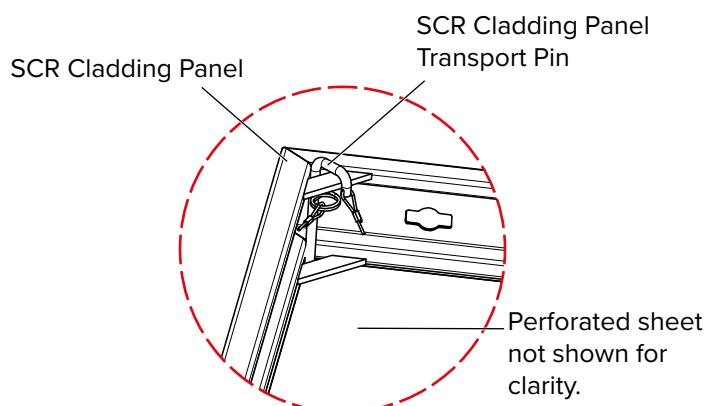
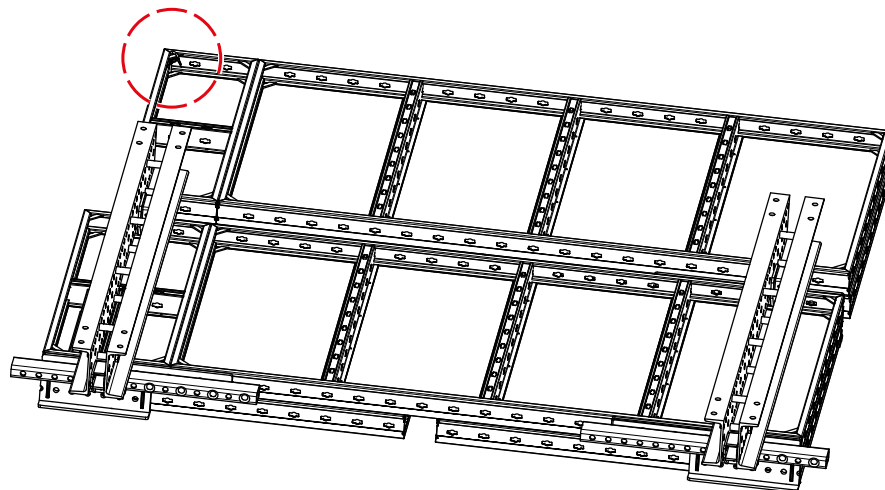
- All parts are completed.

- ☐ - Parts do not show any wear or outer deformation.
- ☐ - Parts do not show any mechanical damage.
- ☐ - Part's welding is without apparent external cracks.
- ☐ - Moving parts (rotating / sliding) show ease of movement.
- ☐ - Unit is free of concrete residuals.

Notes:

11.3 Securing the extendable units

During transportation and to prevent the extendable units from accidentally opening, the SAFESCREEN unit must be secured using the SCR Cladding Panel Transport Pin (code:612124). The SCR Cladding Panel Transport Pin (code:612124) is inserted in the corner of the fixed panels and secured using the safety clip. The extendable panels must be fully retracted and the pin must protrude through the opening of the corner of the extendable panels.



12 Installing the SAFESCREEN units

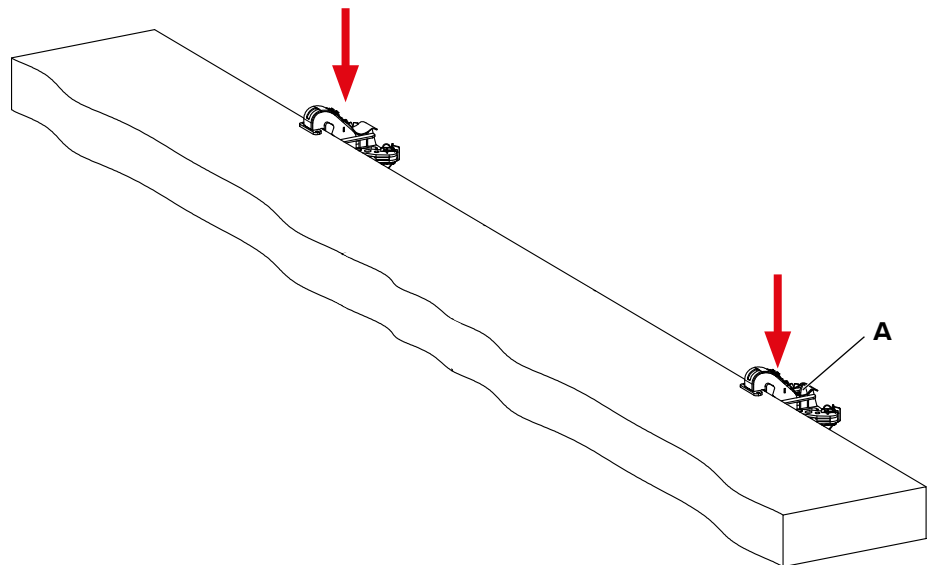
Installation of a SAFESCREEN unit starts when the unit is on-site and pre-assembled in accordance with the agreed scope. The SAFESCREEN unit installation is complete when it is safely secured to the existing concrete structure and all gaps are properly closed as per agreed scope.

Personnel involved in this operation must be competent, wear the appropriate PPE and collective and/or individual measures against falling from height must be in place where required.

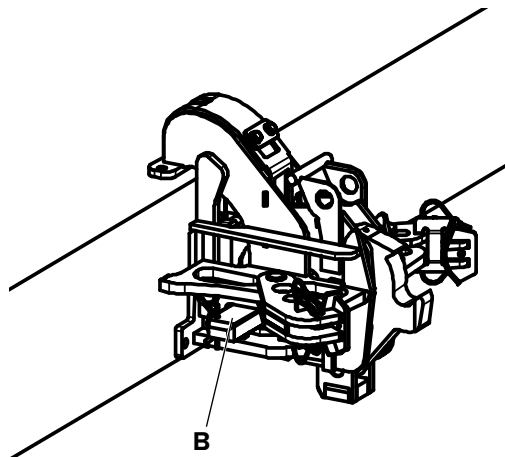
Note that for illustration purposes the instructions may show only one rail, however the instructions are applicable for both rails. Moreover the installation is shown using SCR Slab Edge Bracket (code:611170), however these steps apply to other types of brackets as well.

Phase 1 - Preparations on the concrete structure

- Step 1** Fence off the area below the area where the SAFESCREEN unit is to be installed.
- Step 2** Ensure that the anchors are installed in the concrete structure and that they are vertically aligned, within the allowable tolerances, as per the supplied design tie scheme.
- Step 3** Install 2no. levels of the specified climbing brackets (A).

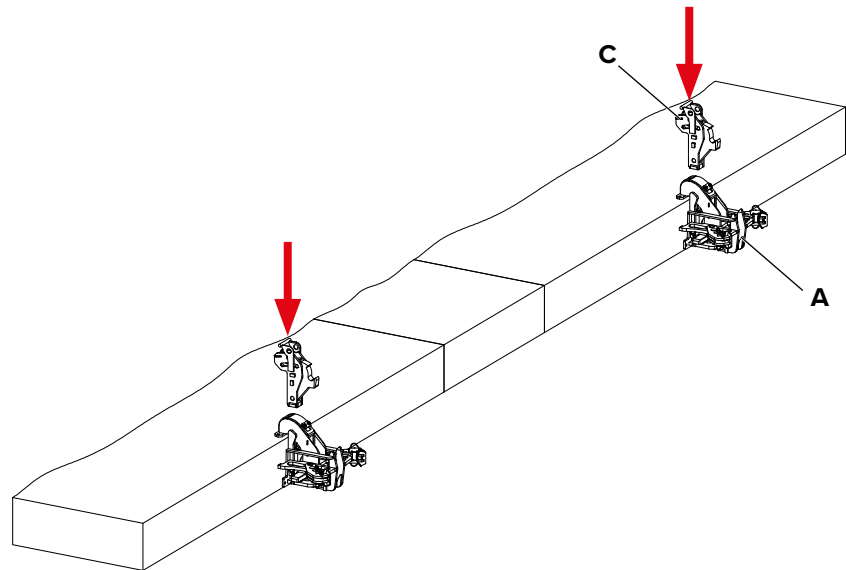


- Step 4** Install the SCR Slab Edge Bracket Securing Bar (code:611230) (B).



Installing the SAFESCREEN units

Step 5 Install the Bracket Claw Units (code:611115) (C) in the climbing brackets (A) at level -1.



Step 6 Check horizontal level of the Bracket Claw Units (code:611115) (C).



Step 7 If required, install the height adjustment components to adjust the level of the Bracket Claw Units (code:611115) (C) and level the Bracket Claw Units (code:611115) (C), see page 57.

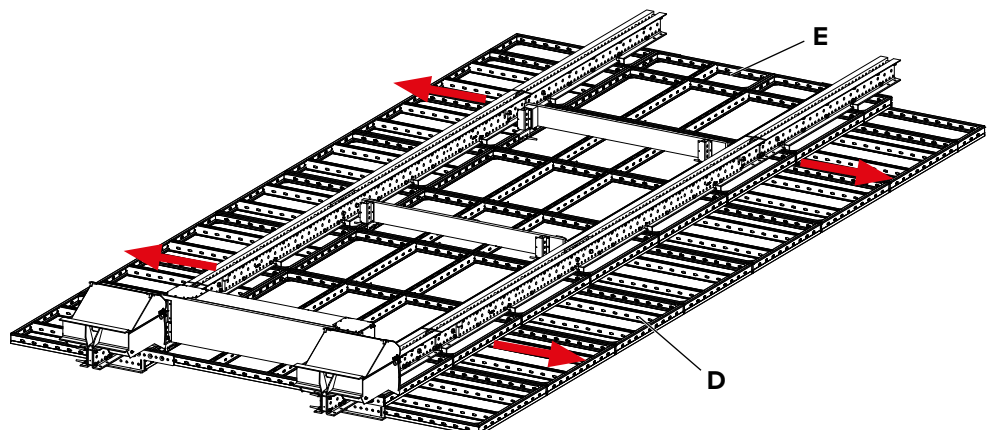
- SCR Slab Bracket Height Adjustment (code:611205) for the SCR Slab Edge Bracket (code:611170)
- SCF 60 Wall Bracket Height Adjustment (code:611210) for the SCR IK Waler Bracket (code:611710).

Phase 2 - Preparing the SAFESCREEN unit

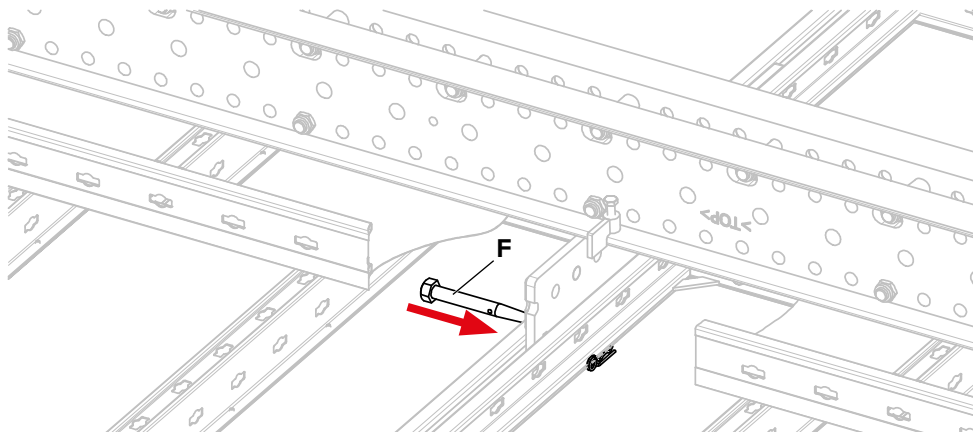
Steps 8–12 are for extendable width SAFESCREEN units only.

Step 8 Remove the safety pins used to secure the SCR Cladding Extension Panels (D) to the SCR Cladding Panels (E). Store the safety pins for later use.

Step 9 Slide the SCR Cladding Extension Panels (D) out.

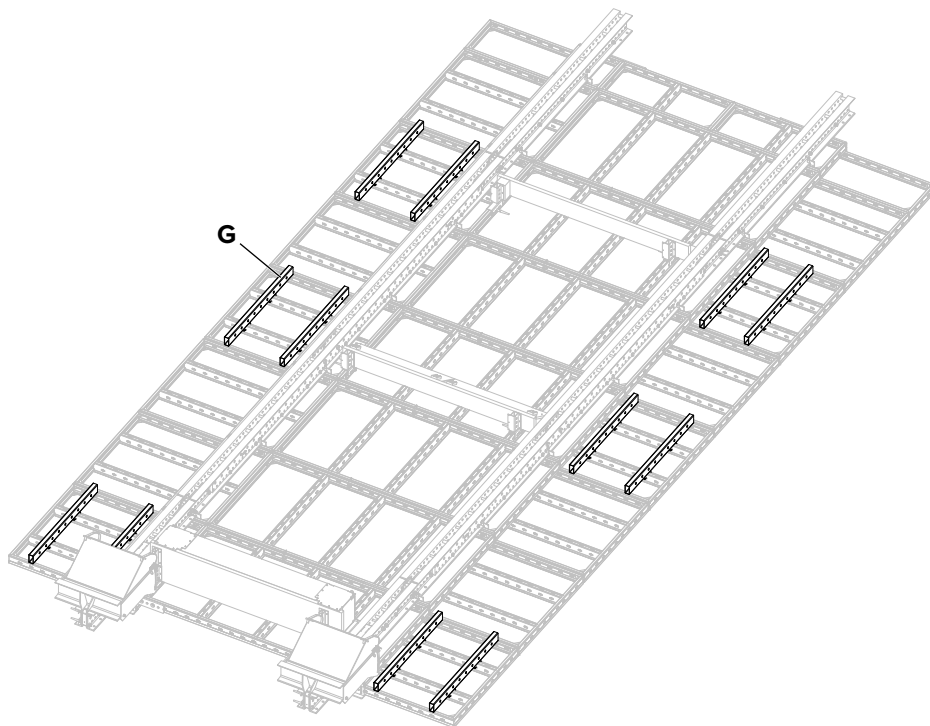


Step 10 Secure the SCR Cladding Extension Panels (**D**) in position using the CT_S_02 connection type (**F**).

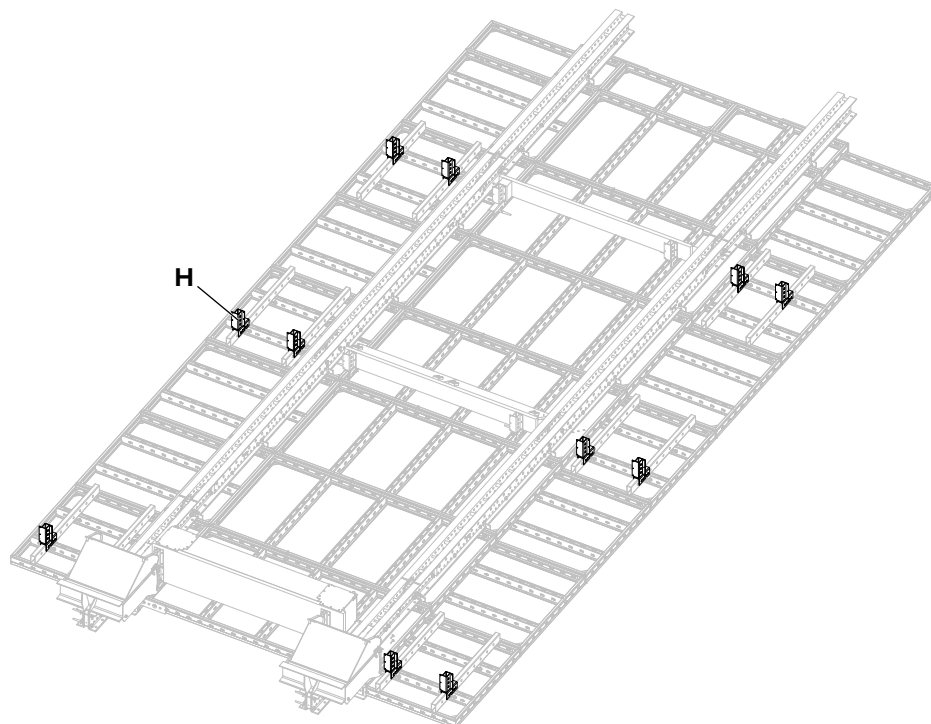


Step 11 Attach the SCR Panel Ribs where required.

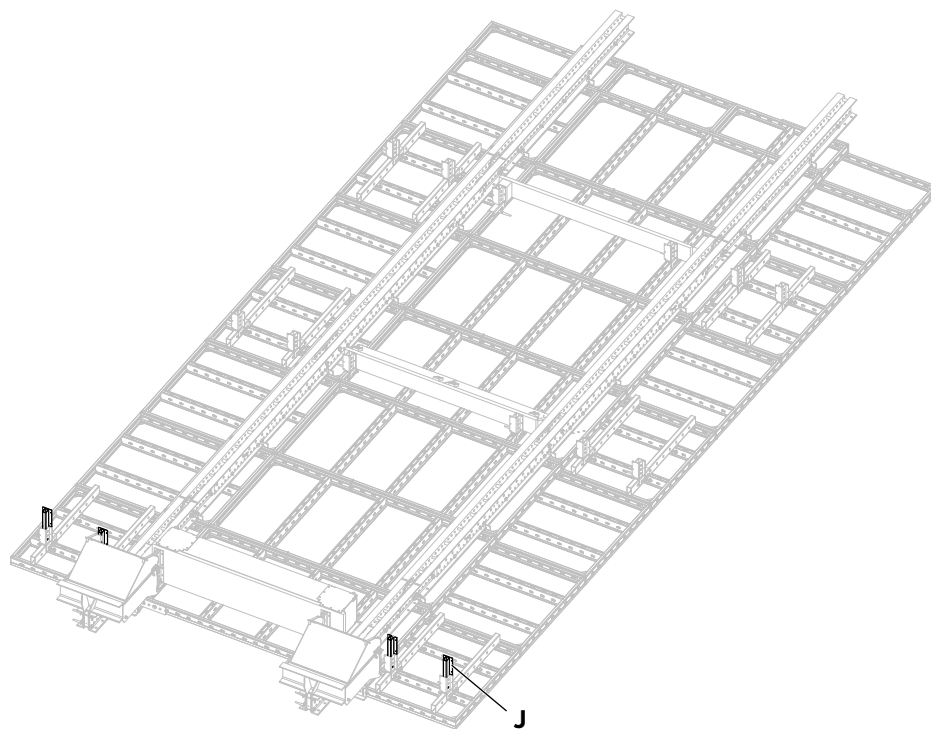
Step 12 Attach the SCR Platform Bracket Adaptors (**G**) where required.



Step 13 Attach the SCR Panel Platform Bracket (code:611580) (**H**). Secure as per design scheme.

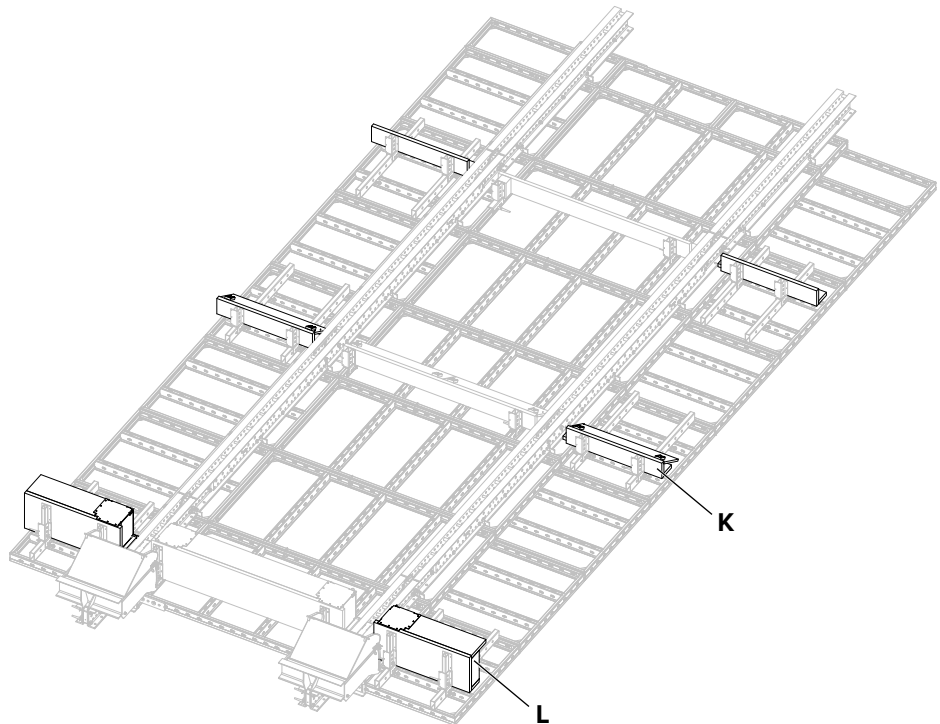


Step 14 Attach the SCR Panel Platform Bracket Extension (code:612239) (**J**). Secure as per design scheme.



Step 15 Build the wing platforms separately.

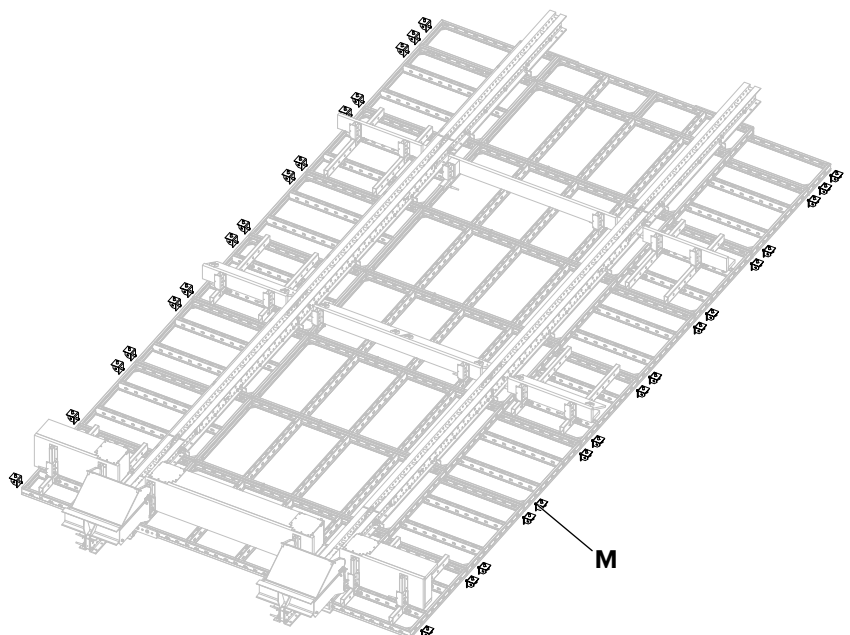
Step 16 Attach the wing platforms (**K**) and the wing safety box level (**L**) as per the supplied design scheme.



To speed up the assembly the platforms, platform brackets with the platform brackets included, could be build prior to the assembly and be transported to site as a pre-assembled unit.

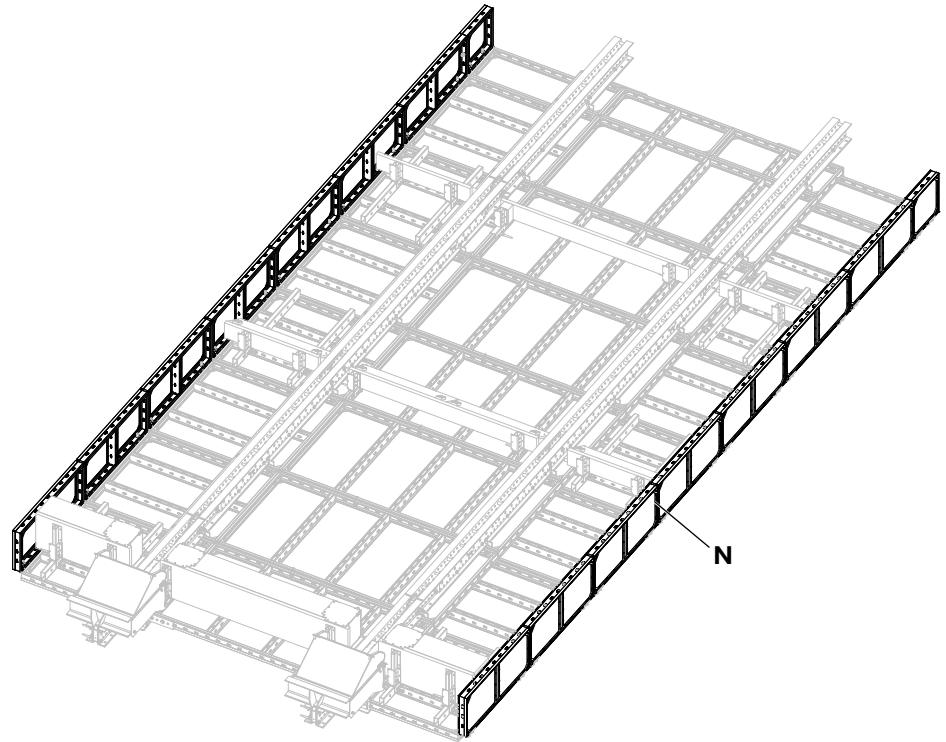
Step 17 If returns are required on the SAFESCREEN unit, attach the specified return connectors (**M**).

- SCR Return Connector Adjustable (code:611620) + SCR Return Brace (code:612245) + 2no. SCR Return Panel Brace Connector (code:612240)
- SCR Return Connector 90° (code:611575).
- SCR Return Connector 45° (code:611615)



Installing the SAFESCREEN units

Step 18 Attach the return panels (**N**) as per the supplied design scheme.



Step 19 Attach the SCR Cladding Panel T-Spacers (code:611548) (**K**) where required.

Step 20 Attach the rubber sealings where required.



To save time, rubber seals can be attached after the unit is installed on the building.

Phase 3 - Lifting the unit

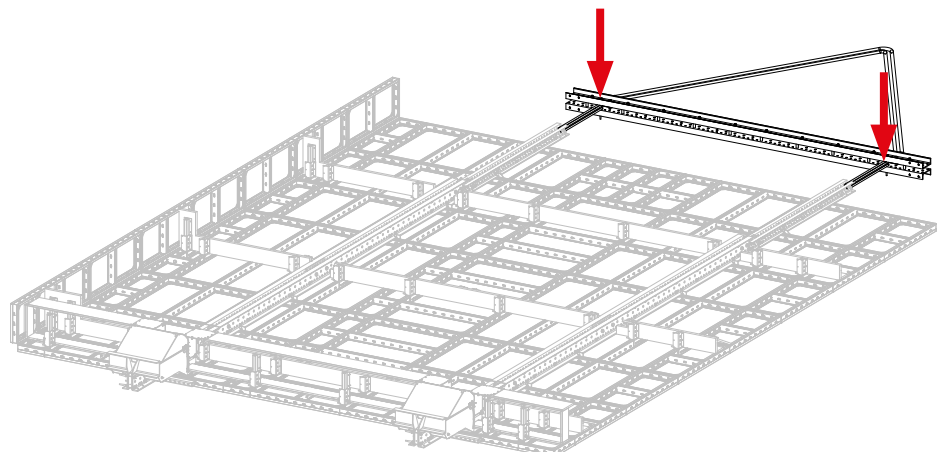


Before commencing the lifting of the SAFESCREEN unit, ensure that:

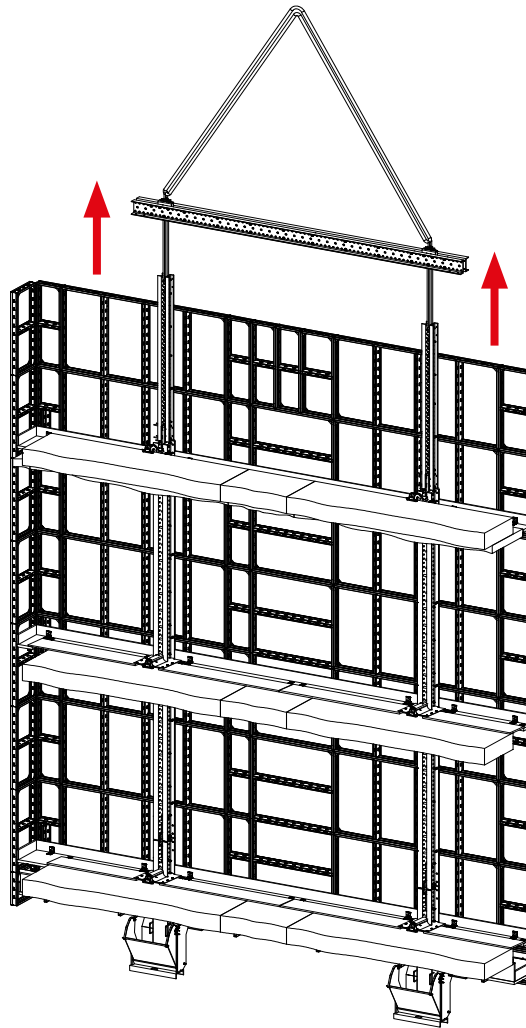
- The unit is clear of debris and loose materials
- All traps are secured in the open position
- All concrete slab edges are free of protruding items
- All extendable panels are secured and cannot slide in or out.

Step 21 Attach a suitable spreader beam to the SAFESCREEN unit.

Step 22 Attach the crane slings to the spreader beam.



Step 23 Lift the SAFESCREEN unit in a controlled and safe manner.



Ensure that during the rotation of the SAFESCREEN unit, from the horizontal to the vertical position, no damage to the material occurs.

If trestles or other supports are used, ensure that the SAFESCREEN unit cannot slide off these trestles in an uncontrolled manner.

Phase 4 - Installing the SAFESCREEN unit to the building



WARNING

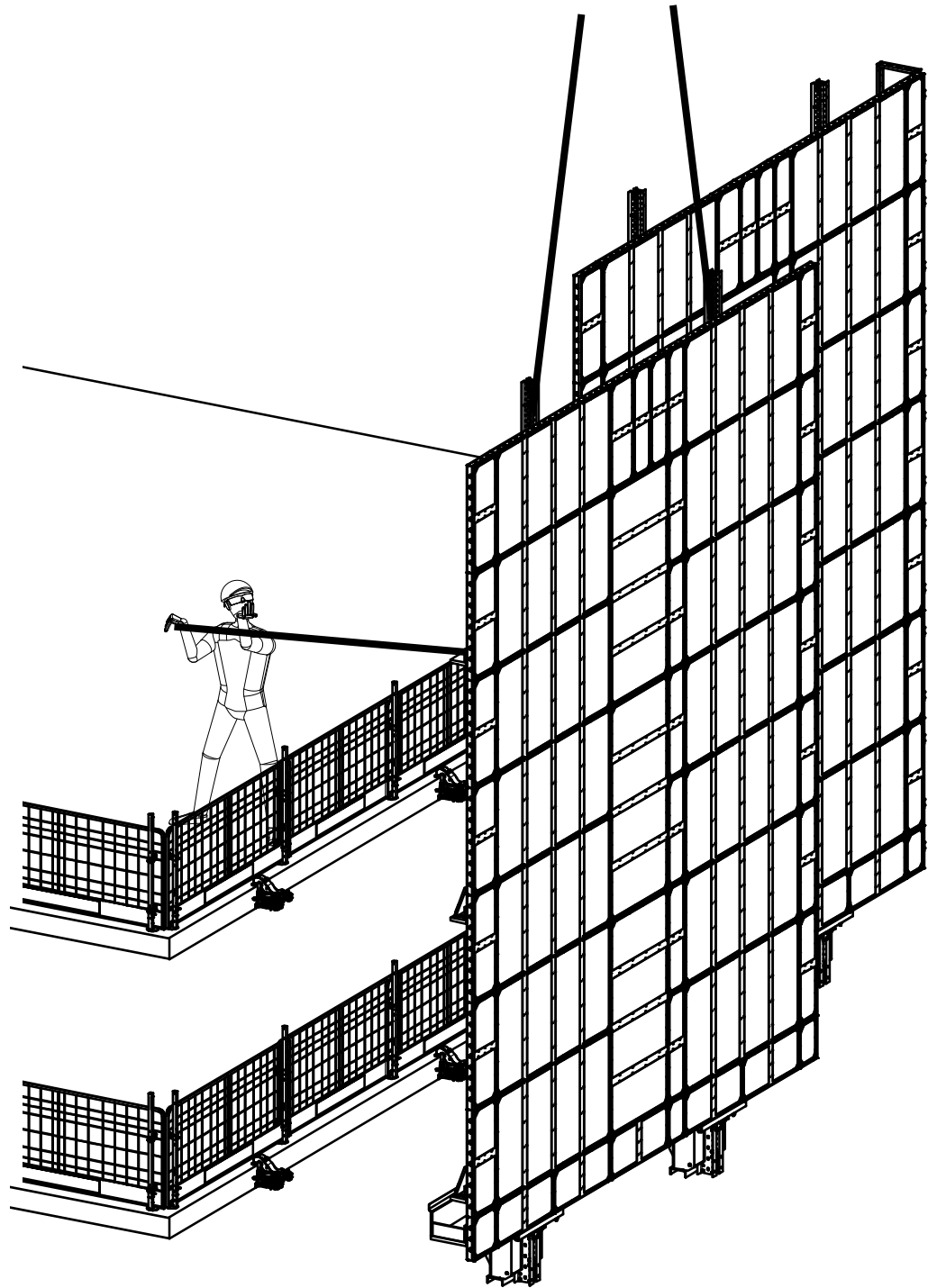
Risk of serious injury or death!

When installing or removing the unit using a crane ensure that the appropriate collective means of edge protection are in place when working near leading edges.

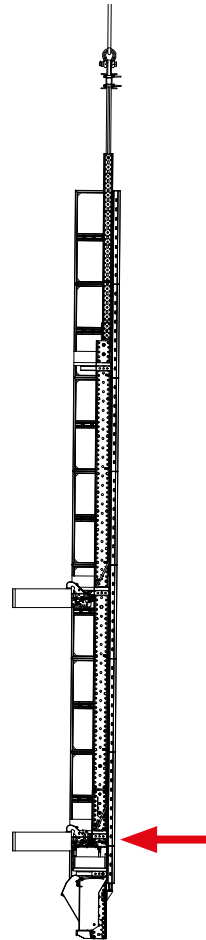
Ensure that the lifting operation is done in a safe and controlled manner.

The temporary edge protection shown refers to a generic assembly/installation sequence. The edge protection may vary depending on the specific job requirements. Refer to the supplied design scheme for more information.

Also, due to the risk of falling objects, the area below the unit should be closed off, operatives should tether loose objects being moved/installed and if possible a safety net below the unit should be in place.

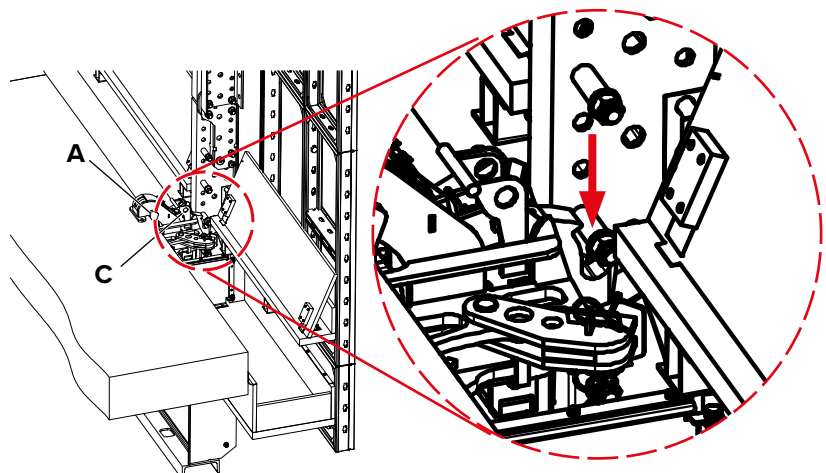


Step 24 Position the SAFESCREEN unit against the lower level of the climbing brackets (**A**).
Note that the SAFESCREEN unit will be at a slight angle with the bottom part of the unit closer to the concrete structure.

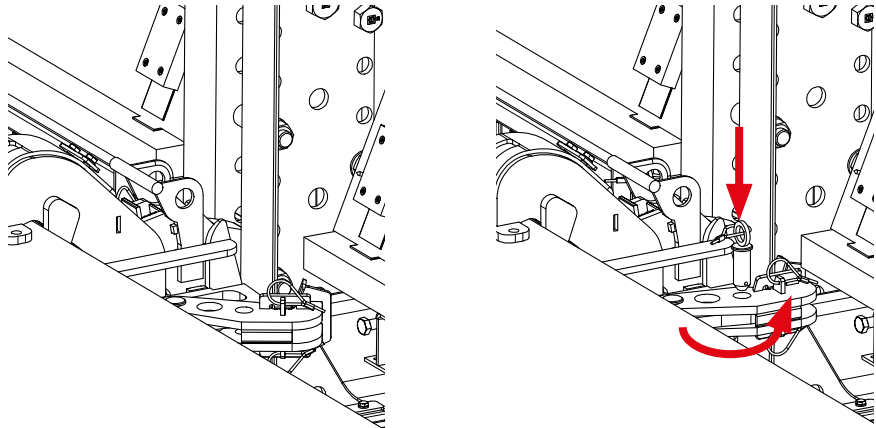


Ensure that the SAFESCREEN unit will be supported by the correct Bolt Sleeve Ø30 (code:611720). The correct supporting Bolt Sleeve Ø30 (code:611720) must be directly above the Bracket Claw Unit (code:611115).

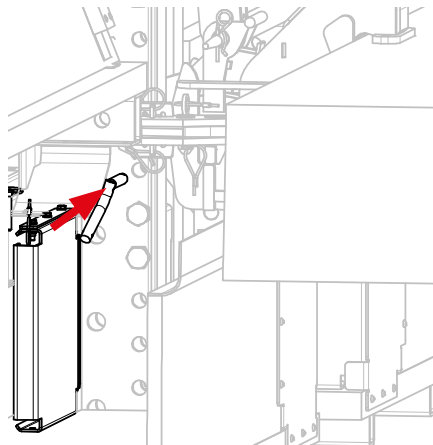
Step 25 Lower the SAFESCREEN unit so that it rests on the Bracket Claw Units (code:611115) (**C**) of level -1 or level -2 depending on the SAFESCREEN unit.



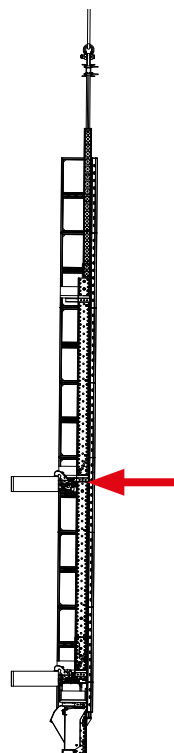
Step 26 Close the claws of the lower level of climbing brackets **(C)** so that the inner flanges of the rails are captured by the claws. Secure using the claw pins.



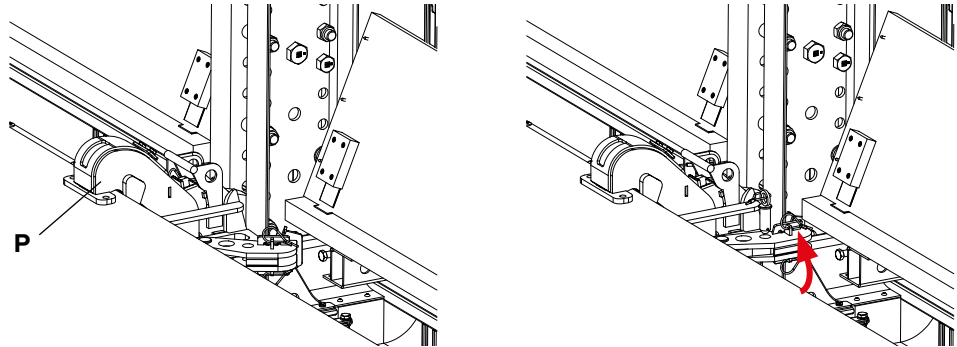
Step 27 Attach the Bracket Claw Locks (code:611380) **(N)** on both rails.



Step 28 Pull the upper part of the SAFESCREEN unit so that the inner flanges of the rails can be captured by the claws of the upper climbing brackets **(P)**.

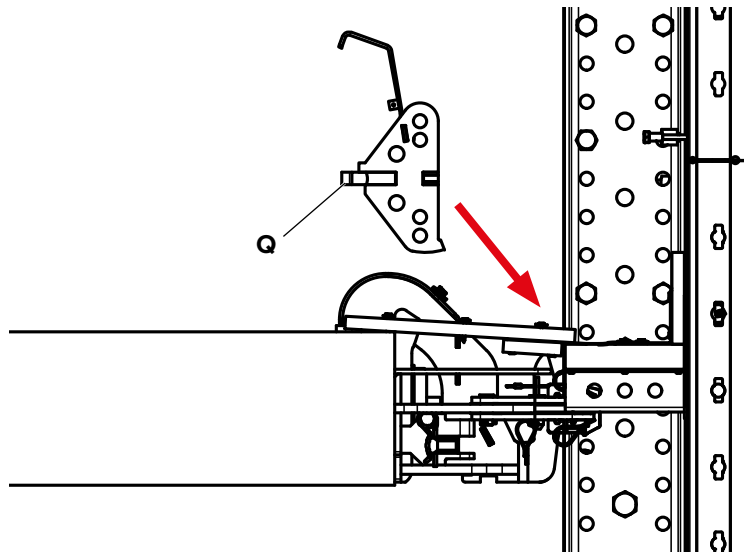


Step 29 Close the claws of the upper climbing brackets (**P**).



Step 30 Release crane slings.

Step 31 Attach the SCR Wind Latches (code:611810) (**Q**) if required.

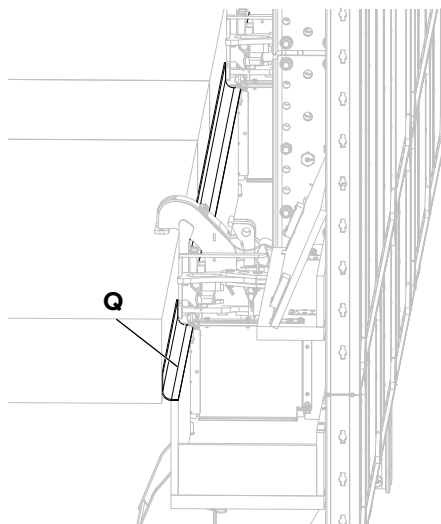


Step 32 Seal the unit by installing/completing the rubber covers as per the supplied design scheme.

Step 33 Seal the SAFESCREEN unit vertically by installing the SCR Sealing Brushes.

Step 34 Close the gap between the safety level platform and the concrete face with 15cm rubber strips (fix using CT_WC_01)

Step 35 Close the gap between the platforms and the concrete slabs by closing the traps (**R**) of the SAFESCREEN unit.



The SAFESCREEN unit is safely installed to the building.

13 Operating the SAFESCREEN unit

This section shows the operation of a typical Powerpack. The unit supplied may vary from the unit shown here. Please refer to the supplied Operating Instructions document of the Powerpack for specific information.

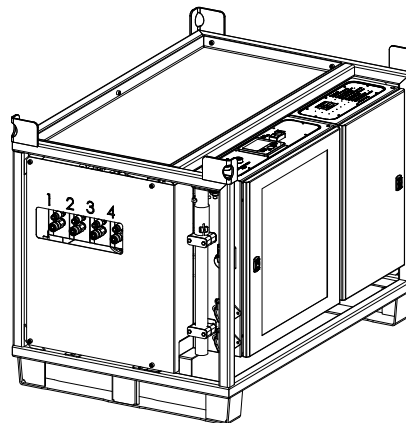
13.1 General and safety information

The hydraulic system (the Powerpack, hydraulic cylinders, and hose sets) must be kept in good condition and the manufacturer's instructions for operation and maintenance must be followed. A separate Operating Instructions document for the Powerpack is supplied and must be kept in the unit.

13.2 Hydraulic Lift

SAFESCREEN units can be lifted to keep in line with the construction of upper levels, by either guided crane climbing or remote hydraulic self-climbing. The units are secured against the structure at all times with either method.

Using the remote hydraulic self-climbing method, the SAFESCREEN units are lifted in 250 mm increments with 485 mm stroke rams that are positioned on to the climbing brackets and powered by a suitable hydraulic power unit.



The Powerpacks have both electric and hydraulic safety features. Electrically, the unit has overload trips and hydraulically the unit has a relief valve to prevent damage to other components and screen parts. The hydraulic cylinders have safety valves fitted, that are designed to hold the screen in place in the event the hoses are damaged during lifting.

The Powerpack and hydraulic cylinders are coupled with fast fix hose connections and oil is used with the system.

Powerpack 4 Jack 230V (code:611760) technical information:

- Electrical supply: 230V 1-Phase 50Hz with Neutral
- Electric motor: 1.80Kw 230V/1Ph/50Hz 2-pole
- Control voltage; 24VDC
- Reservoir capacity: 70 litres (30 litres usable)
- Fluid (typically): Mineral oil ISO VG 32 HVI grade (if not specified otherwise). Check Operating Instructions for temperature range.
- Maximum pressure: 185 bar

- Flow rate: 4 x 1.5 lpm separate outputs

13.2.1 Power units and hydraulics

The Powerpack is designed to be mobile, and can be fitted onto an Euro Trolley (code:607610). Before operation, ensure that the Powerpack is placed on a firm, level floor and that the brakes of the Euro Trolley (code:607610) are applied.

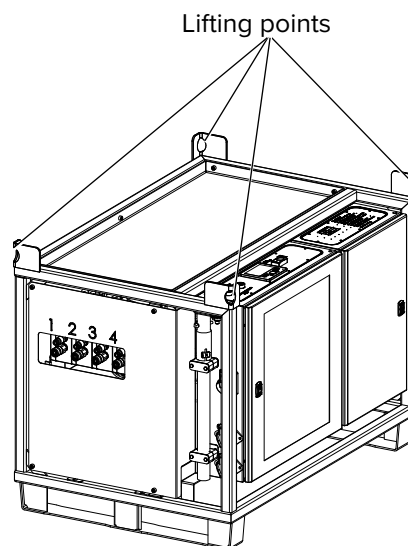
The Powerpack should be connected to a 230V/110V-1Ph-50Hz electrical supply via the 3-Pin connector mounted on the Powerpack. It is important that the mains supply is fused, and includes a NEUTRAL connection.

On each side of the Powerpack is a multi-pin connector. These are for use when several Powerpacks are linked together, and will not require connection when a Powerpack is used independently.

NOTICE

Risk of damage to the equipment!

Always use the lifting points provided for lifting. The Powerpack can be lifted with the Euro-Trolley attached. The lifting points are located on all four corners of the unit as shown below.



The Powerpack cannot operate until its control pendant and the emergency stop pendant are fitted.

13.2.2 Preliminary checks

- ☐ - Ensure that the Powerpacks are suitable for the application.
- ☐ - Ensure that the controls and connections of the Powerpacks are in good condition.
- ☐ - Ensure that the Hose sets are of sufficient length and do not have any defects.
- ☐ - Ensure that the Hose sets will not get caught in any moving or retractable parts.
- ☐ - Ensure that the hydraulic cylinders are in good condition and functioning adequately.

Operating the SAFESCREEN unit

13.2.3 Start-up

Note that this is a short/summary version of how to operate the Powerpack. Please refer to the Operating Instructions for further information.

Before switching on:

- ☐ - Ensure the Powerpack is positioned on a level surface.
- ☐ - Ensure the fluid level in the reservoir is correct.
- ☐ - Ensure the Electrical supply is 230V or 110V (1Phase 50Hz) and includes a Neutral pin.
- ☐ - Ensure that the indicator light is in the upright position.
- ☐ - Ensure that the control pendant is “plugged in”. The system will not work if not connected.
- ☐ - Ensure hoses are connected.

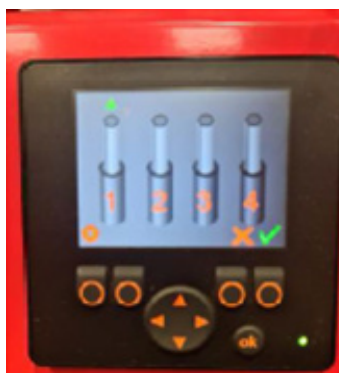
The display will illuminate, and will probably show an emergency stop condition as shown below. The indicator light will also flash red.



Ensure all three emergency stop buttons are released, and press the blue “Reset” button. This should return the display to it’s “start-up display”, as shown below, and the condition light should illuminate solid green.

13.3 Operation

Pressing the orange button beneath the work-man symbol will switch the panel function to “setting mode”, as indicated by the gear symbol, and the main light flashing green.



The photograph above shows a green arrow above cylinder No1. This display will actually flash between red and green arrows until the cylinder is selected. To select this cylinder for operation, press the orange button beneath the green tick symbol. This will show the “1” on cylinder No1 in green colour.

To select another cylinder, use the left and right hand arrow buttons to scroll across

the screen, and select further cylinders using the green tick symbol button. The identification number on all selected cylinders will illuminate green. To de-select any cylinder, scroll to the cylinder required, and press the red cross button.

Once all required cylinders have been selected (or de-selected), press the orange button below the gear symbol, and the display will return to the working screen shown below, with all selected cylinder numbers illuminated green. In the example below No1 & No2 cylinders are selected, and the system is ready to operate.



13.4 Notes

You may find that not all cylinders extend and retract when first started. This may be due to air in pipework or cylinders. Pipework can be individually filled by looping outlet hoses to inlet QR coupling and selecting the relevant section from the control panel. When doing so, please ensure that the oil level is checked and maintained as necessary.

With air in the system, cylinders may not extend at the same speed or if air is compressed under load so that the extension of one cylinder is lower than the other others. In this case please lay the cylinders flat on the ground with the valves facing upwards. To vent the air from the system please fully extend and retract the cylinders multiple times until all cylinders are operating in a synchronised way.

13.5 Maintenance

General instructions for working on hydraulic systems

For reasons of safety, no pipe connectors, screw connections or components should be loosened while the system is under pressure. Always lower any loads first, switch off the pumps and de-pressurise the system.

Extreme cleanliness is essential when working on the system. Before releasing screw connections, clean the external surroundings first and cover all openings into the system with protective caps and covers so that no dirt can enter. Do not use cotton waste when cleaning out fluid reservoirs and always fill the system with fluid through a filter.

Fluid level

Continual checking is necessary because, as the volume of fluid in the system falls below the minimum mark, it can cause a rise in the operating temperature, accumulation of undissolved air and pump failure due to cavitation.

Fluid Temperature

The operating temperature depends on several factors. Temperature should be lower than 50°. If the temperature reaches 55°, the Powerpack will stop and show a warning that the temperature is getting too high. This warning can be overruled to be able

to finish the ongoing climbing operation. After the ongoing climbing is finished the unit should be stopped to let the oil cool down to below 50°. An Oil thermometer is included in the oil level display.

When the temperature reaches 60° the power pack will be stopped automatically.

Fluid Condition

The aging of the fluid depends on a number of operating parameters such as temperature, pressure, air humidity, dirty environment, etc. The aging of the fluid, and hence its continued usability, can be judged from a simple visual examination.

Filter Inspection/Filter Changing

- Filters

These are fitted with visual clogging indicators which should be checked daily.

- Breather Filters

Breather filters will filter the air which flows in and out of the fluid reservoir as the level fluctuates. The frequency of inspection and element changing or cleaning depends on the condition of the environment.



For more information regarding the Powerpack, refer to the supplied manufacturer's instruction manual.

A copy of the instruction manual is kept in the cabinet of the Powerpack.

14 Climbing

14.1 Climbing cycle

The following sequence describes the climbing cycle of a typical SAFESCREEN unit. It assumes that SCR Slab Edge Brackets (code:611170) will be used, however if other climbing brackets and climbing brackets ancillary are required, the sequence still applies.



WARNING

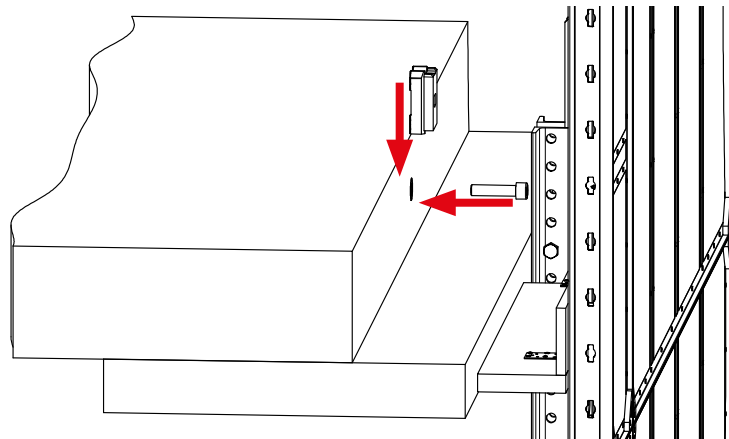
Risk of serious injury or death from falling from height!

Whenever working on a leading edge, an edge protection system is required to be in place. These systems are not mentioned in the following climbing sequence, however a risk assessment plan specific for each site should be done beforehand and all required safety measures should be in place to assist with the climbing operations and their preparations.

Ensure that any edge protection system used will not interfere with the rise of the SAFESCREEN unit.

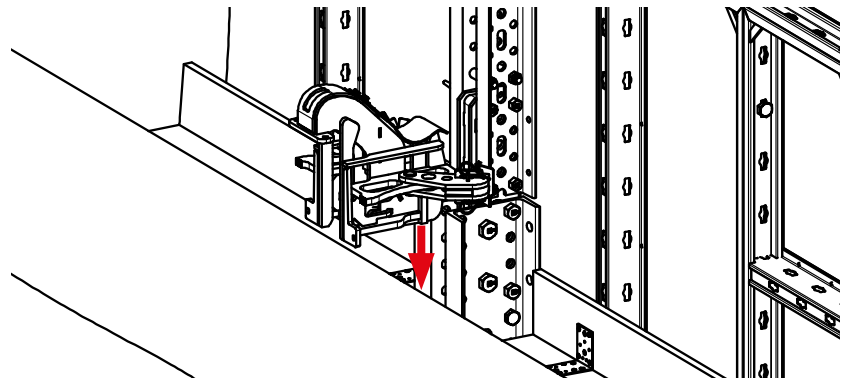
When rising a SAFESCREEN unit, the area around the unit must be fenced off to prevent the risk of being crushed by the equipment.

- Step 1** Install an Anchor Block M24 (code:611220) on all positions of the Anchor Cone M24/ DW15 (code:496664) on level +1. Secure using the Anchor Bolt M24 x 100 (code:611218).



- Step 2** Adjust the horizontal position of the Anchor Block M24 (code:611220) if required.

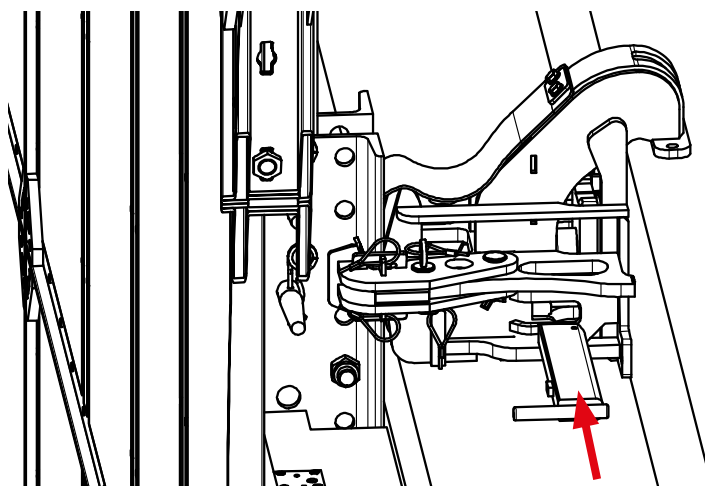
- Step 3** Attach a SCR Slab Edge Bracket (code:611170) to all positions of the Anchor Block M24 (code:611220) on level +1.



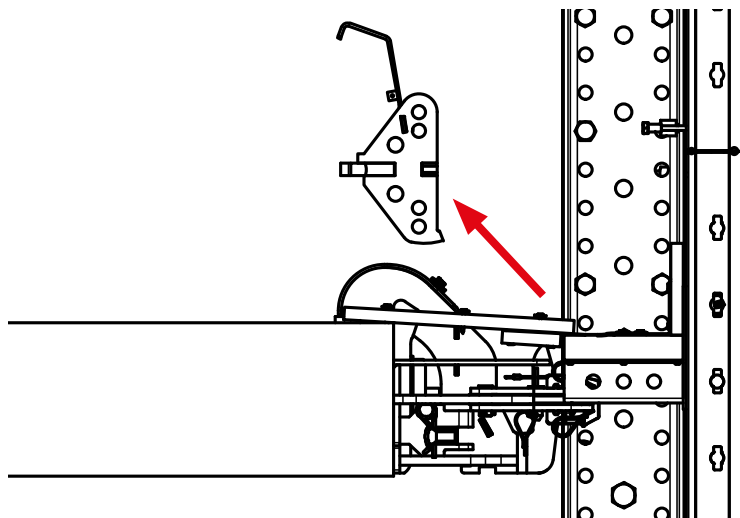


Ensure that the SCR Slab Edge Brackets (code:611170) sit firmly on the concrete and that the Anchor Block M24 (code:611220) does not touch the inside curve of the side plate of the SCR Slab Edge Bracket (code:611170).

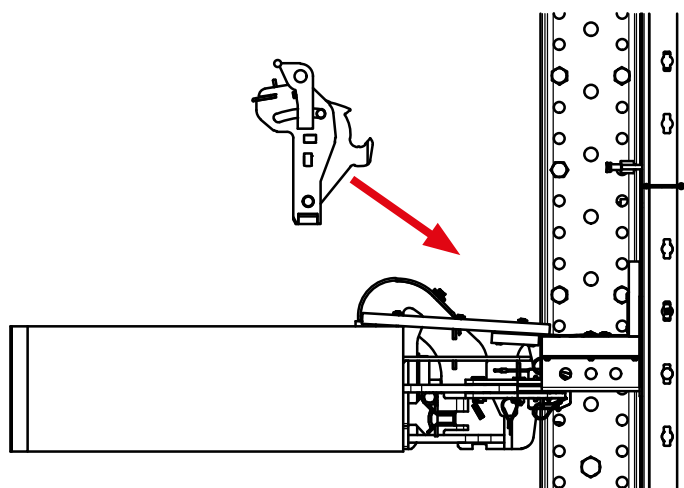
Step 4 Secure all SCR Slab Edge Brackets (code:611170) on level +1 using the SCR Slab Edge Bracket Securing Bar (code:611230). Secure the SCR Slab Edge Bracket Securing Bar (code:611230) using the safety pin (not shown).



Step 5 Remove the SCR Wind Latches (code:611810) from their position in level 0.



Step 6 Insert the Bracket Claw Units (code:611115) into the climbing brackets of level 0.





WARNING

Risk of serious injury or death from falling from height!

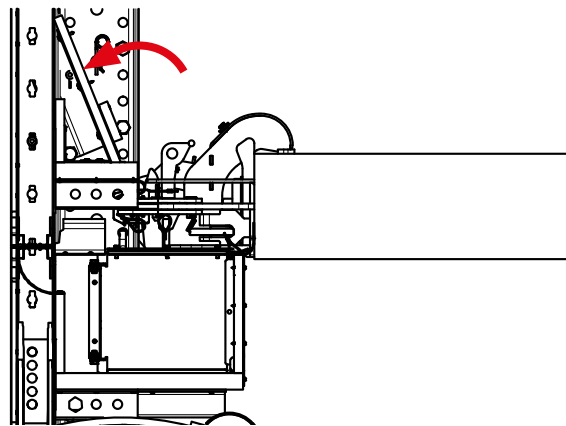
Customer to ensure that the locking plates of the Bracket Claw Units (code:611115) are properly engaged with the climbing bracket and that they prevent the claw unit from uplift.

Customer to ensure that the bobbins of the Movable Support Bobbins (code:611820) are in the resting position and can move freely.

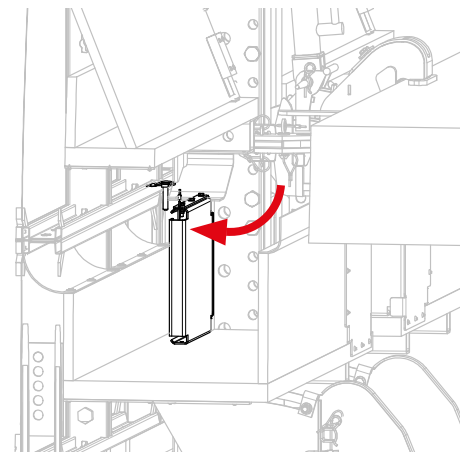
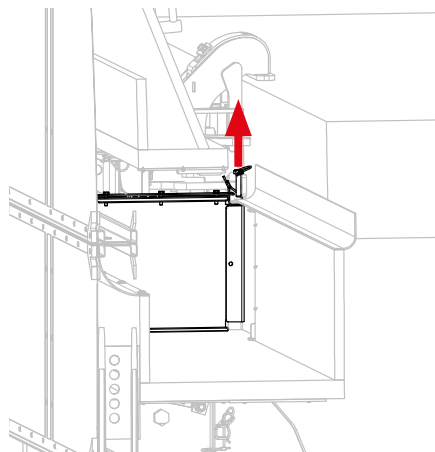
Step 7 If required, attach the SCR Slab Edge Bracket Support (code:611725).

Step 8 If necessary, attach an SCR Slab Bracket Height Adjustment (code:611205) to any SCR Slab Edge Bracket (code:611170) on level 0 that requires to be adjusted vertically.

Step 9 Open the traps on all levels and secure them against the cladding.

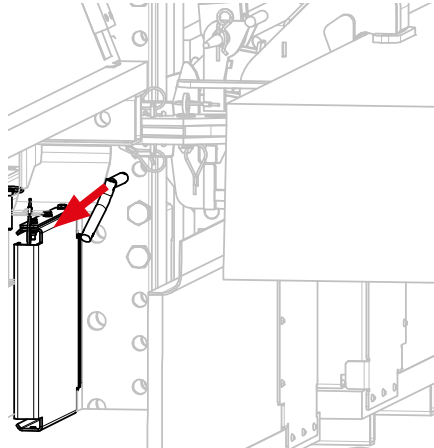


Step 10 If it is required to remove the Bracket Claw Locks (code:611380), remove the safety pin of the SCR Steel Toe Trap 28x28 (code:611675) and rotate against the inner timber toe board of the safety platform level. The SCR Steel Toe Trap 28x28 (code:611675) is now in its "open" position.



Note that the traps should be in the open position during the climbing process.

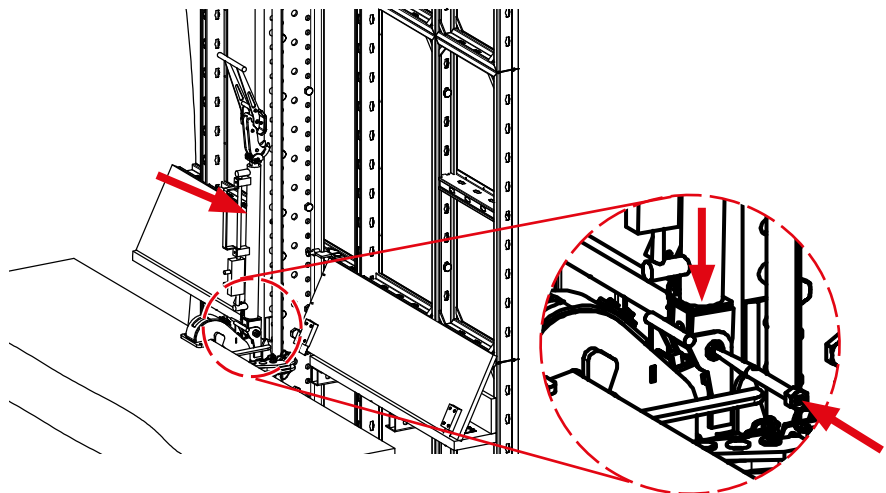
Step 11 Remove the Bracket Claw Locks (code:611380) in level -1.



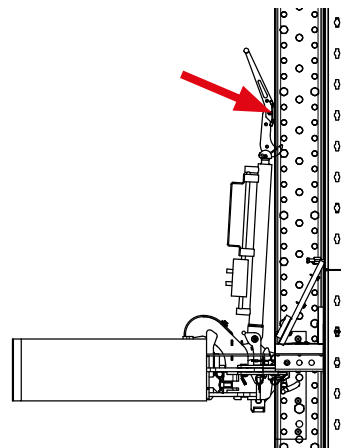
Step 12 Rotate the SCR Steel Toe Trap 28x28 (code:611675) against the SCR Steel Toe Plate 0.28 x 0.28 m (code:611626). Secure the SCR Steel Toe Trap 28x28 (code:611675) with the safety pin removed in step 10.

Step 13 Open all the remaining traps and secure.

Step 14 Attach the hydraulic cylinders to all positions of the Bracket Claw Unit (code:611115) of level 0. Secure the hydraulic cylinders using the Bracket Claw Lock (code:611380).



Step 15 Attach the heads of the hydraulic cylinders to the rails by engaging the magnets to the climbing rail surface.



Step 16 Connect the hydraulic hoses to the power unit.

Step 17 Connect the hydraulic hoses to the hydraulic cylinders.

14.2 Pre-climbing checks

Before climbing the Customer must ensure the following:

- ☐ - Ensure SAFESCREEN unit is clear of debris and any loose material.
- ☐ - Ensure that the climbing brackets in level L+1 are installed and engaged in the rail.
- ☐ - Ensure that all Bracket Claw Locks (code:611380) have been removed from below the climbing bracket in level L-1.
- ☐ - Ensure that all current and future leading edges have the appropriate edge protection (on the climbing and adjacent SAFESCREEN units).
- ☐ - Ensure temporary or retractable infills (traps) have been removed or are secured in the "open" position.
- ☐ - Ensure the lifting pathway is clear for unit lift.
- ☐ - Ensure the hydraulic cylinders have been correctly connected to the climbing brackets and rails.
- ☐ - Check oil level on the Powerpack is sufficient.
- ☐ - Check there are no leakages on the hydraulic system.
- ☐ - Ensure the hydraulic cylinders are fully retracted.
- ☐ - Ensure that the SCR Wind Latches (code:611810) from the climbing brackets on LO have been removed.
- ☐ - Ensure that all joints and connections are properly secure.
- ☐ - Ensure that all SCR Safety Boxes (code:611450) are empty and can move freely.



During the climbing cycle, the Customer must use one operative on each floor to:

- Verify that it is safe to raise the SAFESCREEN unit.
- Monitor the SAFESCREEN unit during climbing for any hazards.
- Ensure that the SAFESCREEN unit is level before and stays level during climbing
- Check for any unexpected sounds and behaviours.
- That the climbing cycle is carried in a controlled and safe way.

Operatives must be in radio contact with each other.

At least one operative must be in control of the emergency stop button of the Powerpack during the climbing cycle. At any point, if a hazardous situation occurs, this operative must stop the climbing cycle immediately.

Hazardous situations may include:

- Uneven lifting of the cylinders
- A trap hazard occurs
- Malfunction of the Powerpack

This list is not exhaustive and other situations may occur.



WARNING

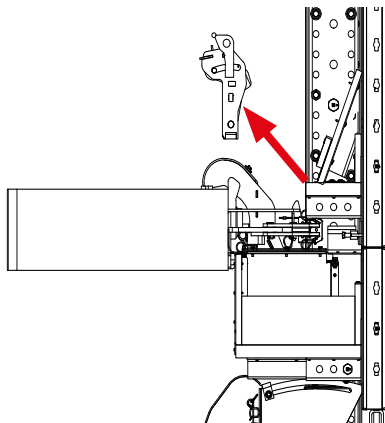
Risk of serious injury or death from falling from height!

Do not stand on the SAFESCREEN unit during the climbing cycle.

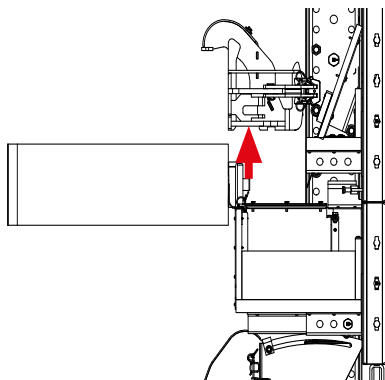
All exposed leading edges, current and those occurring during and/or after the climbing cycle, must be closed before the start the climb the SAFESCREEN unit.

Steps 15–19 are for the 3.5 floor units only

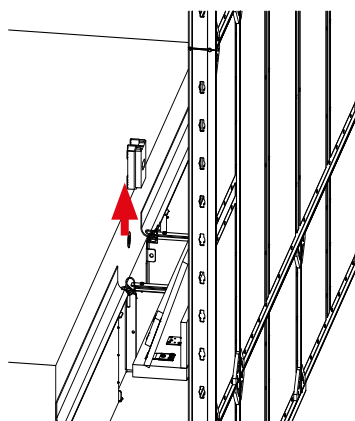
Step 18 Remove the Bracket Claw Unit (code:611115) from all positions of level -2.



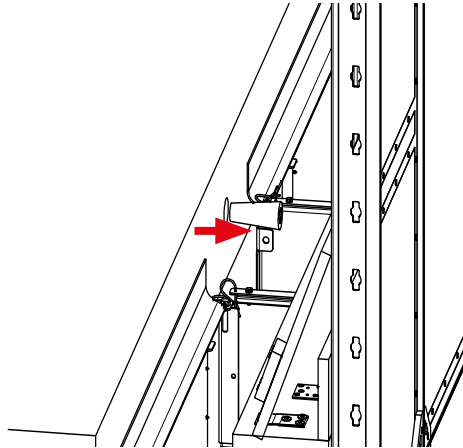
Step 19 Remove the climbing bracket of level -2



Step 20 Remove the Anchor Block M24 (code:611220) from all positions of level -2



Step 21 Remove the Anchor Cone M24/DW15 (code:496664) (M) from all positions of level -2



Step 22 Close the hole left by the anchor cones on level -2.



WARNING

Risk of serious injury or death from falling from height!

Customer to ensure that all leading edges both on the building and on the SAFESCREEN units are protected before, during and after the climbing cycle.

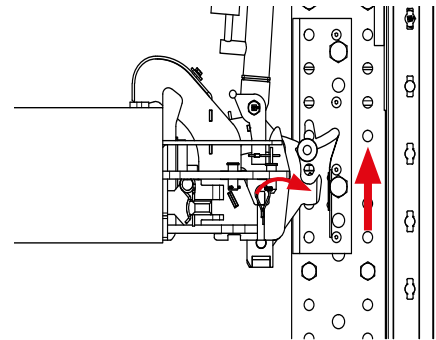
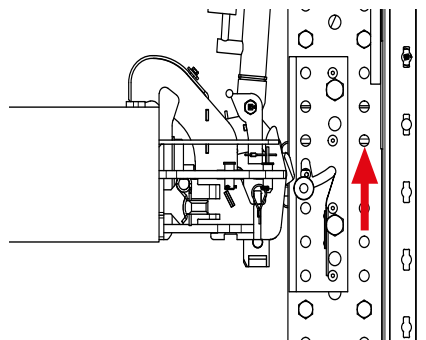
Steps 20–31 are only applicable to the 2.5 floor SAFESCREEN units.

Step 23 Operate the Powerpack to lift the SAFESCREEN unit. Use either the controls on the panel or the control pendant.

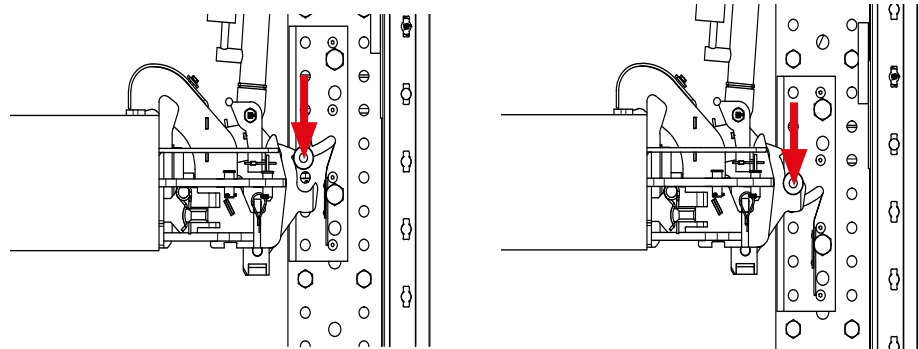


For more information regarding the power unit, refer to the separate operating instructions.

Step 24 Lift the SAFESCREEN unit so that the next bobbins are raised high enough to engage the claw in every Bracket Claw Unit (code:611115) in level 0.

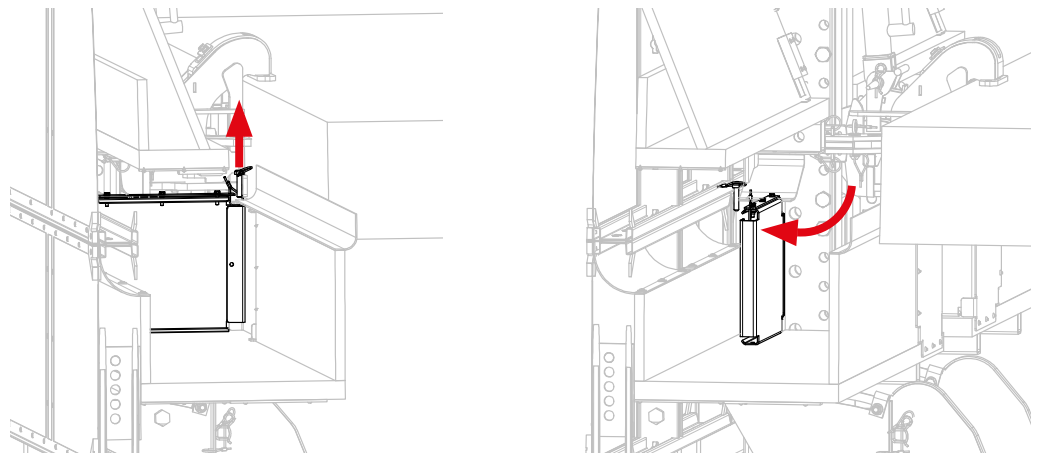


Step 25 Lower the SAFESCREEN unit so that the bobbins are supported by the claws of every Bracket Claw Unit (code:611115) in level 0.

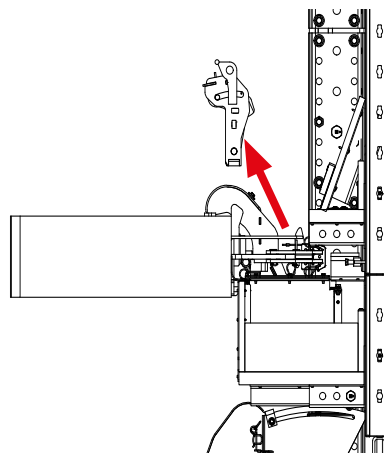


Step 26 Open trap in Level -1.

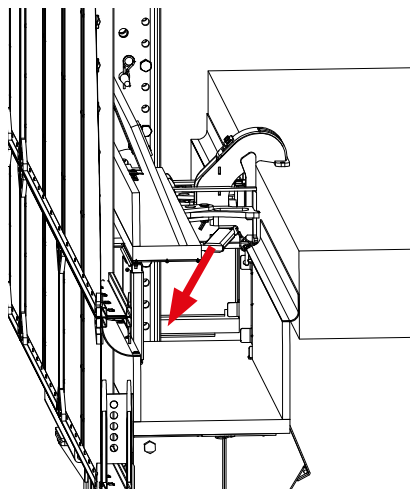
Step 27 Remove the safety pin of the SCR Steel Toe Trap 28x28 (code:611675) and rotate against the inner timber toe board of the safety platform level. The SCR Steel Toe Trap 28x28 (code:611675) is now in its "open" position.



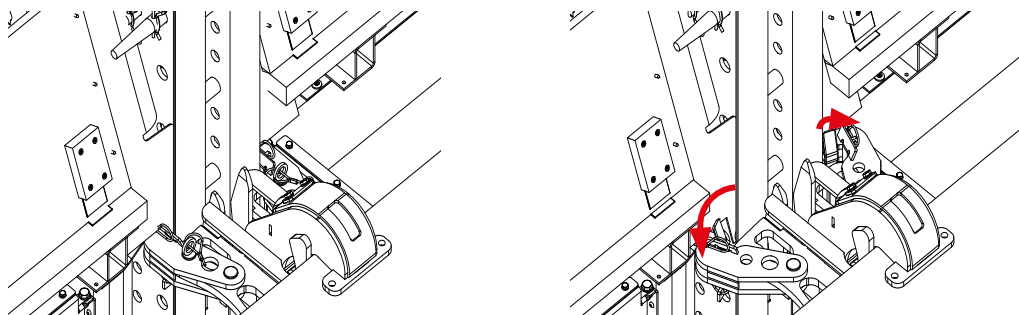
Step 28 Remove the Bracket Claw Unit (code:611115), including any height adjustment components, from the climbing brackets of level -1.



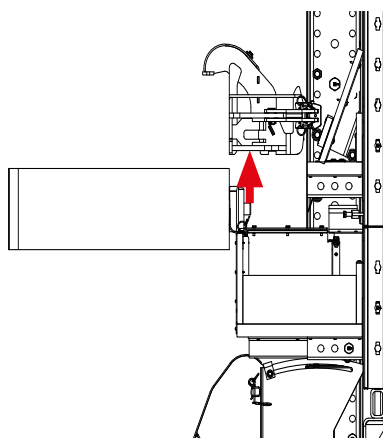
Step 29 Remove the SCR Slab Edge Bracket Securing Bar (code:611230) from all the positions of the climbing brackets on level -1. If SCR Slab Edge Bracket Supports (code:611725) were used they must be removed as well.



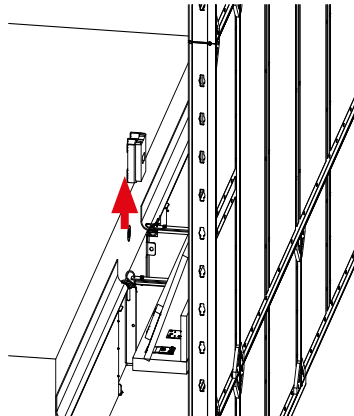
Step 30 Open the sides claws of the climbing brackets on level -1.



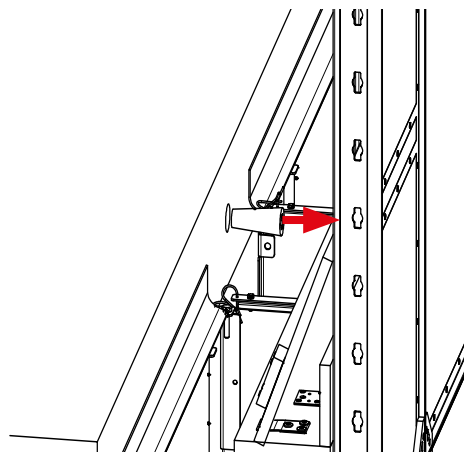
Step 31 Remove the climbing brackets (Q) of level -1.



Step 32 Remove the Anchor Block M24 (code:611220) from all positions of level -1



Step 33 Remove the Anchor Cone M24/DW15 (code:496664) from all positions of level -1



Step 34 Close the hole left by the anchor cones on level -1.

NOTICE

Risk of damage to the equipment!

Ensure that the SCR Safety Box (code:611450) is empty before continuing and can retract freely.

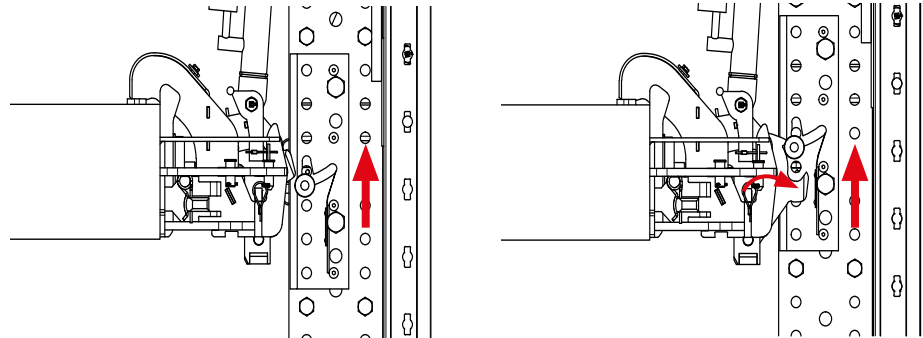
Steps 36–42 are applicable to both the 2.5 floor and to the 3.5 floor SAFESCREEN units.

Step 35 Operate the power unit to lift the SAFESCREEN unit. Use either the controls on the panel or the control pendant.

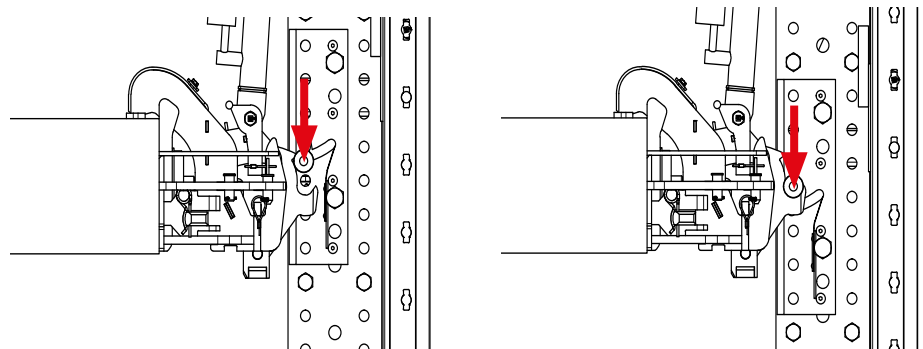


For more information regarding the power unit, refer to the separate operating instructions.

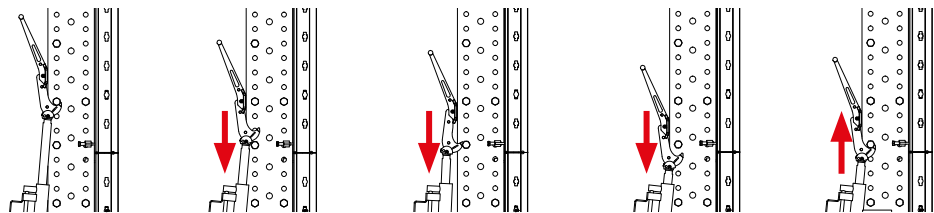
Step 36 Lift the SAFESCREEN unit so that the next bobbins are raised high enough to engage the claws of every Bracket Claw Unit (code:611115) in level 0.



Step 37 Lower the SAFESCREEN unit so that the bobbins are supported by the claws of every Bracket Claw Unit (code:611115) in level 0.

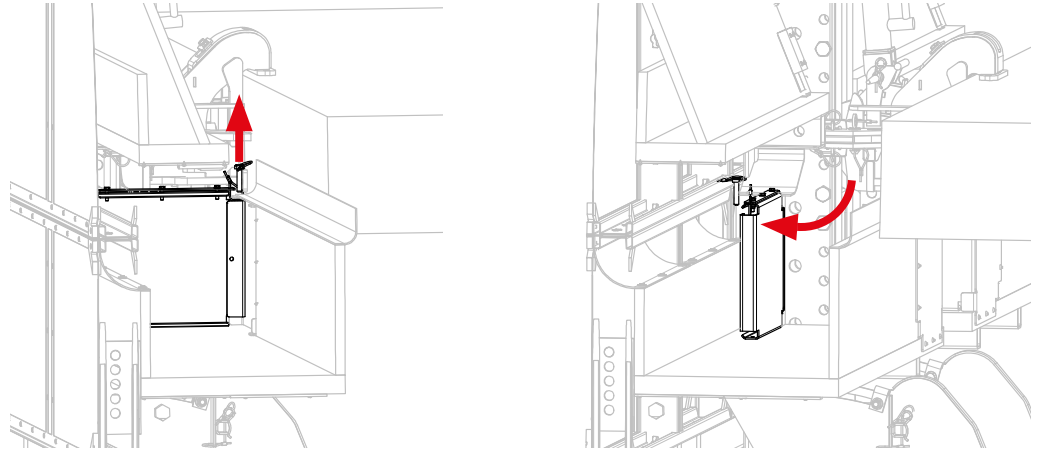


Step 38 Retract the hydraulic cylinders fully and extend so that the heads of the hydraulic cylinders engage with the lowest possible bobbin.

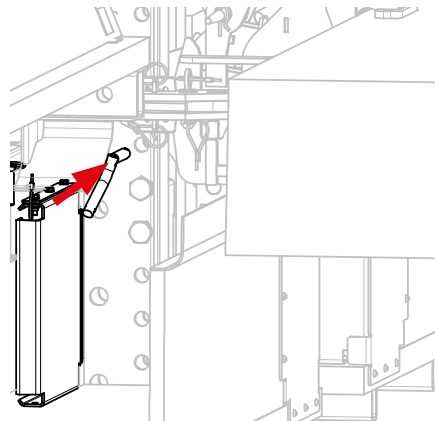


Step 39 Repeat steps 32–35 until the SAFESCREEN unit is at the required position as per the supplied design scheme and that is vertically supported by a designated main support bobbin on level -1.

Step 40 Insert the Bracket Claw Locks (code:611380), remove the safety pin of the SCR Steel Toe Trap 28x28 (code:611675) and rotate against the inner timber toe board of the safety platform level. The SCR Steel Toe Trap 28x28 (code:611675) is now in its "open" position.



Step 41 Insert the Bracket Claw Locks (code:611380) in all required positions in Level -1 (for 2.5 floor units) or Level -2 (for 3.5 floor units). Secure using the safety pin (not shown).



Step 42 Rotate the SCR Steel Toe Trap 28x28 (code:611675) against the SCR Steel Toe Plate 0.28 x 0.28 m (code:611626). Secure the SCR Steel Toe Trap 28x28 (code:611675) with the safety pin removed in step 41.

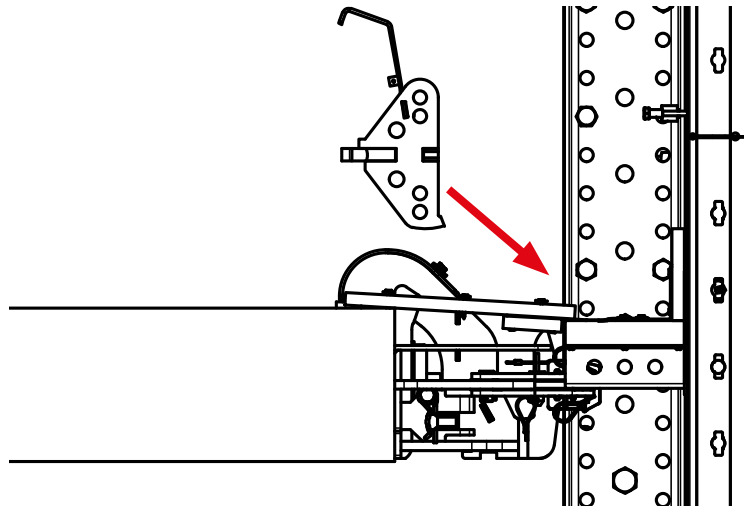


WARNING

Risk of serious injury or death from falling from height!

The SCR Steel Toe Trap 28x28 (code:611675) is now in its closed" position. Customer to ensure that all the SCR Steel Toe Trap 28x28 (code:611675) remain closed at all times during the climbing cycle.

Step 43 Insert the SCR Wind Latch (code:611810) on level 0.



Step 44 Re-position all rubber covers from the safety platform level to the concrete slabs and adjacent SAFESCREEN units, so that all gaps are properly secured.

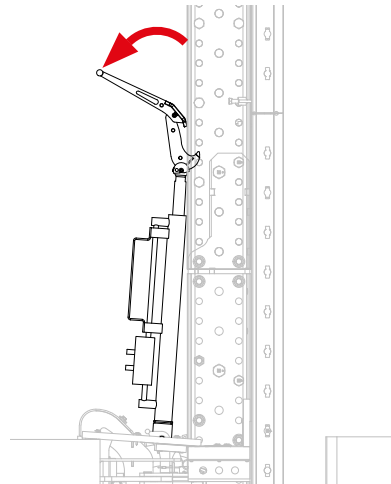
Step 45 Close all traps of the SAFESCREEN unit.

For the 2.5 floor SAFESCREEN units the climbing sequence is now finished but see steps 47. Step 41 is only applicable to the 3.5 floor SAFESCREEN units.

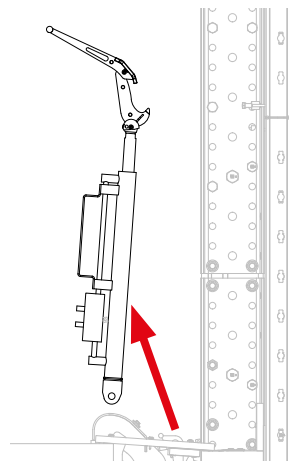
Step 46 Secure the rail to the slab edge on level -2.

The following steps are for both the 2.5 floor units and for the 3.5 floor units.

Step 47 Remove the hydraulic climbing heads from the rails.



Step 48 Remove the hydraulic cylinders from the Bracket Claw Unit (code:611115) of level -1.



For long term storage:

- Remove the hose sets from the cylinders.
- Remove the hose sets from the Powerpack.
- Store the Powerpack and the hoses.



Ensure that the hose sets are stored properly. Do not bend the hoses excessively.

- Store the cylinders.



Ensure that the cylinders are stored in the retracted position.

14.3 Post-climbing checks

- ☐ - Ensure there are no exposed leading edges.
- ☐ - Ensure working area is clear of debris and any loose material.
- ☐ - Ensure that all Bracket Claw Units (code:611115) are properly engaged.
- ☐ - Ensure that all SCR Wind Latches (code:611810) are in place.
- ☐ - Ensure that all sealing is intact and in place after climbing.
- ☐ - Ensure that all steel toe traps are closed and secured.
- ☐ - Ensure that all Bracket Claw Locks (code:611380) are in place.
- ☐ - Ensure that all SCR Safety Boxes (code:611450) are fully open.

15 Removing the unit

Hünnebeck recommends that during the removal of the SAFESCREEN units, the following safety measures should be adopted:

- Secure brackets and loose items to prevent them from falling.
- Install collective edge protection systems, where required, for when the SAFESCREEN unit is removed.
- Fence off the area below the SAFESCREEN unit to be removed.
- Install a safety net below the SAFESCREEN unit to be removed.

This is not an exhaustive list. More safety measures may have to be considered depending on the site requirements.

Hünnebeck can provide sites with collective edge protection systems such as:

- PROTECTO
- PROTECTO Net

Please contact your Hünnebeck design office for more information.

16 Maintenance and repairs

Electric check of Powerpack: 6 months

Hydraulic (oil and filter) replacement: 12 months

All local relevant regulations must be followed.

17 Notes on structural analysis

17.1 Loads

Unless explicitly stated otherwise, all load specifications in this document are safe working loads. This means that characteristic loads can be used for calculations. The following safety factors are included in the safe working load (where applicable):

Load:

Live load $\gamma_f = 1.5$

Dead load $\gamma_f = 1.35$

According to DIN EN 1991-1-1

Resistances:

Steel: $\gamma_m = 1.1$

Imperfections, load assumptions and additional rules:

According to DIN EN 1993 / DIN EN 12810 / DIN EN 12811/ DIN EN 12812 / DIN EN 1991

Aluminum:

$\gamma_m = 1.1$

Imperfections, load assumptions and additional rules:

According to DIN EN 1999 / DIN EN 12810 / DIN EN 12811 / DIN EN 12812 / DIN EN 1991

Timber:

$\gamma_m = 1.3$

$K_{mod} = 0.9$

Imperfections, load assumptions and additional rules:

According to DIN EN 1995 / DIN EN 12810 / DIN EN 12811 / DIN EN 12812 / DIN EN 1991

Concrete:

$\gamma_m = 1.5$

Imperfections, load assumptions and additional rules:

According to DIN EN 1992 / DIN EN 12810 / DIN EN 12811 / DIN EN 12812 / DIN EN 1991

These values only include those loads that derive from the respective part itself (unless stated otherwise).

An increase of the loads due to effects in the full system (e.g. theory II, substitute horizontal loads, scaffolding class...) have to be considered.

To obtain the design resistance F_{Rd} (in accordance with the Eurocode), multiply F_{zul} with $\gamma_F = 1.5$.

17.2 Relevant codes:

- EN1993-1-1 Eurocode 3: Design of steel structures – Part 1-1: General rules and rules for buildings
- EN1993-1-8 Eurocode 3: Design of steel structures – Part 1-8: Design of joints
- EN1991-1-4 Eurocode 1: Actions on structures – Part 1-4: General actions – Wind actions
- EN12811-1 Temporary works equipment; Part 1: Scaffolds; Performance requirements and general design
- EN13374 Temporary edge protection systems; Product specification; Test methods

18 Chronology

| Changes | Page | Date |
|-----------------------|------|------------|
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