BOSTA 70

Façade scaffold

User Guide

HÜNNEBECK

BY BRAND SAFWAY

Contents

1 Product features

The Hünnebeck frame scaffold system BOSTA 70 meets the requirements of DIN 4420, DIN EN 12810, and DIN EN 12811 for use as a working and protective scaffold. The standard model of the BOSTA 70 scaffold has been granted DIBt approval on the basis of the approval principles. This approval is documented as number Z-8.1-54.2.

BOSTA 70 can be used as:

- A working scaffold in load class 3 according to DIN EN 112811 (200 kg/m^2)
- A protective scaffold (falls from < 2.00 m height)
- Protective roof scaffold < 1.50 m

The maximum erection height of the standard model is 24.00 m plus the jack extension length. When the scaffold is higher or does not conform to the standard model, proof of structural stability must be provided for each specific case. The following types of scaffolds can also be constructed using BOSTA 70 components:

- Mobile scaffolds
- Bracket scaffolds
- Supporting structures to provide shelter during the winter and inclement weather

With six different bay lengths between 1.25 m and 4.00 m, the BOSTA 70 façade scaffold can be adapted to meet the requirements of the respective project. The system width of the scaffold is 0.74 m. Consoles can be used to increase the width of the scaffold and adapt it to the size needed for the specific case. All of the steel components are galvanised, and wooden parts are waterproofed. This ensures a long serviceable life as well as high safety standards.

Many of the components can be used in both BOSTA 70 and MODEX scaffolds.

1.1 Intended use

BOSTA 70 is a frame scaffold. It can be used as:

- A working scaffold in load class 3 according to DIN EN 112811 (200 kg/m^2)
- A protective scaffold (falls from ≤ 2.00 m height)
- A protective roof scaffold < 1.50 m

The maximum erection height of the standard model is 24.00 m plus the jack extension length.

The planks mentioned in this User Guide can be used in protective scaffolds and in protective roof scaffolds (with the exception of BOSTA 70 façade insulation planks).

Hünnebeck products are intended to be used only by competent personnel and only for commercial purposes. The use of the BOSTA 70 frame scaffold must comply with all the relevant statutory regulations as well as with those issued by trade associations.

2 Safety notes

The guidelines contained in this manual are intended to make the user aware of safety-related issues when erecting and handling scaffolds. This list includes only the most important instructions and does not claim to be complete. It should also not be considered as a substitute for professional discussion regarding occupational health and safety while working on scaffolding.

The contractor erecting the scaffold is responsible for safe erection, modification and dismantling of the scaffold. He is required to instruct his employees regarding the tasks to be performed. The contractor is obliged to inform the employees of any new developments in the scaffolding field that may be relevant to safety. Instruction includes persistently reminding the employees of safe work practices. Every contractor who uses the scaffolds is responsible for using them as intended and observing all regulations pertaining to industrial safety.

2.1 Regulations and rules

The following laws and regulations on occupational health and safety in the scaffolding field are applicable in Germany at the time of printing:

- German occupational safety law (ASiG), October 31, 2006
- Occupational safety framework directive 89/391/EEC, June 12, 1989
- Directive 2009/104/EC, September 19, 2009
- Construction site directive 92/57/EEC, June 24, 1992
- Working conditions act (ArbSchG), December 22, 2020
- German social insurance code, March 28, 2021; building site regulation (BaustellV) June 10, 1998
- German product safety act (ProdSG), November 8, 2011
- German ordinance on industrial safety and health (BetrSichV); April 30, 2019
- German ordinance on industrial safety and health pertaining to the use of personal protective equipment at work (PSA-BV)
- Instructions for handling working and protective scaffolds (DGUV 201-011), scaffold erection (DGUV 201-047)
- Use of personal protective equipment to prevent falling from heights (DGUV 112- 198)
- Rescue from heights and depths using personal fall protection equipment (DGUV - 112-199)
- TRBS 1203 Persons qualified to inspect equipment (March 2019)
- TRBS 2121 Danger to people from falling from a scaffold - general requirements (July 2018)
- TRBS 2121-1 Danger to people from falling from a scaffold (January 2019)

Essential information on scaffold erection regulations can also be found in the following standards:

- DIN 4420-1:2004-03
- DIN EN 12810-1:2004-03
- DIN EN 12810-2:2004-03
- DIN EN 12811-1:2004-03
- DIN EN 12811-2:2004-04
- DIN EN 12811-3:2003-02

The appendix to this document contains forms that can filled out to meet the requirements stipulated by laws and regulations stated above:

- Hazard assessment
- Transfer of contractor’s obligations
- Inspection diagram
- Proof of fitness for use
- Test report
- Tying report and label for not yet complete scaffolds
- Release log with user instructions

These documents allow the scaffolding supplier to fully comply with the requirements of the German ordinance on industrial safety and health (BetrSichV). The forms shown in the appendix (refer to section 19 "Appendix" on page 150) will assist the user to effectively perform the tasks listed in the ordinance.

2.2 General information

- Based on our own hazard analysis, this User Guide allows the contractor and the user to comply with the relevant regulations on industrial health and safety in certain installations and usage situations.
- The manufacturing and labelling of all components comply with the German Technical Approval Z-8.1- 54.2.
- Some of the illustrations in the assembly instructions show various states of assembly and are not always complete in terms of safety considerations. Safety devices may not always appear in the illustrations, but they are nevertheless mandatory.
- This User Guide contains technical details that are intended to be helpful to the erector or user of the scaffold to facilitate compliance with the ordinance on industrial health and safety. The details do not, however, serve as absolute requirements. Based on the hazard assessment that the erector or user is required to compile as specified by the applicable ordinance on industrial health and safety, the erector or user is responsible for using his own discretion to implement essential preventive measures. The specifics of each case must always be taken into consideration.
- This User Guide shows how to assemble a typical configuration of the BOSTA 70 system. If the scaffold system is erected in a way that deviates from the standard, the construction regulations and the specifications of the German Technical Approval Z-8.1- 54.2 dictate that the deviations be assessed and, in some cases, verified.
- Verification is not required, if erection of the scaffold complies with the instructions contained in this User Guide applicable to the standard design.
- The installation schedule must be determined in advance, during technical planning of the project. Proper planning includes minimising the risk of falling.
- Work on the scaffold must never be performed under time constraints. Keep this in mind during the planning process.

2.3 Assembly, modification and dismantling

- This User Guide as well as the general technical approval must be readily available at all times wherever the BOSTA 70 scaffold in used. Only qualified personnel familiar with this User Guide and the current BOSTA 70 certificate of approval must assemble, modify, dismantle, or use the scaffold.
- The same applies to the assembly instructions provided by the contractor (refer to DIN EN 12811-1: 2004-03, section 8).
- Assembly, modification and dismantling of BOSTA 70 scaffolds must be performed only by persons possessing skills and knowledge specified by the DGUV information DGUV 201-011, Instructions for handling working and protective scaffolds. A qualified manager with sufficient technical expertise, appointed by the contractor, must oversee erection of the scaffold (refer to DGUV information 201-011). Any work on the scaffold must also be supervised by a supervisor who must ensure that it is carried out safely and who has sufficient knowledge and experience to do so. This includes briefing employees on relevant hazards related to the specific equipment.
- If the date and location of the erection of a scaffold coincides with the scheduled work of other contractors, these contractors must be consulted and the work coordinated with one another to avoid jeopardizing each other's work.
- When using personal protective equipment to prevent falling from heights, the supervisor is required to identify suitable attachment points taking into consideration section 7.10.1 "Using personal fall protection equipment" on page 47 and to verify that the employees use the protective equipment.
- All relevant safety regulations and standards must be complied with.
- Compliance with the regulations on operation safety as well as the German technical rules on operational safety is also essential. The German technical rules on operational safety TRBS 2121 and TRBS 2121, part 1 apply to all work with and on the scaffold.
- The BOSTA 70 scaffold must be erected, modified, and dismantled only as described in this User Guide. Only the components listed in section 5 "Components" on page 12 must be used for erection, modification and dismantling of the scaffold.
- Other erection variations are permitted, but only with a specific certificate that can be obtained from the manufacturer.
- All materials required at the site must be available in sufficient quantities, in flawless condition, and freely accessible.
- Scaffold materials must be stored on flat ground in lattice boxes, in stacking frames or on pallets intended for this purpose. Always secure the items to prevent them from slipping.
- To transport materials, use hoists or loading platforms whenever possible. Transporting materials via interior ladders is permitted only in exceptional cases.

- The responsible contractor must inspect the scaffold to verify that it is complete and safe for use before the scaffold is used for the first time, after an extended work stoppage and when it has been exposed to extraordinary circumstances (also refer to section 19.2 "Test report" on page 158). The inspection must be performed by an authorised person.
  When a contractor erects a scaffold for his own employees, the scaffold has to be inspected by an authorised person before it is used for the first time. The completeness, the condition of the components, the structural integrity, and the occupational and operational safety of the equipment, must be verified. The scaffold must not be used until final permission has been granted.
  Approval of the scaffold must be indicated by a label on an easily visible place (also refer to section 19.7 "Release log" on page 163). The label must show information on the scaffold manufacturer, the type of scaffold, the load and width class as well as general safety information.
  The results of the inspection must be documented and saved at least until the next inspection. Photos of the current state of the equipment are a useful addition to the documentation.
- Only undamaged, original scaffold components made by Hünnebeck must be used. All components must therefore be visually inspected for origin and damage before installation and replaced with flawless original parts if necessary.
- Repairs must be made only by properly qualified Hünnebeck personnel. The user must not in any way modify scaffold components.
- Always ensure that the scaffold is structurally sound.
- Base plates and base jacks must always be attached to the posts.
- The surface on which the scaffold is erected must be flat and capable of withstanding the extra imposed loads. If necessary, prepare the surface accordingly. The base jacks must always be placed on boards that distribute the load.
- One in a maximum of five scaffold bays must be face braced using diagonals. The type of bracing required can be found in the User Guide.
- Ties to an existing structure must be checked to see if they are suitable to transfer the loads. The customer is to ensure that the existing structure must be able to withstand the extra imposed loads. The tie pattern and arrangement are to be checked by the contractor.
- If the distance between the scaffold and the existing structure is greater than 300 mm, internal edge protection must be in place where required.
- Ladders in the scaffold must be designed and tied to in a way that ensures safety.
- When erecting the scaffold around a corner of a building, the deck has to have the same width when it wraps around the corner.
- Planks must be placed close together. They should neither teeter nor give way.
- When assembling a scaffold, decks must be at least 500 mm wide.
- If materials are stored on the planks, the minimum clearance for walking around the material is 200 mm.
- When three-part edge protection is used, all of the decks have to be enclosed.
- When materials are transported vertically by hand, one scaffolder has to be positioned on each scaffold level, including at ground level, to aid in transport.
- Never drop scaffold parts to the ground below.
- Store scaffold components such that they are protected from the elements.
- Always handle scaffold material with care.

- To secure the scaffold against wind forces that may cause uplift when the structure has a roof pitch ≤ 20° or when scaffolding is erected around interior corners of the building, the uppermost scaffold levels must be connected, such that they are resistant to tension, to the next bay below the uppermost tied bay using e.g. Frame Pins Ø8 mm (code:61312).
- Indicate sections of the scaffold that have not been completed by posting a prohibition sign, "No access for unauthorised persons!" (refer to page 162). Properly restrict access to these hazardous areas.

2.4 Usage

- An essential requirement for use of the scaffold is that the instructions in this User Guide are always followed.
- DIN EN 12811-1:2004-03 specifies that using a hoist to lift and unload material onto scaffolds up to load class 3 is not permitted.
- Only one working platform within a scaffold bay can be subjected to the total working weight, regardless of the load class of the standard design.
- When braces or ties are detached ahead of schedule, ensure that parts of equal quality and function are on hand.
- Never jump down onto the next deck or drop objects onto the planks.
- Materials and tools must not be stored in a position where they could hinder the net on the fall protection scaffolds from catching a falling person.

3 About this User Guide

This User Guide contains important information regarding the assembly and use of the Hünnebeck BOSTA 70 frame scaffold as well as regarding safety procedures essential to safe erection and use on site. The User Guide is intended to serve as an aid to working effectively with the BOSTA 70 frame scaffold. Read this User Guide carefully prior to commencing work with the BOSTA 70 frame scaffold and save it for future reference.

This User Guide is designed for commercial users with proper professional training. The information and procedures described here comply with the laws and the occupational health and safety regulations of Germany and Austria. Hünnebeck assumes no liability for deviations from the contents and processes described here or for use outside this area of application.

3.1 Warnings and notes

DANGER	**Danger!** DANGER indicates a hazardous situation that, if not avoided, will cause death or serious injury.
WARNING	**Warning!** WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION	**Caution!** CAUTION indicates a hazardous situation that, if not avoided, can cause minor or moderate injury.
NOTE	**Note!** NOTE indicates a hazard that can cause property damage.
	This symbol indicates that an additional inspection is required.
	This symbol indicates practical experience that will help the user, e.g. how to perform a task more easily or more quickly
	This symbol indicates particularly important information, e.g. that a requirement must be met.
	This symbol indicates that additional information from other documents is required. These documents could be User Guides or operating instructions for other products.

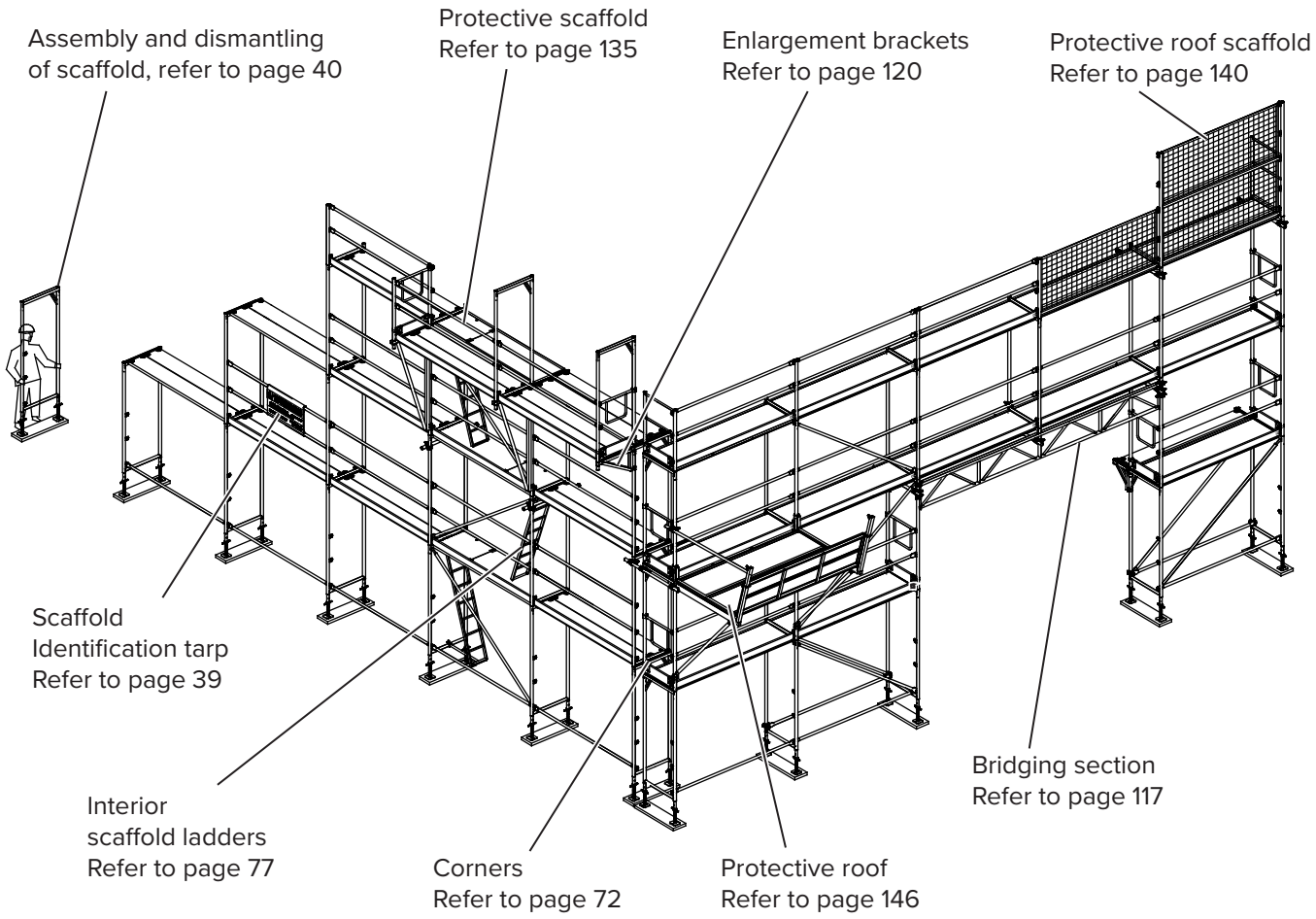
3.2 Instructions

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 bolt with the spring cotter pin.

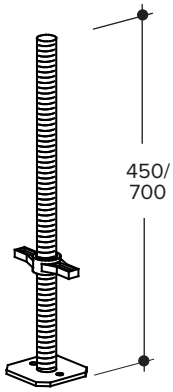
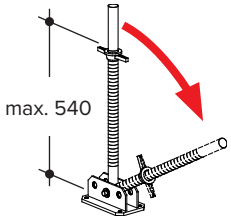
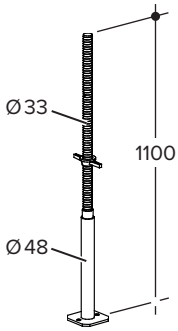
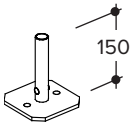
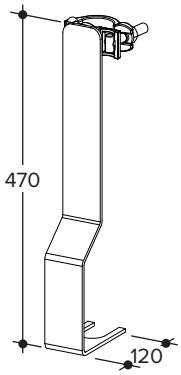
4 Overview


Assembly and dismantling of scaffold, refer to page 40
Protective scaffold Refer to page 135
Enlargement brackets Refer to page 120
Protective roof scaffold Refer to page 140
Scaffold Identification tarp Refer to page 39
Interior scaffold ladders Refer to page 77
Corners Refer to page 72
Protective roof Refer to page 146
Bridging section Refer to page 117

5 Components

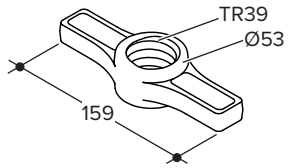
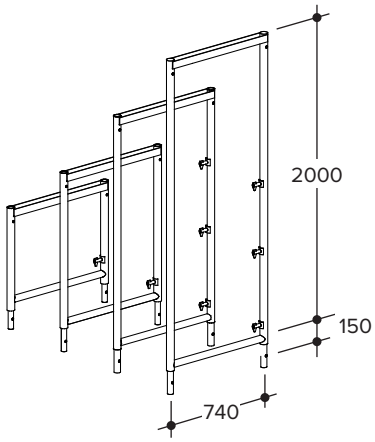
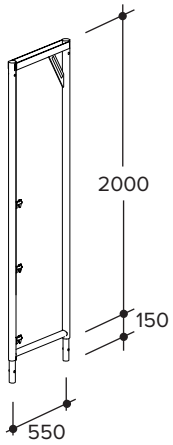
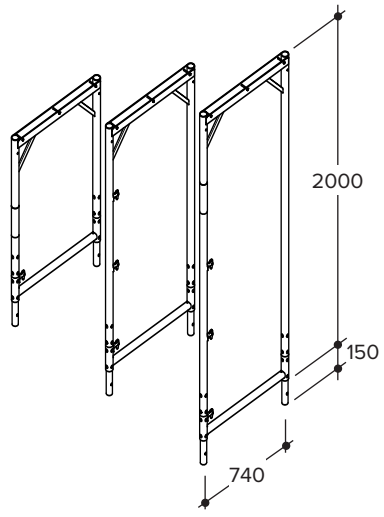
For information on older products not included in this section, refer to previous versions of the User Guide, e.g. the User Guide from 2021. Please contact Hünnebeck to obtain the respective documents.

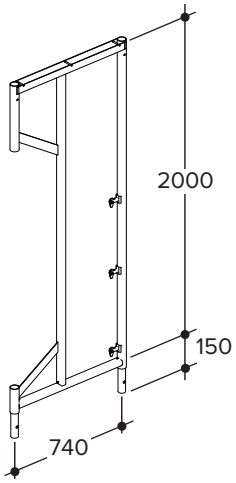
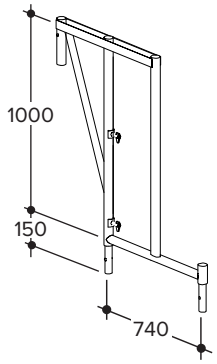
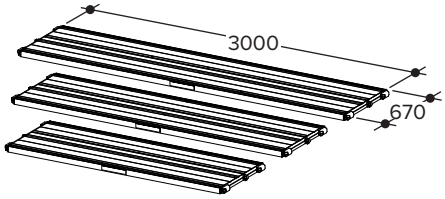
5.1 Basic components

	Component	Code	Weight [kg]
	**Base jack 50/3.3** Adjustment range 65 – 265 mm **Base jack 70/3.3** Adjustment range 65 – 500 mm Used to compensate for unevenness of the ground/floor.	**144131** **54630**	**3.00** **3.64**
	**Swivel Base Jack 70** Used on slopes. Refer to page 40.	**571822**	**5.95**
	**Base Jack 110** Used to compensate for ground unevenness up to 0.90 m. Refer to page 40.	**571248**	**4.64**
	**Base Plate rigid** Similar to a base jack; serves to transfer the vertical loads into the load-bearing ground/floor. Refer to page 40.	**428533**	**1.20**
	**Base Jack Securing Device** Used to attach base jacks to the vertical frame.	**651762**	**2.05**

*Only rental [1]No rental

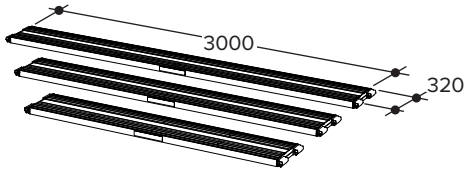
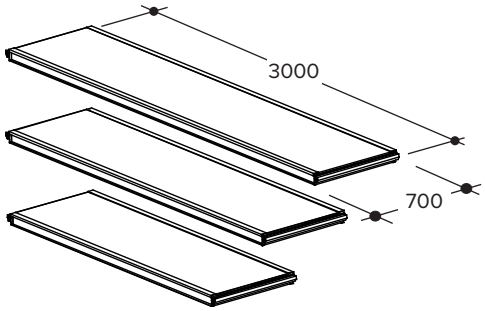
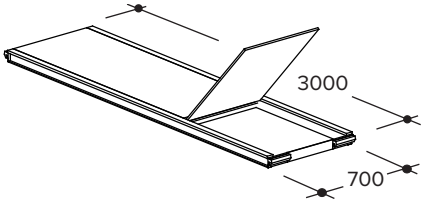
Unless stated otherwise, all dimensions in mm.

	Component	Code	Weight [kg]
	**Wing Nut 30/150** Secures the base jack at outriggers.	**426545**	**0.45**
	**Vertical Frame 200/70 Light** **Vertical Frame 150/70 Light** **Vertical Frame 100/70 Light** **Vertical Frame 66/70 Light** Used for storey heights of 2.00 m (refer to page 43) and compensation heights of 1.50 m, 1.00 m, and 0.66 m. Refer to page 42.	**652044** **652070** **652067** **652064**	**19.33** **16.10** **12.46** **10.52**
	**Vertical Frame 200/50** Vertical frame, only 550 mm wide; suitable for a 320 mm plank and a 180 mm plank.	**S1014**	**20.50**
	**Alu Vertical Frame 200/70** **Alu Vertical Frame 150/70** **Alu Vertical Frame 100/70** Used for storey heights of 2.00 m, 1.50 m, and 1.0 m.	**410644** **652915** **411936**	**11.06** **9.78** **8.33**

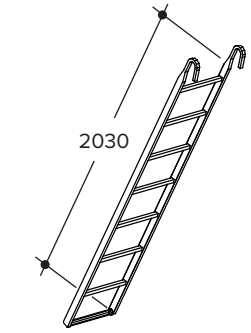
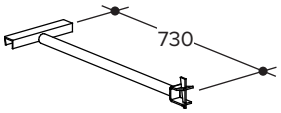
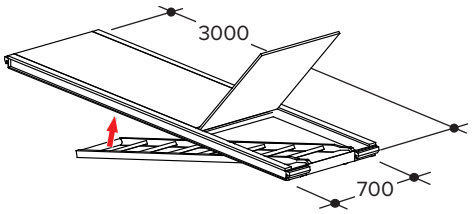
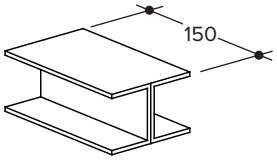
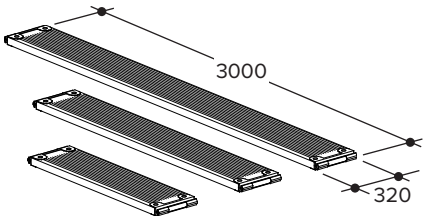
	Component	Code	Weight [kg]
	**Eaves Frame 200/70** Used for façade offsets.	**562110**	**22.71**
	**BOSTA 70 Offset Frame**	**S125**	**20.40**
	**Alu Deck G2 300/67** (2.00 kN/m² LC 3)	**653115**	**21.30**
	Alu Deck G2 250/67 (4.50 kN/m² LC 5)	**653070**	**17.91**
	Alu Deck G2 200/67 (6.00 kN/m² LC 6)	**653155**	**14.52**
	Alu Deck G2 150/67 (6.00 kN/m² LC 6)	**653165**	**11.13**
	Alu Deck G2 125/67 (6.00 kN/m² LC 6)	**653170**	**9.43**
	Alu Deck G2 113/67 (6.00 kN/m² LC 6)	**653175**	**8.62**
	Alu Deck G2 101/67 (6.00 kN/m² LC 6)	**653255**	**7.81**
	Alu Deck G2 82/67 (6.00 kN/m² LC 6)	**653180**	**6.52**
	Alu Deck G2 74/67 (6.00 kN/m² LC 6)	**653260**	**5.98**
	New generation of lightweight scaffold decks. Used to create access levels in scaffolds. Made of aluminium, modular, rated up to load class 6 pursuant to DIN EN 12811, drop-tested and suitable for use in protective scaffolds. The low height and the shift protection mean that the decks can easily and safely be stacked. Intended to be installed only in Hünnebeck BOSTA 70, BOSTA 100 and MODEX scaffold systems.		

*Only rental [1]No rental

Unless stated otherwise, all dimensions in mm.

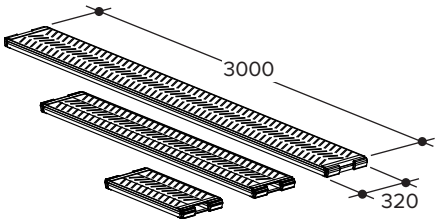
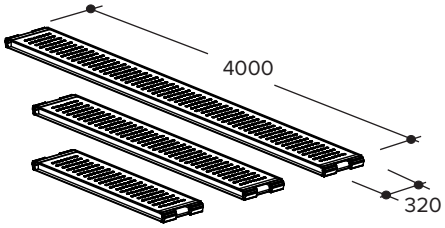
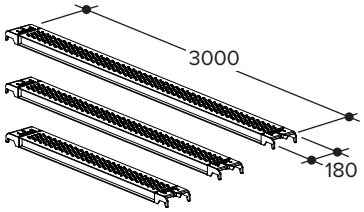
	Component	Code	Weight [kg]
	**Alu Plank G2 300/32** (2.00 kN/m² LC 6)	**653185**	**12.64**
	Alu Plank G2 250/32 (4.50 kN/m² LC 5)	**653095**	**10.63**
	Alu Plank G2 200/32 (6.00 kN/m² LC 6)	**653195**	**8.63**
	Alu Plank G2 150/32 (6.00 kN/m² LC 6)	**653200**	**6.62**
	Alu Plank G2 125/32 (6.00 kN/m² LC 6)	**653205**	**5.62**
	Alu Plank G2 113/32 (6.00 kN/m² LC 6)	**653210**	**5.14**
	Alu Plank G2 101/32 (6.00 kN/m² LC 6)	**653265**	**4.66**
	Alu Plank G2 82/32 (6.00 kN/m² LC 6)	**653215**	**3.90**
	Alu Plank G2 74/32 (6.00 kN/m² LC 6)	**653270**	**3.58**
	New generation of lightweight scaffold decks. Used to create access levels in scaffolds. Made of aluminium, modular, rated up to load class 6 pursuant to DIN EN 12811, drop-tested and suitable for use in protective scaffolds. The low height and the shift protection mean that the decks can easily and safely be stacked. Intended to be installed only in Hünnebeck BOSTA 70, BOSTA 100 and MODEX scaffold systems.		
	**Alu Frame Deck 300/70**	**437476**	**20.23**
	(2.00 kN/m² LC 3)	**437487**	**17.15**
	Alu Frame Deck 250/70	**437498**	**13.94**
	(2.00 kN/m² LC 3)	**S1580**	**10.90**
	Alu Frame Deck 200/70		
	(2.00 kN/m² LC 3)		
	Alu Frame Deck 150/70		
	(2.00 kN/m² LC 3)		
	Aluminium-plywood design. Lightweight frame deck with exchangeable planks. Refer to page 44.		
	**Alu Ladder Passage Deck 300/70**	**437502**	**22.31**
	(2.00 kN/m² LC 3)		
	Alu Ladder Passage Deck 250/70	**437513**	**19.41**
	(2.00 kN/m² LC 3)		
	Alu Ladder Passage Deck 200/70	**S115**	**16.43**
	(2.00 kN/m² LC 3)		
	Alu Ladder Passage Deck 150/70	**S114**	**13.45**
	(2.00 kN/m² LC 3)		
	Scaffold deck for installing a Ladder 200 A (code:136318) Refer to page 44.		

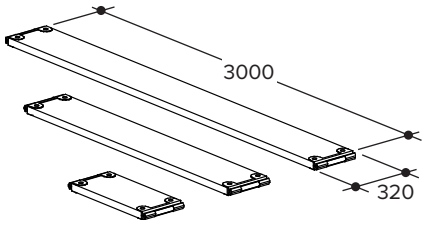
Unless stated otherwise, all dimensions in mm. *Only rental [1]No rental

	Component	Code	Weight [kg]
	**Ladder 200 A** Used for interior ascent at storey height of 2.00 m. Refer to page 77.	**136318**	**9.80**
	**Ladder Lock** Used to secure the Ladder 200 A to the lower transom of the vertical frame at the lowest scaffold level. Refer to page 77.	**422753**	**2.28**
	**Alu Passage Deck with Ladder 300/70** (LC 3) **Alu Passage Deck with Ladder 250/70** (LC 3) Scaffold deck with integrated folding ladder. Refer to page 44.	**492910** **465031**	**26.39** **23.33**
	**Plank Connector** Used only with Alu Plank 400/32. The Plank Connector is placed between two planks to prevent the individual planks from sagging. Spaced ≥ 500 mm from support.	**529390**	**1.20**
	**Alu Plank 400/32** (2.00 kN/m² LC 3)* **Alu Plank 300/32** (4.50 kN/m² LC 5)* **Alu Plank 250/32** (6.00 N/m² LC 6)* **Alu Plank 200/32** (6.00 N/m² LC 6)* **Alu Plank 150/32** (6.00 N/m² LC 6)* **Alu Plank 125/32** (6.00 N/m² LC 6)* Two alu planks form a working platform for a scaffold bay. Symmetrical design (either side can be used). Non-slip surface. Refer to page 44.	**529805** **479860** **479871** **479882** **479893** **479908**	**21.50** **16.90** **14.50** **12.00** **9.60** **8.40**

*Only rental [1]No rental

Unless stated otherwise, all dimensions in mm.

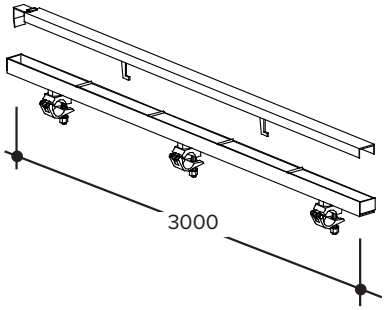
	Component	Code	Weight [kg]
	**Hollow Box Plank 300/32**	**531323**	**17.77**
	(2.00 kN/m² LC 3)		
	Hollow Box Plank 250/32	**531334**	**15.27**
	(3.00 kN/m² LC 4)		
	Hollow Box Plank 200/32	**531345**	**12.77**
	(4.50 kN/m² LC 5)		
	Hollow Box Plank 150/32	**531356**	**10.27**
	(6.00 kN/m² LC 6)		
	Hollow Box Plank 125/32	**531367**	**8.82**
	(6.00 kN/m² LC 6)		
	Hollow Box Plank 101/32	**S1546**	**7.62**
	(6.00 kN/m² LC 6)		
	Hollow Box Plank 74/32	**531687**	**6.27**
	(6.00 kN/m² LC 6)		
	Steel sheet design with aluminium zinc coating, lightweight and sturdy; corrugated non-slip surface. Two planks required per scaffold bay.		
	Refer to page 44.		
	**Steel Plank 400/32** (2.00 kN/m² LC 3)	**530307**	**30.21**
	Steel Plank 300/32 (3.00 kN/m² LC 4)	**427984**	**23.50**
	Steel Plank 250/32 (4.50 kN/m² LC 5)	**427973**	**19.93**
	Steel Plank 200/32 (6.00 kN/m² LC 6)	**430279**	**16.29**
	Steel Plank 150/32 (6.00 kN/m² LC 6)	**485858**	**12.20**
	Steel Plank 125/32 (6.00 kN/m² LC 6)	**430280**	**10.40**
	Steel Plank 113/32 (6.00 kN/m² LC 6)	**485869**	**9.60**
	Steel Plank 82/32 (6.00 kN/m² LC 6)	**485870**	**7.30**
	Two hot-dip galvanised steel planks form the deck of a scaffold bay. Sturdy with non-slip surface. Two planks per scaffold bay.		
	Refer to page 44.		
	**Steel Plank 400/18** (3.00 kN/m² LC 4)	**651595**	**21.78**
	Steel Plank 300/18 (3.00 kN/m² LC 4)	**550744**	**15.20**
	Steel Plank 250/18 (4.50 kN/m² LC 5)	**550733**	**13.88**
	Steel Plank 200/18 (6.00 kN/m² LC 6)	**550722**	**10.43**
	Steel Plank 150/18 (6.00 kN/m² LC 6)	**550711**	**8.03**
	Steel Plank 125/18 (6.00 kN/m² LC 6)	**651594**	**7.30**
	Steel Plank 113/18 (6.00 kN/m² LC 6)	**651593**	**6.66**
	Steel Plank 82/18 (6.00 kN/m² LC 6)	**651592**	**5.04**
	Used for the Enlargement Bracket 18 (code:652142). Hot-dip galvanised sheet steel design.		



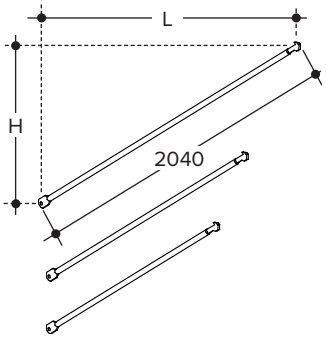
Component		Code	Weight [kg]
Timber Plank 300/32 MS10		**566428**	**24.92**
(2.00 kN/m² LC 3) *			
Timber Plank 250/32 (3.00 kN/m² LC 4) *		**533399**	**21.20**
Timber Plank 200/32 (4.50 kN/m² LC 5) *		**533403**	**17.40**
Timber Plank 150/32 (6.00 kN/m² LC 6) *		**458473**	**13.60**
Timber Plank 125/32 (6.00 kN/m² LC 6)*		**427539**	**11.70**
Timber Plank 74/32 (6.00 kN/m² LC 6)*		**462612**	**7.80**

Two timber planks form a working platform for a scaffold bay. Symmetrical design (either side can be used).

Refer to page 44.



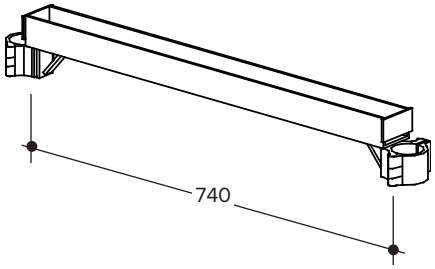
U-shaped Add-on Rail 300		**574219**	**16.96**
Lift-off Lock Bar 300		**574220**	**8.16**
U-shaped Add-on Rail 200		**574193**	**11.92**
Lift-off Lock Bar 200		**574208**	**5.63**
U-shaped Add-on Rail 160		**572080**	**9.64**
Lift-off Lock Bar 160		**573660**	**4.58**
U-shaped Add-on Rail 130		**572069**	**8.26**
Lift-off Lock Bar 130		**572070**	**3.67**
U-shaped Add-on Rail 100		**572047**	**5.97**
Lift-off Lock Bar 100		**572058**	**2.76**



for scaffold bay	*length × height*		
Diagonal 204	4.00 m × 2.00 m	**547176**	**9.96**
Diagonal 203	3.00 m × 2.00 m	**110167**	**7.90**
Diagonal 200	2.50 m × 2.00 m	**110020**	**6.94**
Diagonal 150	2.50 m × 1.50 m	**119606**	**6.40**
Diagonal 100	2.50 m × 1.00 m	**2054**	**4.60**
Diagonal 220	2.00 m × 2.00 m	**410758**	**6.25**
Diagonal 215	1.50 m × 2.00 m	**410736**	**5.50**

Used for ledger bracing of the scaffold. Attach the top end to the U-profile and slide the bottom over the clevis pin.

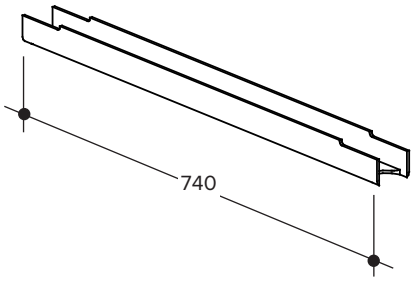
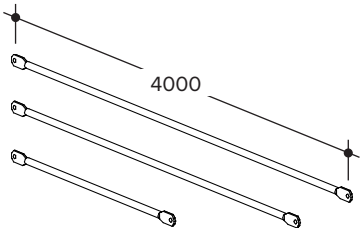
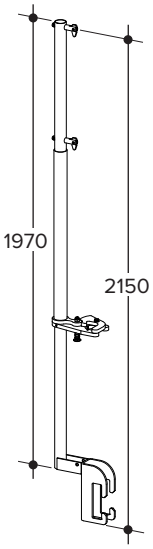
Refer to page 44.

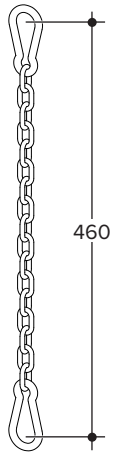
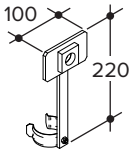
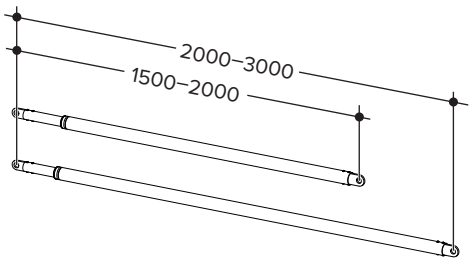
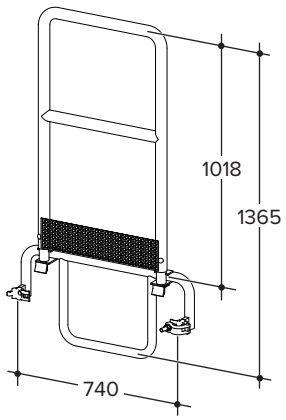


Adjustable Transom 70	**423622**	**4.31**

*Only rental [1]No rental

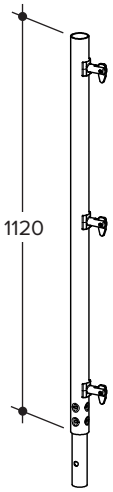
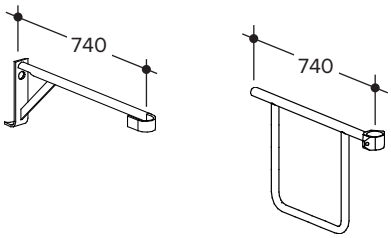
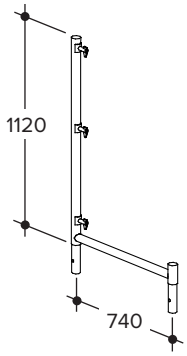
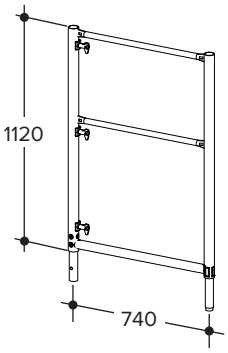
Unless stated otherwise, all dimensions in mm.

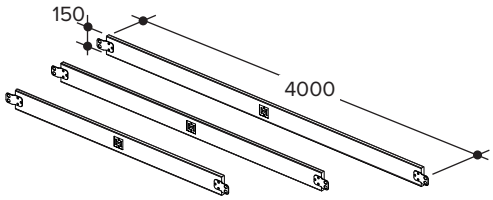
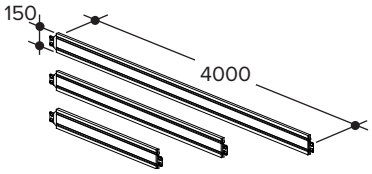
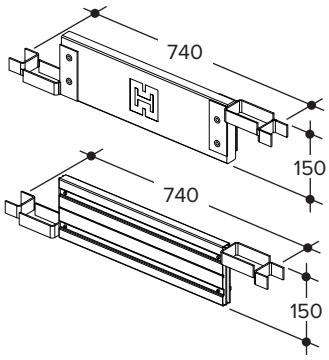
	Component	Code	Weight [kg]
	**Bearing Profile 74** Used to support planks installed at the lowest scaffold bay. These planks are used only as a surface on which to place ballast.	**553623**	**3.00**
	**Guardrail 400**	**525715**	**12.94**
	Guardrail 300	**138957**	**5.25**
	Guardrail 250	**002113**	**4.40**
	Guardrail 226	**653435**	**3.99**
	Guardrail 200	**154080**	**3.55**
	Guardrail 190	**547658**	**3.38**
	Guardrail 164	**653430**	**2.93**
	Guardrail 150	**407683**	**2.70**
	Guardrail 125	**2102**	**2.27**
	Guardrail 113	**653425**	**2.06**
	Guardrail 101	**651390**	**1.86**
	Guardrail 82	**653420**	**1.54**
	Guardrail 74 Slide both ends over the clevis pins. Refer to page 44.	**653415**	**1.40**
	**AGS Post G3** Used along with AGS Vario guardrails to construct temporary edge protection on BOSTA scaffolds.	**653450**	**6.21**

	Component	Code	Weight [kg]
	**AGS Post G3 Lift-off Retainer** Used to prevent the AGS Post G3 from lifting off when material is transported. Is hooked into the AGS Post G3 (code:653450) and wrapped around the guardrail.	**653970**	**0.32**
	**AGS Post Holder** Used in the scaffold staircase tower in conjunction with the AGS Post G3 (code:653450) to secure the bottom of a post.	**652975**	**0.60**
	**AGS Vario Guardrail 200-300** **AGS Vario Guardrail 150-200** Extendible guardrail with a standard length of 1.50 - 2.00 m or 2.00 - 3.00 m. It is hooked to the AGS Post G3 (code:653450).	**653470** **653485**	**2.97** **2.22**
	**BOSTA 70 AGS End Guardrail G2** Used to create permanent advancing side edge protection at the end face of BOSTA 70 scaffolds. The BOSTA 70 AGS End Guardrail G2 completely closes the end face of the scaffold.	**653490**	**10.21**

*Only rental [1]No rental

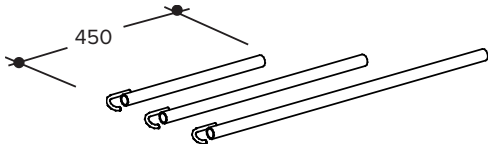
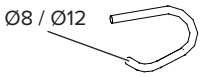
Unless stated otherwise, all dimensions in mm.

	Component	Code	Weight [kg]
	**Single Post 70** For use with Enlargement Bracket 35 or Enlargement Bracket 70. Used to support the edge protection. Secured with the Frame Pin Ø8 mm.	**133120**	**4.79**
	**Guardrail 70 trans.*** **Double Rail 70 trans.** Used for side edge protection at the end faces. Refer to page 66.	**24733** **534419**	**1.75** **3.77**
	**Railing Post 70** Used to support the edge protection at the uppermost scaffold level. Secured with the Frame Pin Ø8 mm. Refer to page 66.	**452980**	**7.71**
	**Twin Railing Post 70 trans. light** Used to secure the top scaffold bay at the end faces instead of the Railing Post 70. Secured with the Frame Pin Ø8 mm.	**652880**	**12.97**

	Component	Code	Weight [kg]
	**Toe Board 400/15**	**651979**	**10.87**
	Toe Board 300/15	**651978**	**7.15**
	Toe Board 250/15	**651977**	**6.03**
	Toe Board 200/15	**651976**	**4.91**
	Toe Board 150/15	**651975**	**3.79**
	Toe Board 125/15	**651974**	**3.23**
	Toe Board 113/15	**651973**	**2.96**
	Toe Board 101/15	**651972**	**2.69**
	Toe Board 82/15	**651971**	**2.27**
	Toe Board 74/15	**651970**	**2.09**
	One of the three components used for edge protection. Secures the scaffold level at plank level, 150 mm high and 30 mm thick (35 mm with 4.00 m length). Refer to page 66.		
	**Steel Toe Board 300/15***	**531437**	**8.99**
	Steel Toe Board 250/15	**531448**	**6.64**
	Steel Toe Board 200/15	**531459**	**5.44**
	Steel Toe Board 150/15	**531460**	**4.24**
	Steel Toe Board 125/15	**531470**	**3.64**
	Steel Toe Board 113/15	**652017**	**3.58**
	Steel Toe Board 101/15	**652016**	**3.26**
	Steel Toe Board 82/15	**652015**	**2.77**
	Steel Toe Board 74/15	**652014**	**2.56**
	Board made of sheet steel hollow box profile with aluminium zinc coating, 150 mm high and 28 mm thick. Refer to page 66.		
	**Toe Board 74/15 trans.**	**651991**	**2.40**
	Steel Toe Board 74/15 trans.	**652002**	**2.36**
	Used to complete the side edge protection along the end faces of the scaffold. 150 mm high. Refer to page 66.		

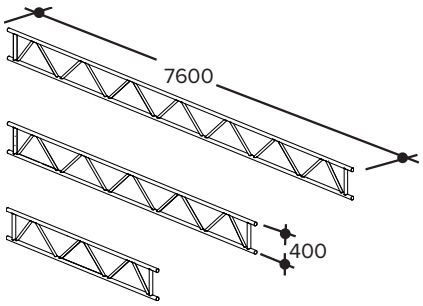
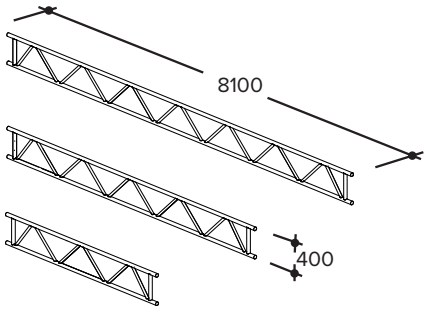
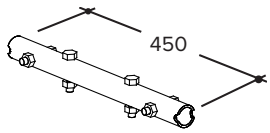
*Only rental [1]No rental

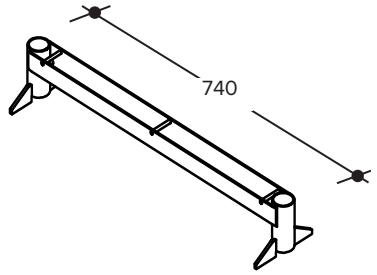
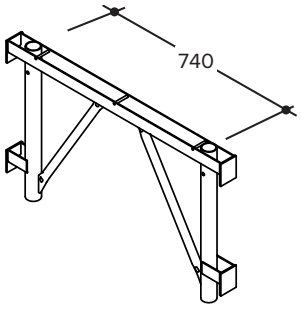
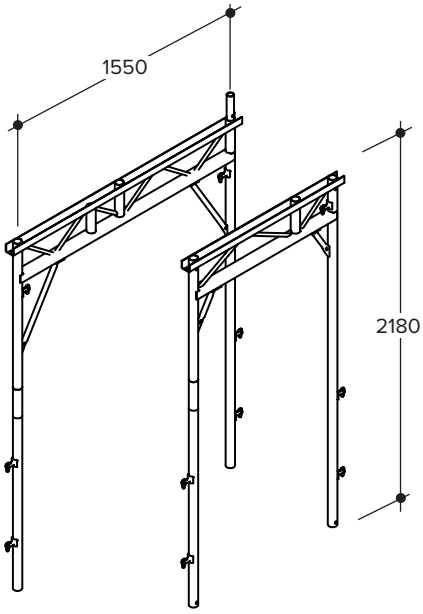
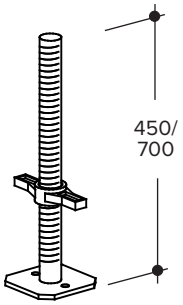
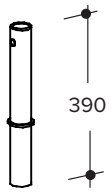
Unless stated otherwise, all dimensions in mm.

	Component	Code	Weight [kg]
	**Scaffold Retainer 350**	**467063**	**11.73**
	Scaffold Retainer 250	**467041**	**8.50**
	Scaffold Retainer 223	**467085**	**7.53**
	Scaffold Retainer 180	**116820**	**6.10**
	Scaffold Retainer 140	**116793**	**4.97**
	Scaffold Retainer 110	**116808**	**3.61**
	Scaffold Retainer 75	**78940**	**2.54**
	Scaffold Retainer 45	**78939**	**1.65**
	Steel tube Ø48.3 mm with hook Ø20 mm. For tying the scaffolds.		
	Refer to page 96.		
	**Frame Pin Ø8 mm**	**61312**	**0.06**
	Frame Pin Ø12 mm	**129473**	**0.26**
	Secures various components against uplift.		
	Refer to page 65.		

5.2 Auxiliary components

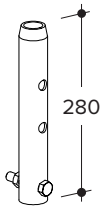
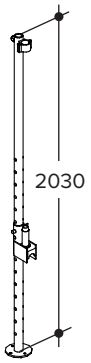
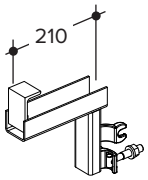
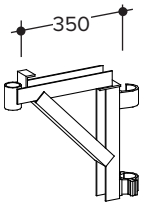
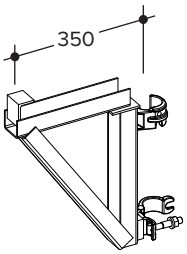
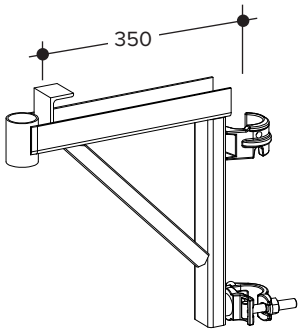
The auxiliary components expand the potential range of applications and increase the degree of utilisation of the scaffold.

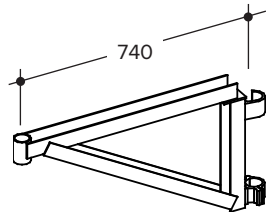
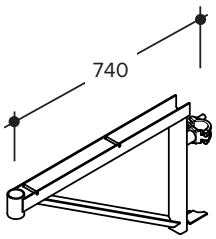
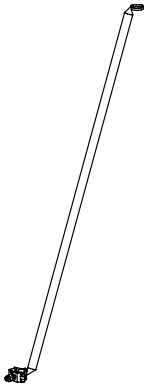
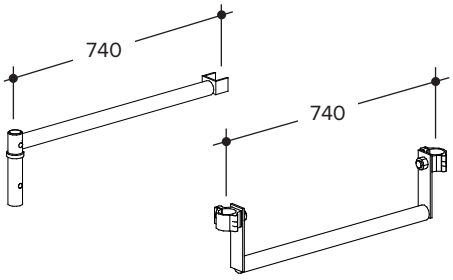
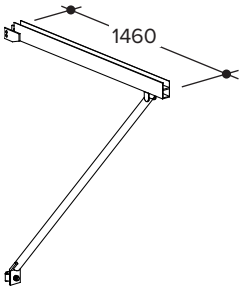
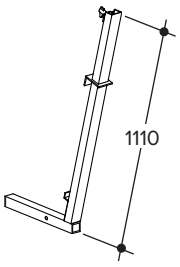
	Part	Code	Weight [kg]
	**Steel Lattice Girder 760**	**575555**	**68.90**
	Steel Lattice Girder 610	**575544**	**55.76**
	Steel Lattice Girder 510	**575533**	**47.00**
	Steel Lattice Girder 410	**575522**	**38.24**
	Steel Lattice Girder 310	**575511**	**29.49**
	**Alu Lattice Girder 810**	**444251**	**29.98**
	Alu Lattice Girder 610	**444240**	**22.81**
	Alu Lattice Girder 510	**444230**	**19.23**
	Alu Lattice Girder 410	**444229**	**15.65**
	Alu Lattice Girder 310	**444218**	**12.07**
	**Connecting Tube cpl.**	**575500**	**1.90**

	Part	Code	Weight [kg]
	**Cross Beam 70** Holds vertical frames between two bridge girders. Use only in conjunction with a bridge girder. Refer to page 117.	**416446**	**3.99**
	**Bridging Frame** Placed between commercially available lattice girders to serve as the base for the Vertical Frame 200/70 Light to continue scaffold erection.	**581597**	**10.12**
	**Passage Frame 100 Light** Used to construct pedestrian passages. System dimension 1.01 m. Refer to page 114.	**652885**	**26.94**
	Passage Frame 150 Light System dimension 1.55 m.	**652890**	**34.44**
	**Base Jack 45/3.8** Adjustment range 65 – 265 mm.	**551234**	**3.31**
	Base Jack 70/3.8 Adjustment range 65 – 500 mm. Used with passage frames.	**540575**	**4.26**
	**Tubular Joint 150 cpl.** (incl. screw) When the Passage Frame 100 Light is used with a Vertical Frame 200/100, order one tubular joint for each Passage Frame 100.	**417977**	**1.10**

*Only rental [1]No rental

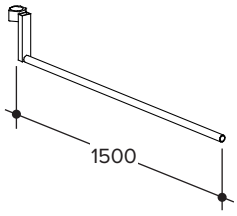
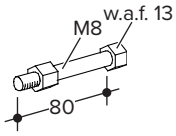
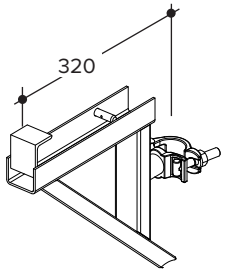
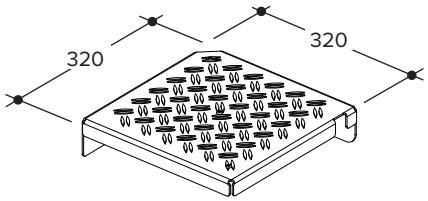
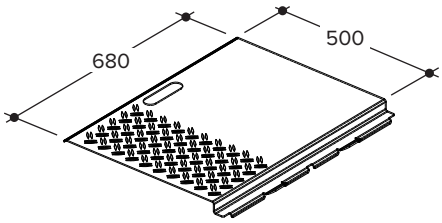
Unless stated otherwise, all dimensions in mm.

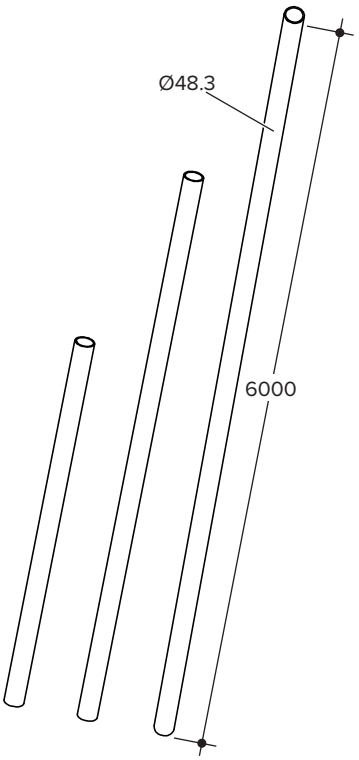
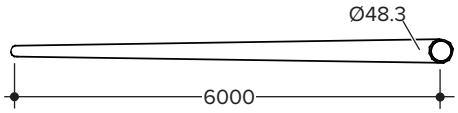
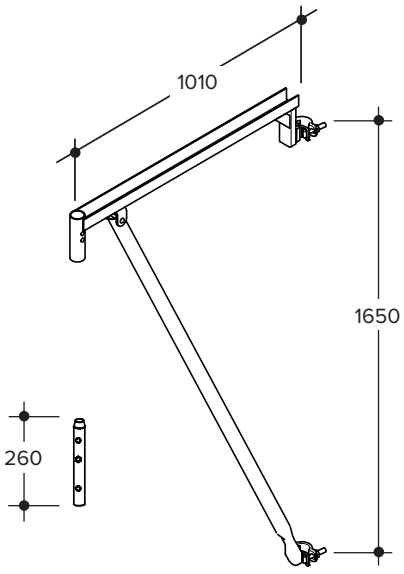
	Part	Code	Weight [kg]
	**Tubular Joint 100 cpl.** (incl. screw) When the Passage Frame 100 Light is used with a Vertical Frame 200/100, order one tubular joint for each Passage Frame 100.	**462921**	**0.84**
	**Adjustment Stand 70** Used to compensate substantial ground unevenness. Heigh adjustable from 290 mm to 1290 mm. Refer to page 42.	**39835**	**12.77**
	**Enlargement Bracket 18** Used to extend the deck by 180 mm. Cover with a 180 mm wide steel plank. Refer to page 120.	**652142**	**2.50**
	**Enlargement Bracket 35** Used to extend the deck by 350 mm. Cover with a 350 mm wide plank. Refer to page 120.	**402599**	**6.15**
	**Enlargement Bracket 35 w/o Starting Piece** Similar to the Enlargement Bracket 35 (code:402599), but without starting piece.	**652089**	**5.77**
	**Enlargement Bracket 35 Light** Used to extend the deck by 350 mm. Cover with a 320 mm wide plank: Weighs 1.5 kg less than Enlargement Bracket 35 (code:402599). Refer to page 120.	**652883**	**4.98**

	Part	Code	Weight [kg]
	**Enlargement Bracket 70** Used to extend the deck by 700 mm. Cover with two 320 mm wide planks. Refer to page 120.	**424226**	**8.75**
	**Enlargement Bracket 70 Light** Used to extend the deck by 740 mm. Cover with two 320 mm wide planks. Weighs 2.4 kg less than Enlargement Bracket 70 (code:424226). Refer to page 120.	**652906**	**6.36**
	**Diagonal EB 70 cpl.** Used to stabilise the Enlargement Bracket 70 (code:424226). Refer to page 138.	**554959**	**8.20**
	**Bracket 70 Plank Retainer** **Plank Retainer 74 cpl.** Used to secure the planks to the Enlargement Bracket 70 (code:424226) or to the vertical frame. It secures the planks against uplift. Refer to page 120.	**442837** **417348**	**2.43** **4.26**
	**BOSTA Working Bracket 1.8** Collapsible; used for a protective roof that projects 1.80 m. Used in conjunction with the BOSTA Bracket Post (code:429468), a gap cover, the Plank Retainer (code:427664), the frame pin, and a screw. Refer to page 146.	**427907**	**23.40**
	**BOSTA Bracket Post** Used to create protective roofs in conjunction with the BOSTA Working Bracket 1.8 (code:427907). Secure with the Frame Pin Ø12 mm (code:129473). Use an alu frame deck for the protective roof. Refer to page 146.	**429468**	**8.40**

*Only rental [1]No rental

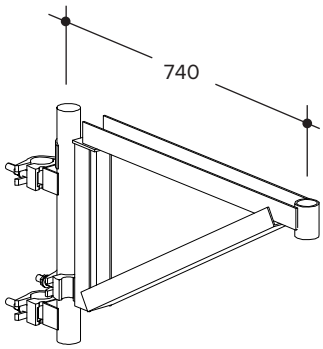
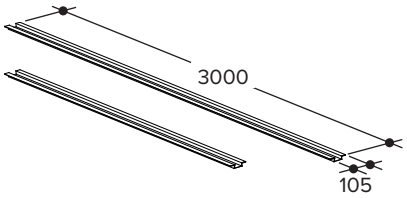
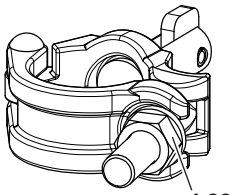
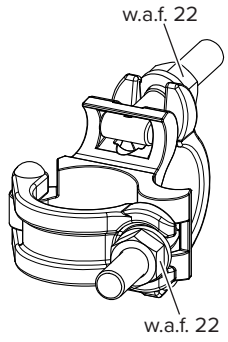
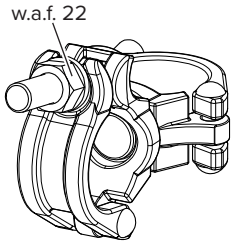
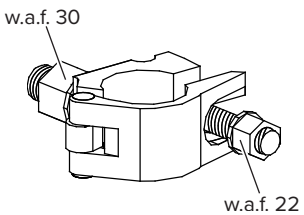
Unless stated otherwise, all dimensions in mm.

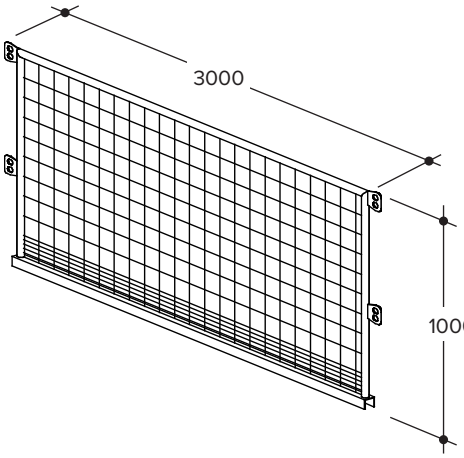
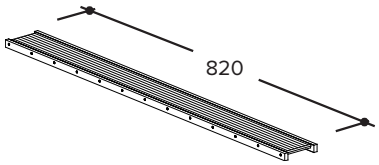
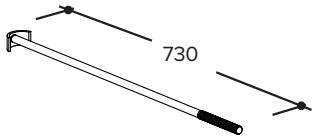
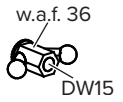
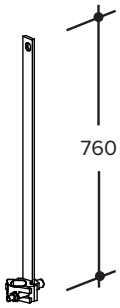
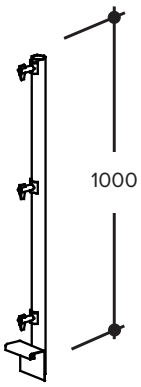
	Part	Code	Weight [kg]
	**Plank Retainer** Used to prevent the frame decks from lifting off. Slide the end of the tube onto the BOSTA Bracket Post pin and attach the half coupler to the vertical frame. Refer to page 146.	**427664**	**4.98**
	**Bolt M8×80 with Nut 5.6** Used to secure the Working Bracket 1.8 (code:427907) to the vertical frame. Refer to page 146.	**411638**	**0.04**
	**Corner Bracket 32** Used at the corners of interior extensions to create a continuous plank surface. Refer to page 73.	**652768**	**3.33**
	**Corner Plank 32** Used at the corners of interior extensions to create a continuous plank surface.	**652760**	**5.49**
	**Crossover Plate 68/30** Used to bridge the gap between two scaffolds at corners. Refer to page 73.	**652758**	**4.05**

	Part	Code	Weight [kg]
	**Scaffold Tube 48.3/50**	**169001**	**1.90**
	Scaffold Tube 48.3/100	**169012**	**3.81**
	Scaffold Tube 48.3/150	**169023**	**5.72**
	Scaffold Tube 48.3/200	**169034**	**7.62**
	Scaffold Tube 48.3/250	**169045**	**9.53**
	Scaffold Tube 48.3/300	**169056**	**11.43**
	Scaffold Tube 48.3/350	**169067**	**13.34**
	Scaffold Tube 48.3/400	**169078**	**15.24**
	Scaffold Tube 48.3/450	**169089**	**17.15**
	Scaffold Tube 48.3/500	**169090**	**19.05**
	Scaffold Tube 48.3/550	**169104**	**20.96**
	Scaffold Tube 48.3/600	**169115**	**22.86**
	Ø48.3 mm steel tube		
	**Alu Scaffold Tube 48.3/600**	**465443**	**8.88**
	**Enlargement Bracket 100 Light**	**652869**	**13.69**
	Tubular Joint 100 cpl.	**462921**	**0.84**
	Used to extend the deck by 1010 mm, with a safe working load pursuant to LC 4. Secured at the top and bottom with half couplers. The tubular joint is used to connect the Single Post 70 (code:133120) and Frame Pin Ø8 mm (code:61312). Secure with the Frame Pin Ø12 mm (code:129473). Cover with three 320 mm wide planks.		

*Only rental [1]No rental

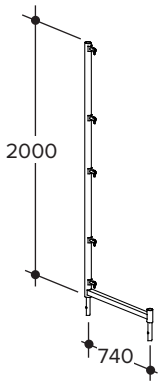
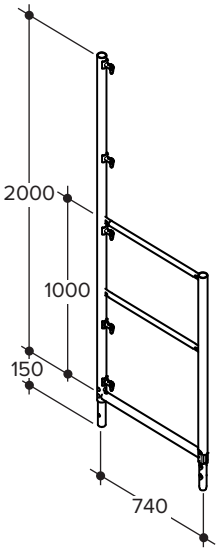
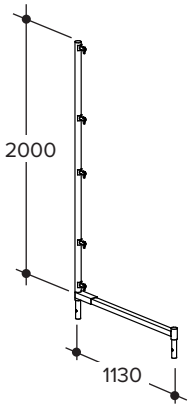
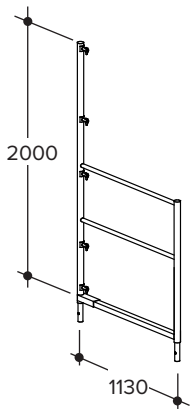
Unless stated otherwise, all dimensions in mm.

	Part	Code	Weight [kg]
	**BOSTA 70 Offset Bracket**	**S1013**	**12.10**
	**Gap Plate 300** **Gap Plate 250** Used to close the gap between the scaffold plank and the protective roof. To close the gap between the scaffold plank and bracket plank, if necessary. Refer to page 146.	**138990** **138980**	**6.90** **5.80**
	**Half Coupler 48/FB w.a.f. 22** Used to attach guardrails and vertical diagonals to an additional clevis pin. Torque 50.00 Nm.	**116370**	**0.84**
	**Rigid Coupler 48/48 w.a.f. 22** Used to connect scaffold tubes Ø48.3 right angles. Torque 50.00 Nm.	**2514**	**1.18**
	**Swivel Coupler 48/48 w.a.f. 22** Used to connect scaffold tubes Ø48.3 mm at any angle. Torque 50.00 Nm.	**2525**	**1.37**
	**Half Coupler 48/M20×30 w.a.f. 22 /** **w.a.f. 30** **Half Coupler 48/M20×70 w.a.f. 22 /** **w.a.f. 30** With an additional thread M20×30 mm or M20×70 mm. Torque 50.00 Nm.	**2488** **39846**	**0.90** **0.96**

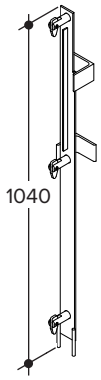
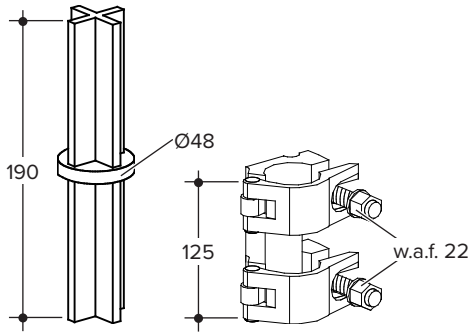
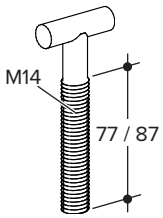
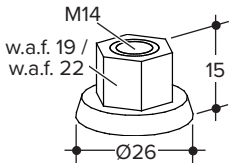
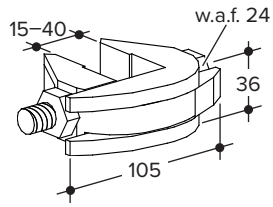
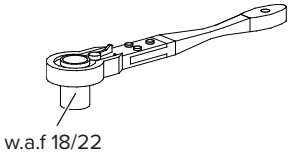
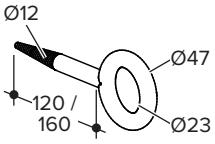
	Part	Code	Weight [kg]
	**Mesh Panel 300***	**543329**	**21.80**
	Mesh Panel 250*	**543330**	**19.00**
	Mesh Panel 200*	**543340**	**15.90**
	Mesh Panel 150*	**543351**	**12.90**
	Mesh Panel 125*	**543362**	**11.50**
	A roofer's protective wall that complies with all relevant regulations can be constructed using two stacked mesh panels, along with the Roofer's Safety Post 70 (code:543204). Refer to page 141.		
	**Alu Working Plank 820**	**541124**	**60.00**
	Alu Working Plank 620	**541113**	**35.00**
	**Post Fastener**	**549999**	**1.30**
	**Wing Nut Galv.**	**509618**	**0.32**
	**Plank Retainer Universal**	**545052**	**2.80**
	**Walkway Post 100**	**548950**	**5.70**

*Only rental [1]No rental

Unless stated otherwise, all dimensions in mm.

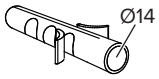
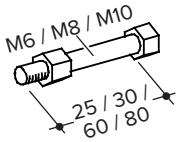
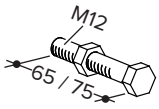
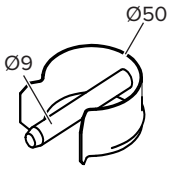
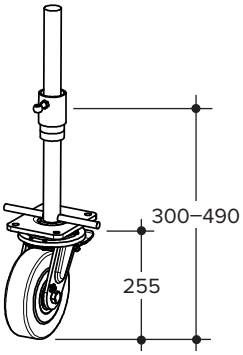
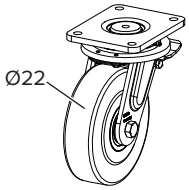
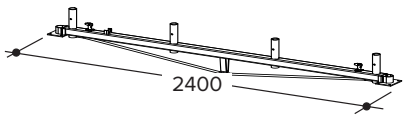
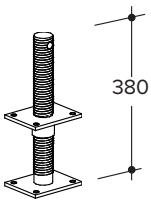
	Part	Code	Weight [kg]
	**Roofer's Safety Post 70** Used to construct a roofer's protective wall, 2 m high. Can accommodate two stacked mesh panels. Secure with the Frame Pin Ø8 mm (code:61312) to prevent uplift. Refer to page 141.	**543204**	**12.53**
	**Roofer's Safety Post 70 trans. light** Completes the roof protection along the end faces. Secure with the Frame Pin Ø8 mm (code:61312) to prevent uplift. Refer to page 141.	**652875**	**16.47**
	**Roofer's Safety Post 113** Used to construct a roofer's protective wall, 2 m high. Can accommodate two stacked mesh panels. For the Vertical Frame 200/70 Light (code:652044), in conjunction with the Enlargement Bracket 35 (code:402599). Secure with 2no. Frame Pins Ø8 mm (code:61312) to prevent uplift.	**586935**	**16.82**
	**Roofer's Safety Post 113** Used to construct a roofer's protective wall, 2 m high. Completes the roof protection along the end faces. Secure with 2no. Frame Pins Ø8 mm (code:61312) to prevent uplift.	**586990**	**23.73**

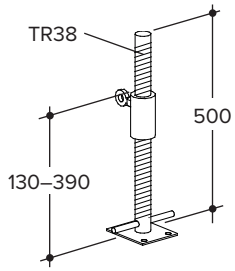
Unless stated otherwise, all dimensions in mm. *Only rental [1]No rental

	Part	Code	Weight [kg]
	**BOSTA 70 IEP Rail G2** Used to construct inside edge protection on the interior side (façade side) of a working or protective scaffold. If the space between the façade and the scaffold deck is bigger than 300 mm, additional edge protection pursuant to DIN 4420 is required. Can be used with the AGS Post G3 (code:653450). Connect only to a BOSTA 70 vertical frame.	**653480**	**3.39**
	**Tube Connector for Pull Coupler** **Pull Coupler w.a.f. 22** Used as a Tension Coupler 48/48 when connecting Ø48.3 scaffold tubes. Torque 50.00 Nm.	**801168** **20003**	**1.05** **1.35**
	**Hammer-head Screw M14×77Z 5.6** **Hammer-head Screw M14×87Z 5.6**	**76984** **154230**	**0.09** **0.10**
	**Collar Nut M14 w.a.f. 22** **Collar Nut M14 w.a.f. 19**	**154263** **801330**	**0.04** **0.04**
	**Flange Clamp 16-40, w.a.f. 24***	**3953**	**1.24**
	**Universal Scaffold Ratchet w.a.f. 19/22** **Ratchet Wrench w.a.f 19/22** **Scaffold Ratchet w.a.f. 22** **Scaffold Ratchet w.a.f. 19**	**651791** **884265** **587300** **587311**	**0.50** **0.90** **0.75** **0.75**
	**25no. Eye Bolts GS 12×160** **25no. Eye Bolts GS 12×160**	**497864** **497875**	**4.60** **5.00**

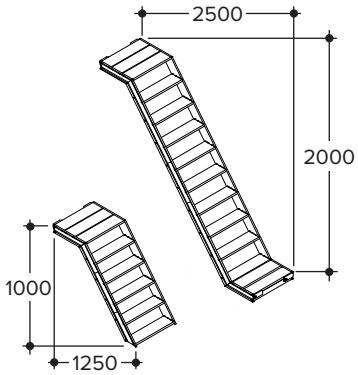
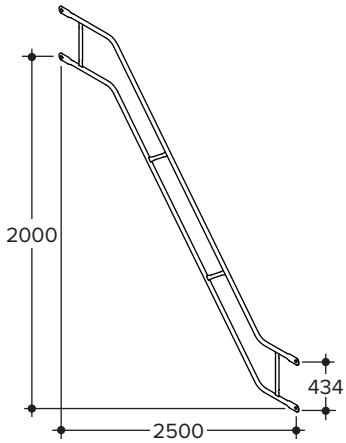
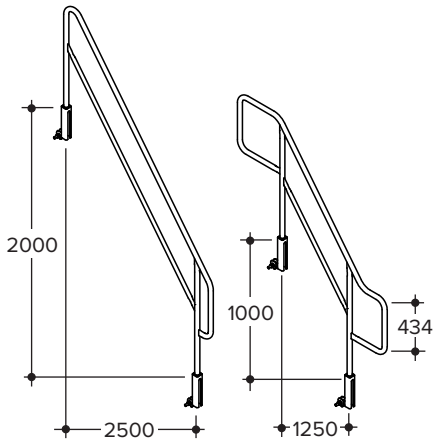
*Only rental [1]No rental

Unless stated otherwise, all dimensions in mm.

	Part	Code	Weight [kg]
	**25no. Dowels S14 ROE 100** Used to tie the scaffold to walls when insulating the façade.	**497842**	**0.18**
	**Bolt M10×25 with Nut 4.6**	**5724**	**0.04**
	Bolt M10×30 with Nut 4.6	**553347**	**0.04**
	Bolt M8×80 with Nut 5.6	**411638**	**0.04**
	Bolt M6×60 with Nut 8.6	**651808**	**0.01**
	**Bolt M12×65 with Nut 4.6***	**143560**	**0.09**
	Bolt M12×75 with Nut 4.6	**554710**	**0.10**
	**Spring Pin 9** Secures railing posts and vertical frames.	**440919**	**0.07**
	**Castor Wheel with Jack** Used for mobile scaffolds. Secured to Base Plate rigid (code:428533).	**480682**	**7.60**
	**Castor Wheel 200/10** Used for mobile scaffolds. Secured to Base Plate rigid (code:428533).	**481780**	**4.80**
	**Castor Wheel Bar 70**	**57107**	**25.75**
	Castor Wheel Bar 70/100	**415740**	**27.00**
	Wheel Bar Extension 70/100	**422411**	**9.00**
	**Jack for Castor Wheel** Secured with Bolt M10×30 with Nut 4.6 (code:553347). Hole size 110×80 mm.	**25186**	**4.98**

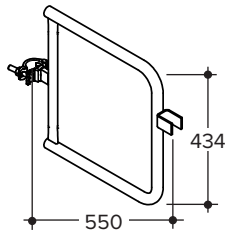
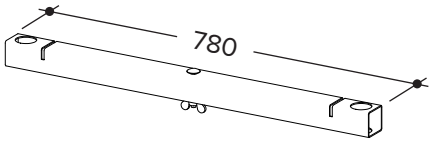
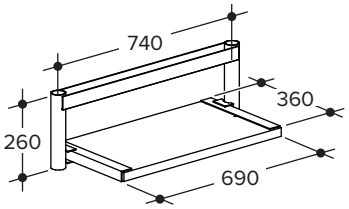
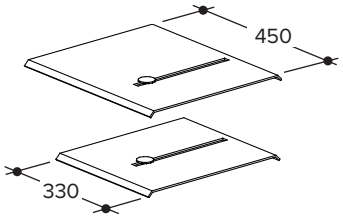
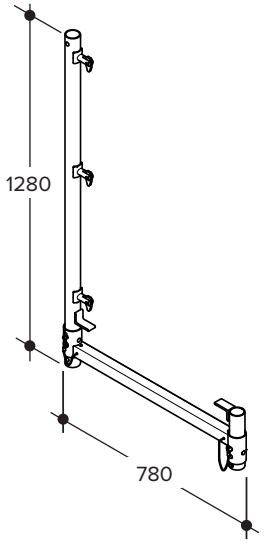
	Part	Code	Weight [kg]
	**Adjustable Base Plate*** Secured with Bolt M10×30 with Nut 4.6 (code:553347). Hole size 110×80 mm.	**481790**	**4.53**

5.3 Alu scaffold staircases

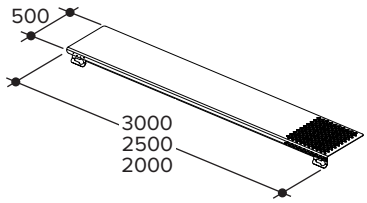
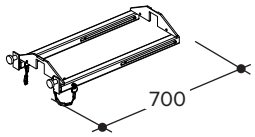
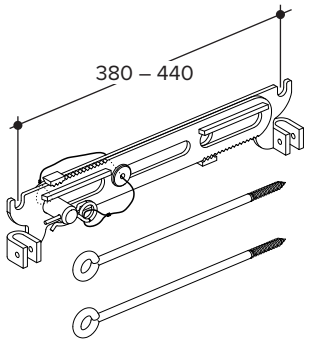
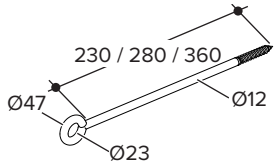
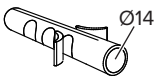
	Part	Code	Weight [kg]
	**Alu Staircase G2 250/200** **Alu Staircase G2 125/100** Reinforced flight with landings for external staircase access as scaffold staircase. Screwed together.	**652780** **652895**	**25.49** **13.94**
	**Alu Staircase G2 Outer Handrail 250/200** Used to secure the Alu Staircase G2 250/200 from the outside. Weight of outer handrail 250/200 reduced by 4.3 kg compared to previous model.	**652860**	**14.22**
	**Alu Staircase G2 Inner Handrail 250/200** Used to secure the Alu Staircase G2 250/200 from the interior. Weight of inner handrail 250/200 reduced by 0.8 kg compared to previous model. **Alu Staircase G2 Inner Handrail 125/100** Used to secure the Alu Staircase G2 125/100 from the interior and exterior.	**652865** **652935**	**12.56** **12.59**

*Only rental [1]No rental

Unless stated otherwise, all dimensions in mm.

	Part	Code	Weight [kg]
	**Alu Staircase G2 Guardrail** Used to close spaces between the inner handrail and vertical frame resulting from the structure or the scaffold or to close off access ways.	**653000**	**3.87**
	**Alu Staircase G2 Jack Connector 125/100** Used to attach the base jacks to the Alu Staircase G2 125/100. It is screwed onto the bottom step of the Alu Staircase G2 125/100	**653130**	**2.28**
	**Handrail Post** Post to which Guardrail 190 is attached. Refer to page 80.	**547669**	**3.60**
	**Stairway Access** Lowest step and also fastening point for first staircase. Placed on base jacks. Refer to page 80.	**553656**	**10.15**
	**Top Gap Cover** **Bottom Gap Cover** Used to bridge the gaps between the upper and lower staircase landings, and the scaffold planks. Refer to page 80.	**653995** **653990**	**5.72** **4.17**
	**BOSTA 70 Intermediate Railing Bracket** Used as a variable railing post to create a continuous, three-part edge protection at the inner corners of the scaffold and to attach the railing posts to the uppermost scaffold bay level by the exit of a staircase on the outside of the scaffold.	**652830**	**8.44**

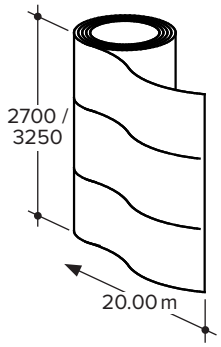
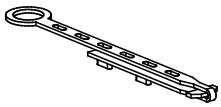
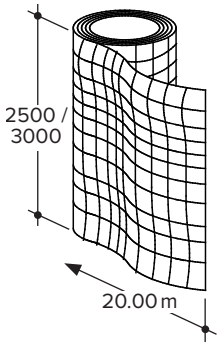
5.4 Façade insulation accessories

	Component	Code	Weight [kg]
	**BOSTA 70 Façade Insulation Plank 300**	**652235**	**17.04**
	BOSTA 70 Façade Insulation Plank 300*	**652236**	**14.21**
	BOSTA 70 Façade Insulation Plank 200	**652237**	**11.38**
	Used for installation of façade insulation systems to close the temporary gap between the façade and the scaffold plank. Refer to page 126 ff.		
	**BOSTA 70 Façade Insulation Telescope***	**652230**	**10.69**
	Inserted into the vertical frames during erection of the scaffold. It will later supports the BOSTA 70 insulation planks. Refer to page 126 ff.		
	**Façade Insulation Bridge cpl.**	**652293**	**2.48**
	Set of Façade Insulation Bridge and two eye bolts to tie scaffolds to façades, particularly in the case of façade insulation. The 280 mm lever guarantees a sufficient load-bearing capacity of the bridge parallel to the façade. Refer to page 126 ff.		
	**Façade Insulation Eye Bolt 12×360 10.9**	**652260**	**0.39**
	Façade Insulation Eye Bolt 112×280 10.9	**652840**	**0.32**
	Façade Insulation Eye Bolt 112×230 10.9	**652291**	**0.28**
	Used to tie the scaffold to walls when insulating the façade. Refer to page 126 ff.		
	**25no. Dowels S14 ROE 100**	**497842**	**0.18**
	Used to tie the scaffold to walls when insulating the façade. Refer to page 126 ff.		

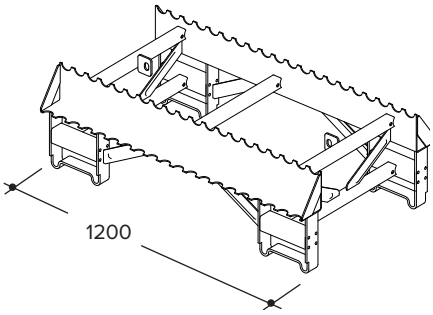
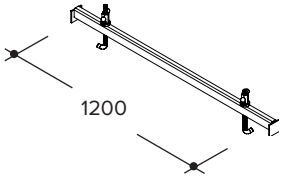
*Only rental [1]No rental

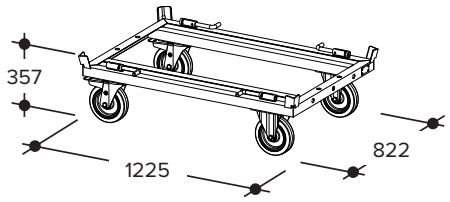
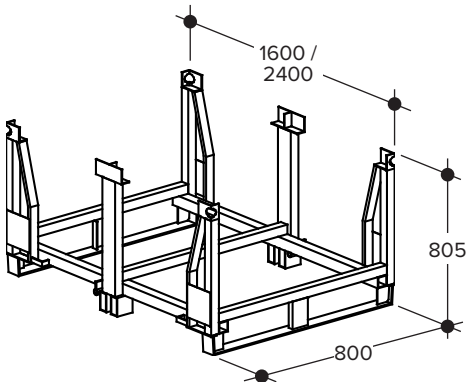
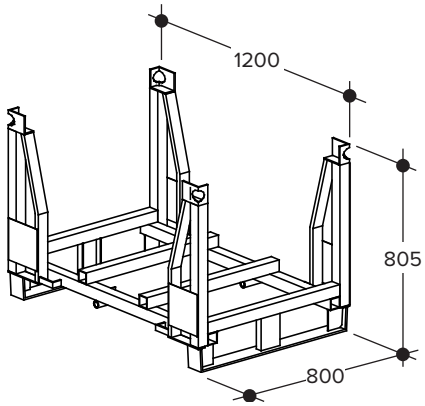
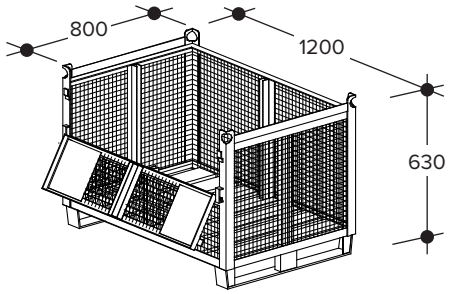
Unless stated otherwise, all dimensions in mm.

5.5 Scaffold tarpaulins and accessories

	Component	Code	Weight [kg]
	**DELTA Scaffold Tarp 2.70×20 m**	**543292**	**15.12**
	DELTA Scaffold Tarp 3.25×20 m	**543307**	**18.20**
	**DELTA Connector**	**533035**	**0.01**
	**Scaffold Net 2.5×20 m**	**563343**	**3.00**
	Scaffold Net 3.0×20 m	**563354**	**3.60**

5.6 Transport racks and accessories

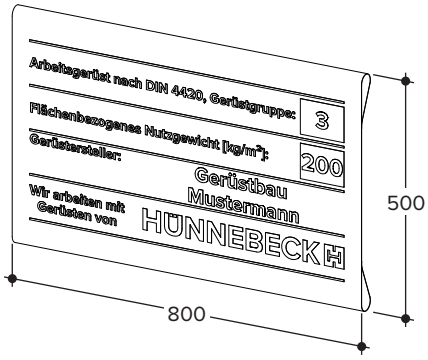
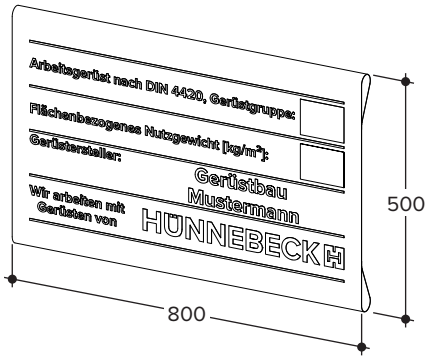
	Part	Code	Weight [kg]
	**Vertical Frame Pallet** Used for storage and transport of BOSTA 70 vertical frames. The pallet can accommodate up to 20no. vertical frames. Do not stack more than two pallets. Order the Lift-off Retainer for Vertical Frame separately.	**651402**	**43.85**
	**Lift-off Retainer VF** Used to secure the vertical frames during transport on a Vertical Frame Pallet.	**651401**	**6.05**

	Part	Code	Weight [kg]
	**Euro Trolley** Used to manually transport only the Euro Lattice Box and Euro Stacking Frame 120/80 . The Euro Trolley has two lockable swivel castors. Working load: 1300 kg	**607610**	**39.57**
	**Euro Stacking Frame 160/120** **Euro Stacking Frame 240/80**	**566494** **566509**	**84.02** **92.47**
	**Euro Stacking Frame 120/80** Can be moved using the Euro Trolley (code:607610).	**553689**	**54.47**
	**Euro Lattice Box** Can be moved using the Euro Trolley (code:607610).	**548480**	**68.79**

*Only rental [1]No rental

Unless stated otherwise, all dimensions in mm.

5.7 Scaffold Identification Tarps

	Component	Code	Weight [kg]
	**Scaffold Identification Tarpaulin LC 3***	**544665**	**0.36**
	Scaffold Identification Tarpaulin LC 3/ Logo*	**544779**	**0.36**
	Scaffold identification tarp for load class 3 in German. Code:544779 comes with individual company logo. The identification tarps are equipped with loops at the top and bottom of the long sides to attach guardrails.		
	**Scaffold Identification Tarp LC N***	**544643**	**0.36**
	Scaffold Identification Tarp LC N/Logo*	**544757**	**0.36**
	Scaffold identification tarp without load class in German. Code:544757 comes with individual company logo. The identification tarps are equipped with loops at the top and bottom of the long sides to attach them to the guardrails.		

6 Overview of erection configuration, standard design

Covering	Façade	AO*	Load class	Bay length	First tie position	Planks	Use as protective (roof) scaffold	Page
Without	Open + closed	①	LC 3	L ≤ 3.00 m	at 4.00 m	All planks	Permitted	100
Without	Open + closed	②	LC 3	L ≤ 3.00 m	at 4.00 m	All planks	Permitted	102
Without	open	③	LC 3	L ≤ 3.00 m	at 4.00 m	HBP	Not permitted!	104
Nets	Open + closed	④	LC 3	L ≤ 3.00 m	at 4.00 m and 2.00 m	All planks	Permitted	106
Tarps	Open + closed	⑤	LC 3	L ≤ 3.00 m	at 4.00 m and 2.00 m	All planks	Permitted	108
Tarps	Open + closed	⑥	LC 3	L ≤ 3.00 m	at 2.00 m	All planks	Permitted	110
Tarps	Open + closed	⑦	LC 3	L ≤ 3.00 m	at 2.00 m	All planks	Permitted	112

*AO = assembly option, beginning on page 100

7 Component assembly

The scaffold must be erected in the sequence specified below. It is dismantled by reversing the sequence.

7.1 Safety

Always meet these requirements when assembling, modifying, and dismantling the scaffold!

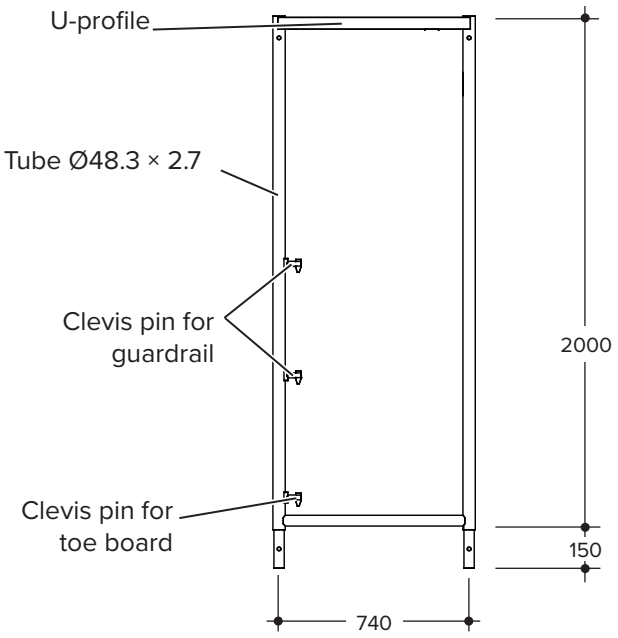
- Always comply with the latest occupational safety regulations!
- All components must be visually inspected before being used. All components must be checked for damage and must not be cracked, bent and/or deformed.
- Use only couplers permissible by the general building code or couplers that comply with DIN EN 74-1.
- System planks serve as braces. Always install them across the entire width of the scaffold.
- Guardrails attached to drop latches can unintentionally be released! Always position the guardrails such that the drop latches face the plank!
  Always attach the drop latches in the vertical position.
- Never step onto scaffold levels that have not yet been secured. Always secure the scaffold levels using the advanced guardrail system (AGS) or other suitable guardrails.
- Assembly of the first scaffold bay typically requires two persons.

7.2 Access to scaffold

Interior ladders (spaced no more than 50.00 m apart) can be used to access the scaffold during erection, dismantling and modification. Accesses have to be planned and created as specified by TRBS 2121-1 (German technical rules on operational safety) to be able to later use the scaffold. Construction hoists / loading platforms should be used primarily. Use staircases only when this is not possible. If none of these are feasible, ladders can be used.

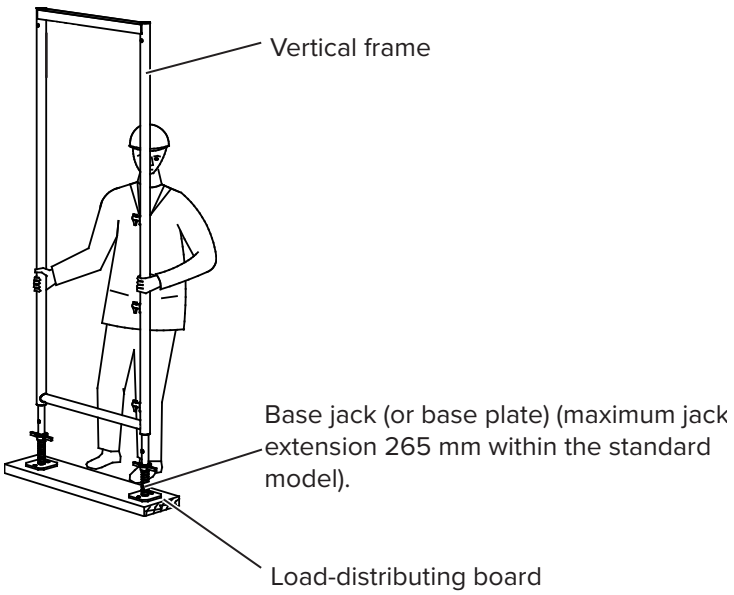
When using hoists or loading platforms, the manufacturer's instructions regarding tying, technical data and operation must always be complied with.

7.3 Vertical frame 70 light



7.4 Load-distributing sub-structure and base jack

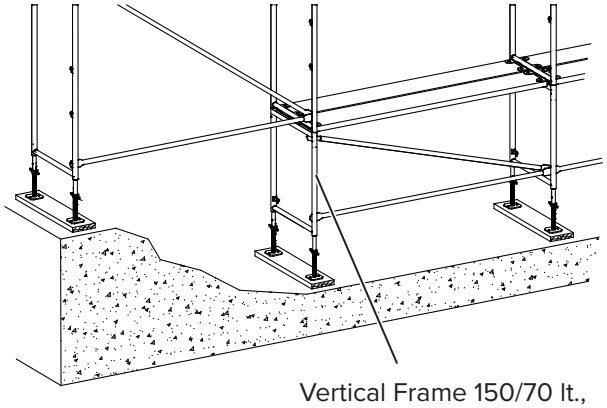
Erect the scaffold only on ground capable of supporting the load. Bases that can bear the load of the structure are required (e.g. boards). Assembly begins at the highest ground level. Place a base jack or base plate under each scaffold post on the vertical frame.



The vertical rail with the 3no. clevis pins forms the exterior of the scaffold.

7.5 Adjustment frames

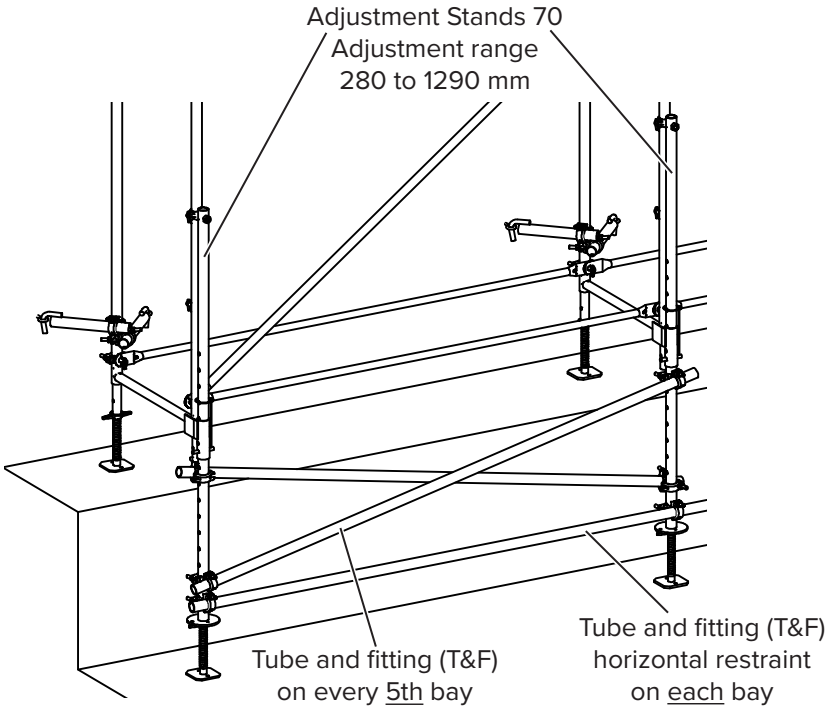
Vertical adjustment frames 66, 100 and 150 can be built into the lowest scaffold levels to accommodate slanted surfaces and differences in height, as well as to reach certain floor heights.



Vertical Frame 150/70 lt.,
Vertical Frame 100/70 lt. or
Vertical Frame 66/70 lt.

7.6 Adjustment Stands 70

Adjustment Stands 70 (code:39835) can be used to compensate for differences in the ground level and for unevenness. They must be connected to the posts of the vertical frame. The hole pattern on the inner tube is used for approximate adjustment to suit the erection level. The inserted base jack facilitates fine adjustment. For more detailed information, refer to page 116.

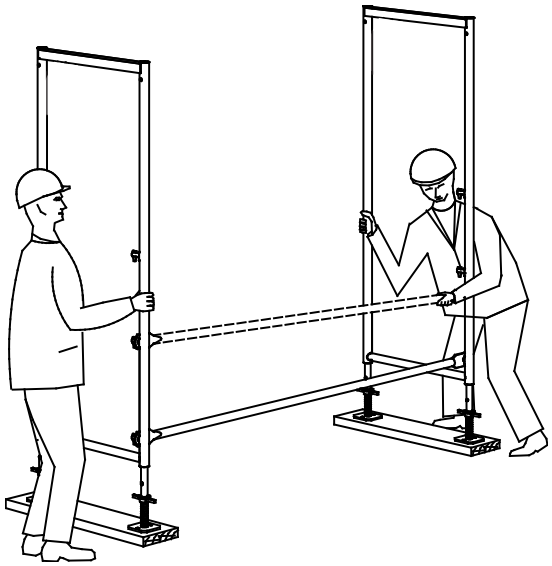


Unless stated otherwise, all dimensions in mm.

7.7 Vertical frames and passage frames

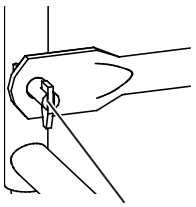
Vertical frames and passage frames must be set up vertically on base jacks or base plates, at the specified distance from the wall. The vertical frames are connected to guardrails placed over the lower clevis pins. For information on how to use the vertical frames, refer to page 114.

☞	Clevis pins always have to be positioned vertically to properly secure components! An additional scaffold bay covered with planks is required for the edge protection components!



This guardrail is an assembly aid to help erect the first scaffold bay. It can be removed again once the diagonals are installed and the planks are in place (as shown in section 7.8 "Diagonals and planks" on page 44).

Guardrail connection



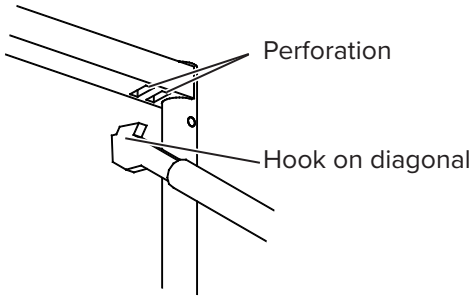
Clevis pin

7.8 Diagonals and planks

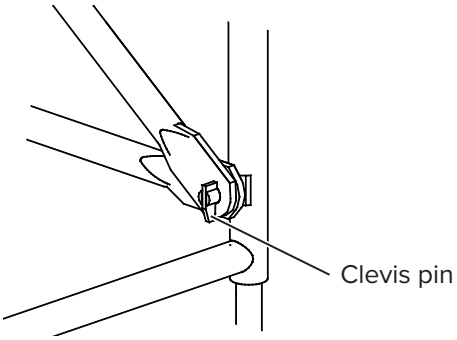
The scaffold has to be braced on the outside face using diagonals. To attach the diagonals guide the hook at the top of the diagonal into one of the perforations in the U-profile of a vertical frame. The other end is fastened to the lower clevis pin on the other vertical frame. Diagonals and planks must be installed as scaffold erection progresses.

Place decking panels, timber planks, steel decks or alu planks on the U-ribs of the vertical frame such that the legs on the U-profile fit tightly into the corrugation on the plank bearing profile.

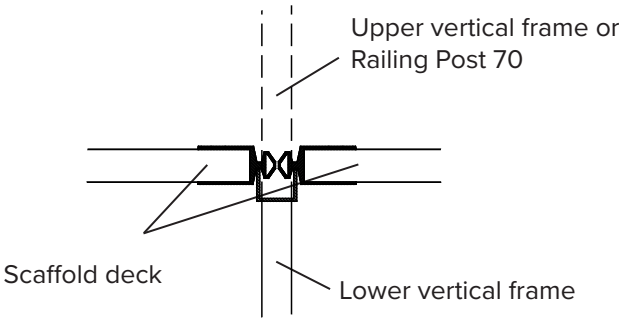
Connection of diagonal at top



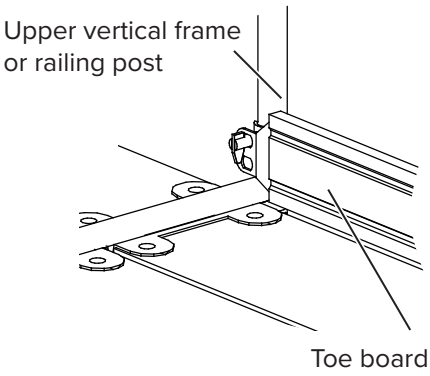
Connection of diagonal at bottom



Installing scaffold deck

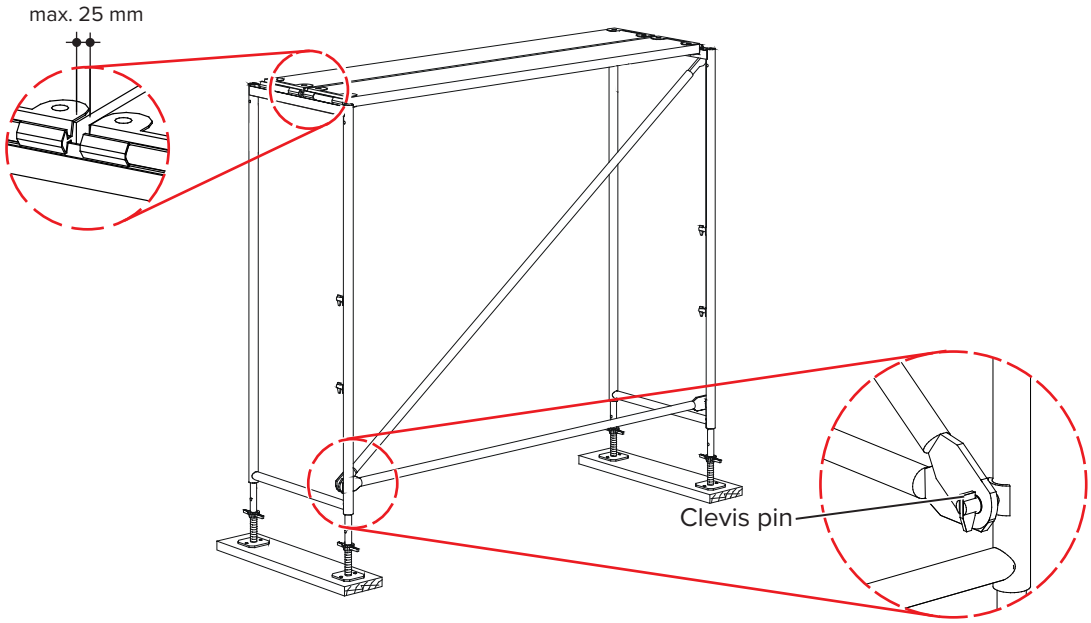


Attaching toe board



If the vertical frame does not have shift protection, ensure that the gap between the 320 mm wide scaffold planks is no more than 25 mm. Use the base jacks to adjust the completed scaffold bay vertically and horizontally. Check the distance between the scaffold and the wall.

Unless stated otherwise, all dimensions in mm.



WARNING

Risk of injury from scaffold collapsing!

System planks serve as braces and are essential to structural integrity.

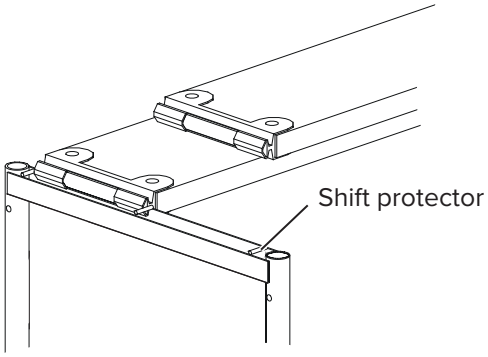
If any system planks are missing, the scaffold can collapse!

Always install the system planks across the entire width of the scaffold.

Verify that the clevis pin is closed!

Installing scaffold decks

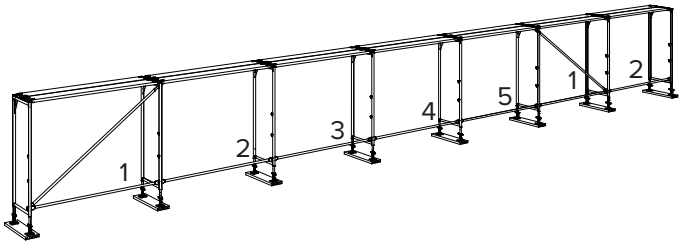
Three shift protectors in the U-profile of the vertical frame (beginning 4/96) centre the 320 mm wide scaffold decks.



Verify that the bearing profiles are positioned correctly!

7.9 Erecting additional scaffold bays

Subsequent scaffold bays are erected in the same way as described in the previous sections. A diagonal must be attached to every fifth bay. Additional diagonals may be needed for some configurations.



7.10 Erecting additional scaffold levels

Plan and perform work on a scaffold so that the risk of falling is eliminated or minimised. On the basis of the hazard assessment, the manufacturer is required to assess each specific case or task and to take appropriate measures to avoid dangerous situations.

The advanced guardrail system (AGS) is usually used to secure the next scaffold level before it is stepped on. As soon as the scaffold level is secured with the AGS, it has to be completed by installing double guardrails and toe boards as edge protection.

Using personal fall protection to prevent falling from heights instead of the AGS is permitted only as an exception. More information on the use of personal fall protection can be found in section 7.10.1 "Using personal fall protection equipment" on page 47.

Any or all of these protective measures can be implemented when using the BOSTA 70 scaffold system:

- AGS all around the top scaffold levels
- AGS in the access bay and specification of attachment points for personal fall protection
- Properly trained and instructed personnel, along with specification of attachment points for personal fall protection to prevent falling from heights
- Properly trained and instructed personnel.

WARNING

Risk of injury from scaffold tipping over!

While the first scaffold levels are being erected, the scaffold can tip over if it is not yet tied.

Do not lean against the scaffold, especially when transporting materials vertically.

Push scaffold components into the scaffold from below.

Otherwise secure the scaffold to prevent it from tipping over, e.g. using ballast. Install the transoms and planks at the base of the lowest vertical frame.

7.10.1 Using personal fall protection equipment

General information

Personal fall protection equipment (PPE) must be used only when a hazard assessment determines that safe and collective protective measures such as edge protection and fall arrest equipment cannot be used when erecting the scaffold or are not justified for the respective application.

Observe the following:

- When elaborating the hazard assessment, include precautionary organisational and technical measures that may be required on site to rescue persons who have fallen and have been caught by a fall protection system. Take into consideration the potential risks of injury, e.g. suspension trauma or collision with structures.
- Use only fall protection suitable for the intended purpose. This means e.g.:
  - Depending on the intended use, an EC type-examination is required for the selected fall protection to determine whether the system is suitable for the intended purpose. It must be performed by an accredited test facility (observe CE label and manufacturer's operating instructions).
  - All of the connectors must be part of the same system, with a proven load capacity along a leading edge (for horizontal use).
  - Depending on the selected fall protection and the available attachment points, it is essential that the required clearance below the scaffold bay on which persons stand is maintained (usually 5.75 m).
  - This also applies to the use of fall arresting equipment.
- Only the attachment points on the scaffold shown in this section and proven to be suitable must be used.
- The supervisor is responsible for indicating the attachment points to be used before beginning the scaffold erection.
- Only one person must be secured to each attachment point.
- Use the personal fall protection to prevent falling from heights only as specified in the manufacturer’s operating instructions.
- The supervisor is responsible for verifying that the PPE to prevent falling from heights is used only as intended.
- Persons using fall protection equipment must receive instruction on proper use and be familiar with the fall protection equipment.
- Always wear a hard hat with chin strap when using fall protection. The helmet has to be able to withstand forces of 25 daN (DIN EN 397).
- After the impact resulting from arresting a fall, access to the scaffold must be restricted until it has been approved by the responsible supervisor.

The next section provides an overview of particular aspects of using BOSTA 70 scaffold components as attachment points.

Suitable attachment points for personal fall protection

WARNING

Risk of injury caused by falling from scaffold!

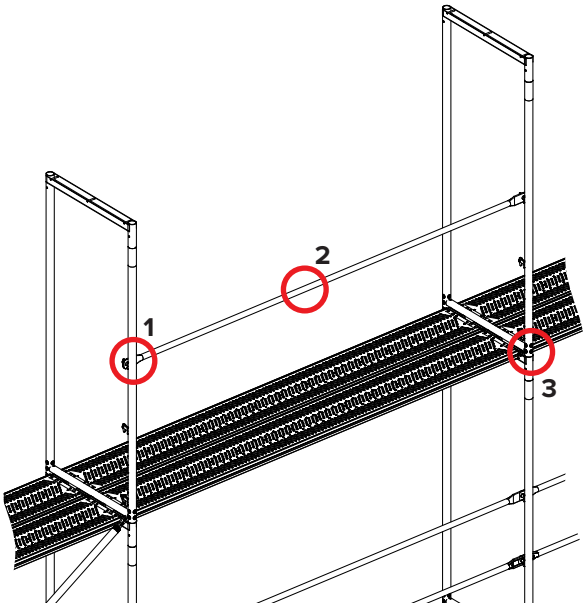
- Select the attachment point such that a person falling from the scaffold cannot collide with any lower component or the ground. The length of the connector, including the shock absorber and the extension of 0.50 m, must not exceed 2.50 m.
- When selecting attachment points, keep in mind that each point must be at least 1.00 m above the user's standing area.
- If instead an attachment point which is at the same height as the working platform is selected, the length of the connector including the shock absorber must not be longer than 2.00 m.

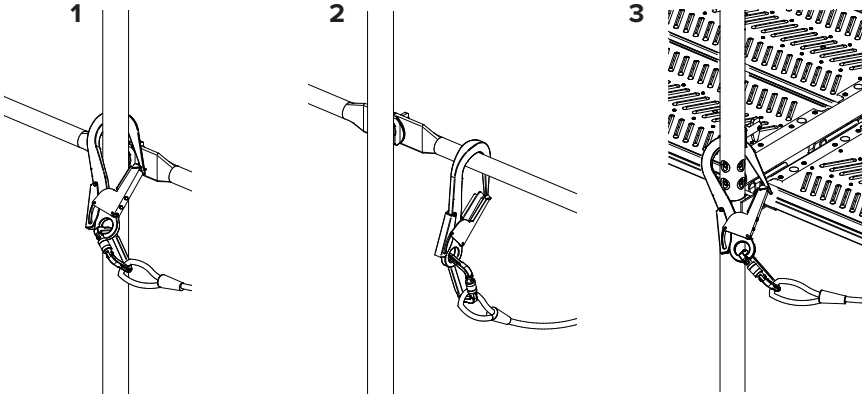
Taking into consideration the standing area and the maximum length of the connector, the following points on the BOSTA 70 scaffold can be used to attach personal fall protection systems:

1 To the vertical of the BOSTA 70 Frame, resting above the connection of the top/main guardrail (1.00 m above the working platform) to the clevis pin.

2 Along the top/main guardrail (1.00 m above the working platform) which is attached to the clevis pin of the BOSTA 70 Frame.

3 To the vertical of the BOSTA 70 Frame, resting above the completed working platform.





The tube hooks must be suitable for the attachment type selected. For example, figure **1** shows an attachment type that is permitted only with a tube hook approved to resist transverse force.

Unless stated otherwise, all dimensions in mm.

7.10.2 Test report

Test report no. 201322840

"Scaffold system BOSTA 70 with lengthwise scaffold levels as a façade scaffold, with the option of using designated places as an attachment point for personal fall protection to prevent falling from heights when assembling a scaffold".

Institut für Arbeitsschutz (IFA, Institute for Occupational Safety and Health), Sankt Augustin, Germany, 2013

7.11 Assembling temporary edge protection

The advance guardrail system (AGS) is made up of the following aluminium and steel components:

- AGS Post G3 (code:653450)
- AGS Vario guardrails as double guardrail
- BOSTA 70 AGS End Guardrail G2 (code:653490)
- AGS Post G3 Lift-off Retainer (code:653970)

The AGS serves as temporary edge protection on the longer side and the end face of a BOSTA 70 scaffold.

This edge protection meets the requirements specified by DIN EN 12811 and the German technical rules on operational safety TRBS 2121.

The telescoping guardrails with slide bearing sleeves made of plastic allow the AGS components to be quickly and easily moved along the longer side without having to disassemble the scaffold.

The AGS Post G3 has a lock that closes automatically when attached to a vertical frame.

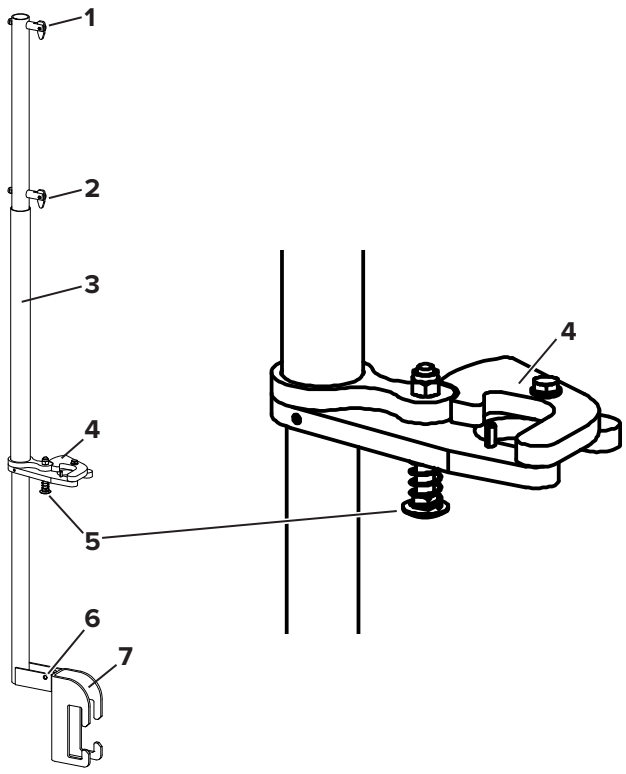
Permanent, three-part advancing edge protection along the end face of a BOSTA scaffold can be created with the aid of the AGS End Guardrail G2 (code:653490).

Scaffold bays used to ascend the scaffold or to transport materials vertically still have to be equipped with a double guardrail. Then the handrail can be attached to the remaining scaffold bays with the aid of the AGS. Once this is complete, it is safe to step onto the plank and add guardrails as knee rails and to add the toe boards to the vertical frames.

Such temporary edge protection is mandatory when assembling and disassembling a façade scaffold in Germany.

7.11.1 Erecting temporary edge protection along the outside face of the scaffold

AGS Post G3



1 Upper clevis pin with anti-luce fitting
2 Lower clevis pin with anti-luce fitting
3 Outer tube, for unlocking and locking the locking claw
4 Locking claw
5 Spring-loaded bolt, for unlocking and locking the locking claw
6 Connecting hole for lift-off retainer
7 Lower bracket

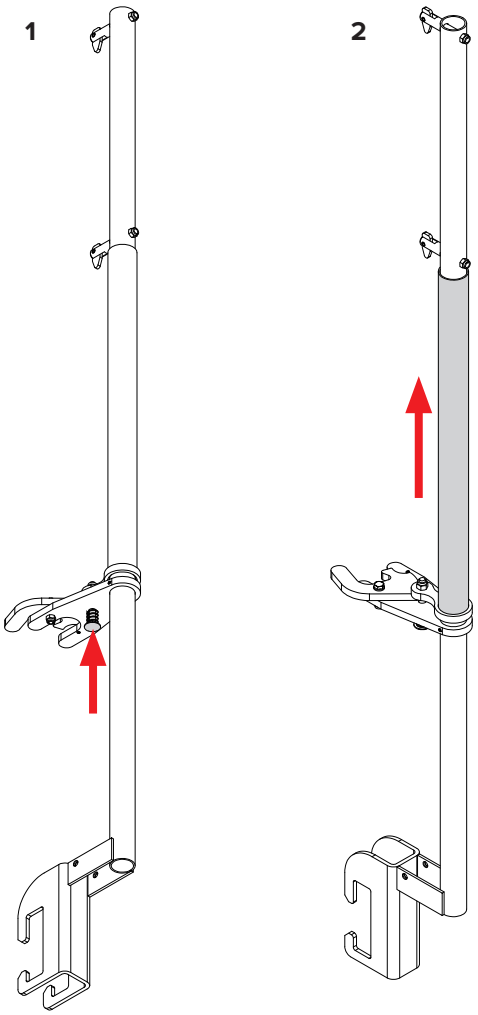
Unless stated otherwise, all dimensions in mm.

Unlocking and locking the locking claw

The locking claw secures the AGS Post G3 (code:653450) to the vertical frame. When it is in place, it grasps around the outer vertical tube on the vertical frame.

The claw has to be unlocked to attach and remove the AGS Post G3. There are two ways to unlock the claw.

1. By pressing the spring-loaded bolt. This is useful when standing below the platform protected by the AGS, e.g. when standing on the bottom bay to assemble or disassemble the scaffold.
2. By lifting the outer tube. This is useful when standing on the platform protected by the AGS.



Once the locking claw has been unlocked, it can be opened.

Pre-assembling the advance guardrail in the lowest loading bay

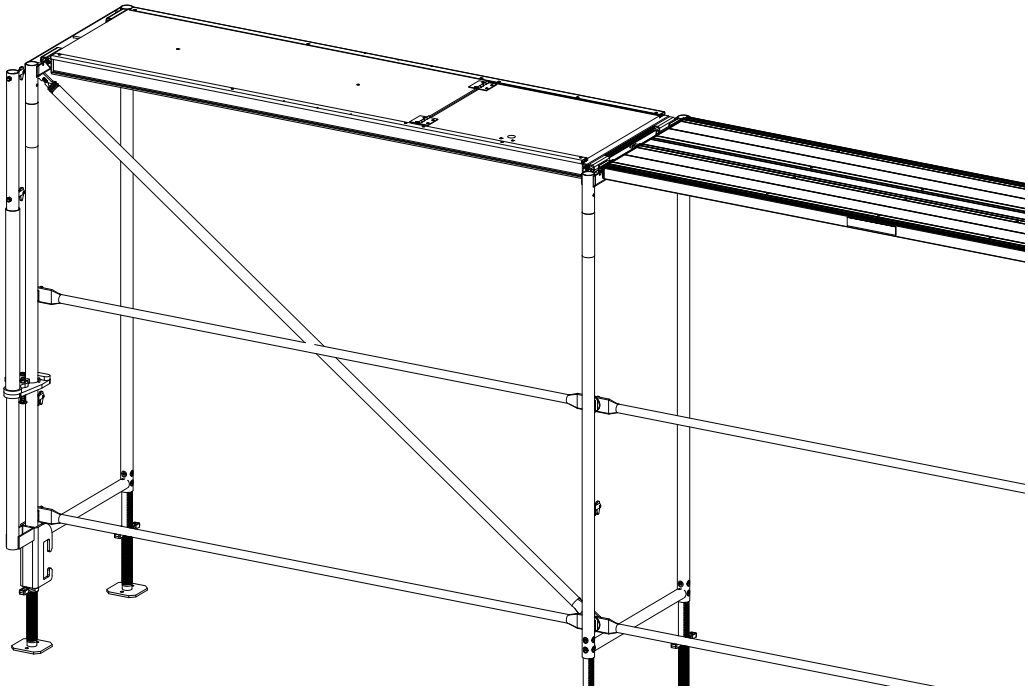
☞	Two AGS Vario guardrails have to be attached to the AGS Post G3 (code:653450) in scaffold bays in which material is transported vertically to provide the required edge protection The assembly is described in this section.

Step 1 Pull up the outer tube of the AGS Post G3. This unlocks the locking claw.

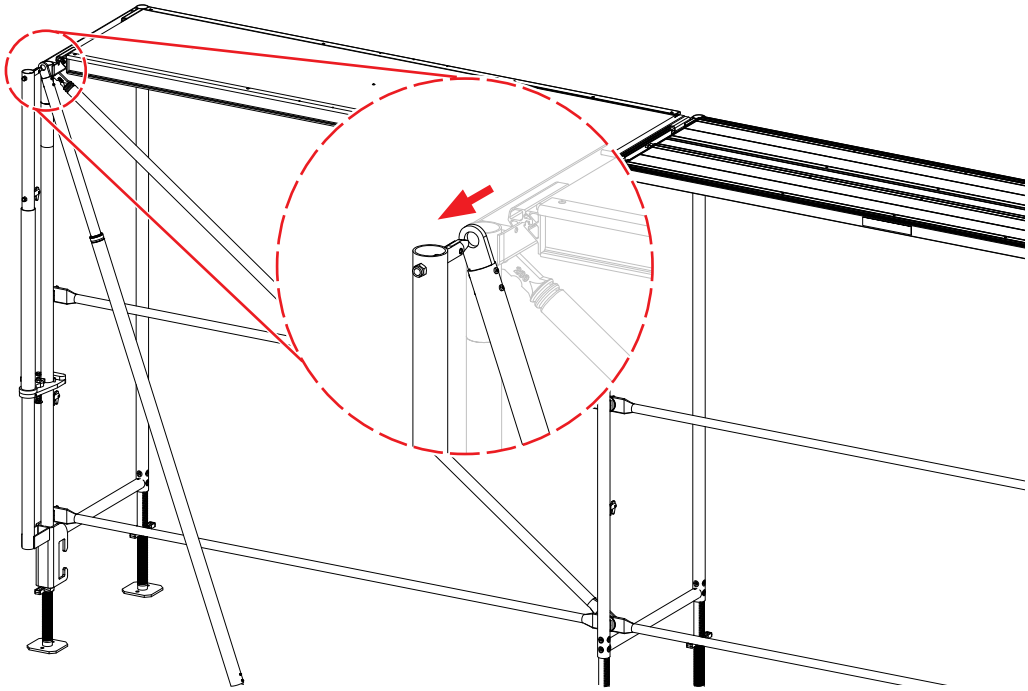
Step 2 Open the locking claw.

Step 3 Place the lower bracket of the AGS Post G3 on the base jack wing nut.

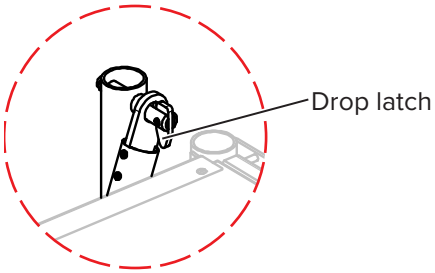
Step 4 Press the locking claw against the vertical frame tube. The locking claw clicks into place.



Step 5 Slide the end of the AGS Vario guardrail to the upper clevis pin on the AGS Post G3 and let it hang down.



After sliding parts onto the clevis pin, ensure that the drop latch is folded down! This also applies to the next steps.



WARNING

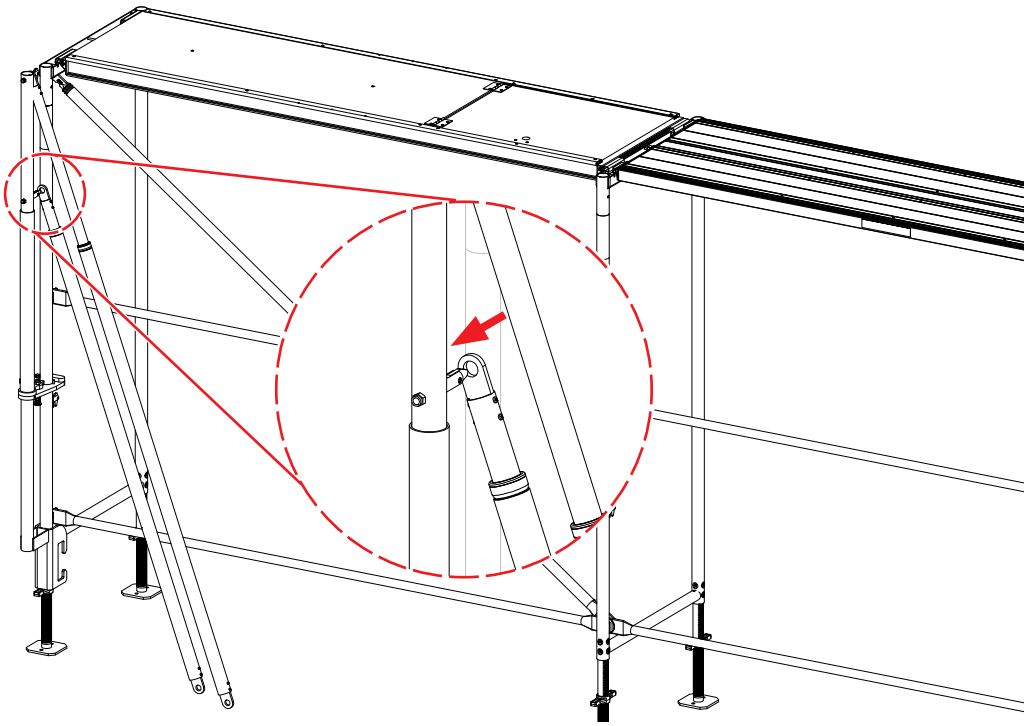
Risk of injury caused from falling from scaffold!

If they are not attached properly, guardrails attached to drop latches can unintentionally be released.

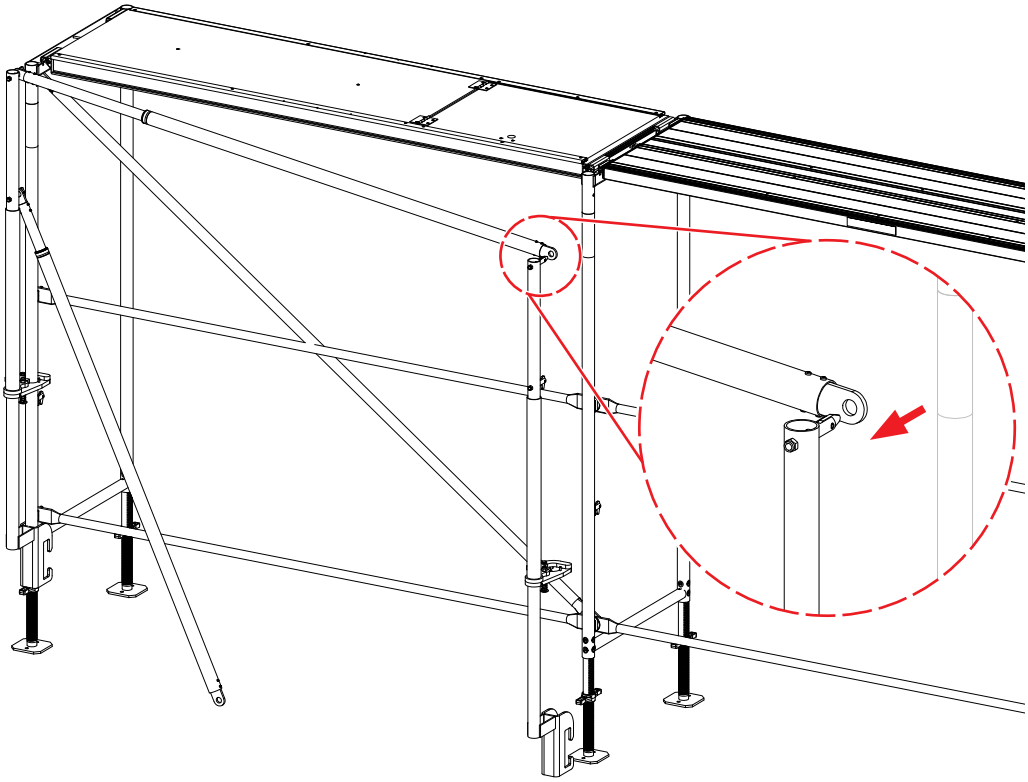
Always position the guardrails such that the drop latches face the plank!

Always attach the drop latches in the vertical position!

Step 6 Slide the AGS Vario guardrail to the lower clevis pin on the AGS Post G3 (code:653450) and let it hang down. Check that the anti-luce fitting is folded down!



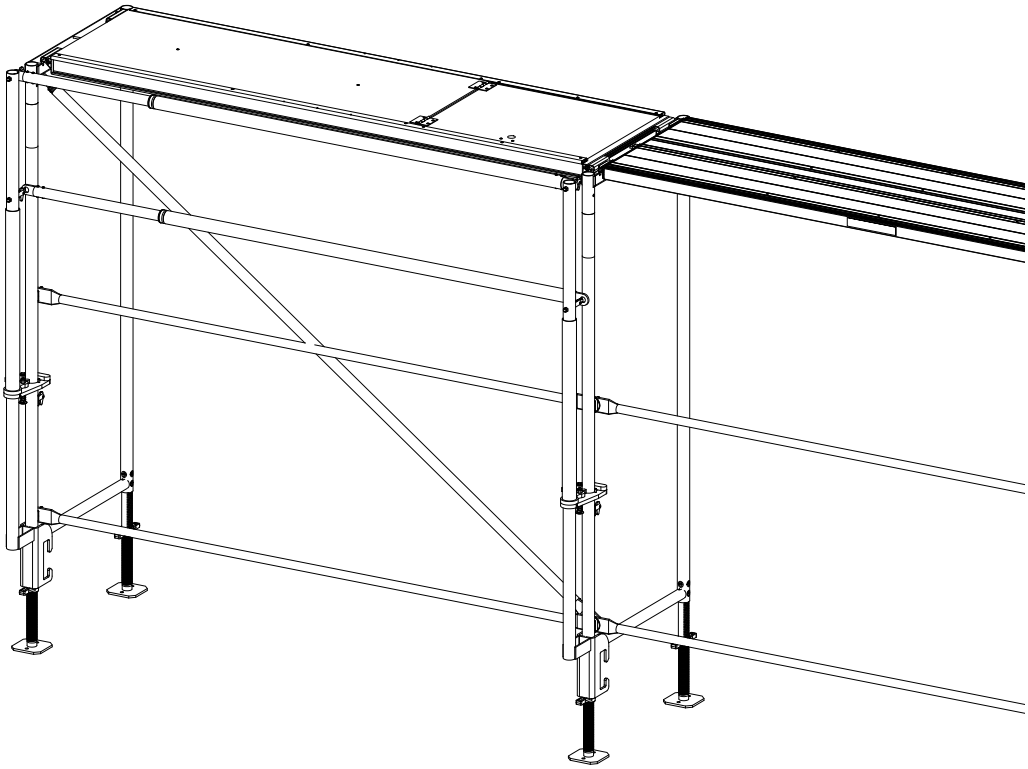
Step 7 Slide the upper AGS Vario guardrail to the upper clevis pin on the second AGS Post G3. Check that the anti-luce fitting is folded down!



Step 8 Place the lower bracket of the AGS Post G3 on the base jack wing nut.

Step 9 Press the locking claw against the vertical frame tube. The locking claw clicks into place.

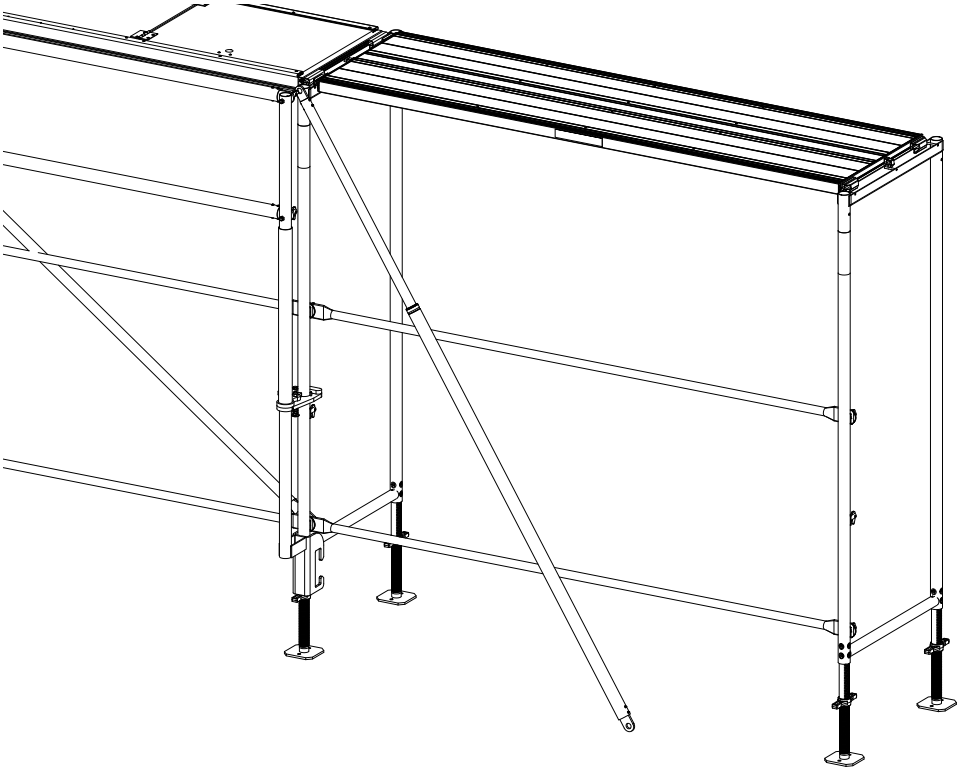
Step 10 Slide the lower AGS Vario guardrail to the lower clevis pin on the second AGS Post G3. Check that the anti-luce fitting is folded down!



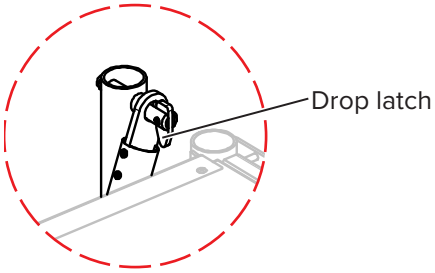
Expanding the scaffold bay

Only one AGS Vario guardrail has to attached to the upper clevis pin in scaffold bays in which no material is transported. The single guardrail serves as the handrail.
The assembly is described in this section.

Step 1 Slide the AGS Vario guardrail to the upper clevis pin on the AGS Post G3 (code:653450) previously attached and let it hang down.



After sliding parts onto the clevis pin, ensure that the anti-luce fitting is folded down! This also applies to the next steps.



WARNING

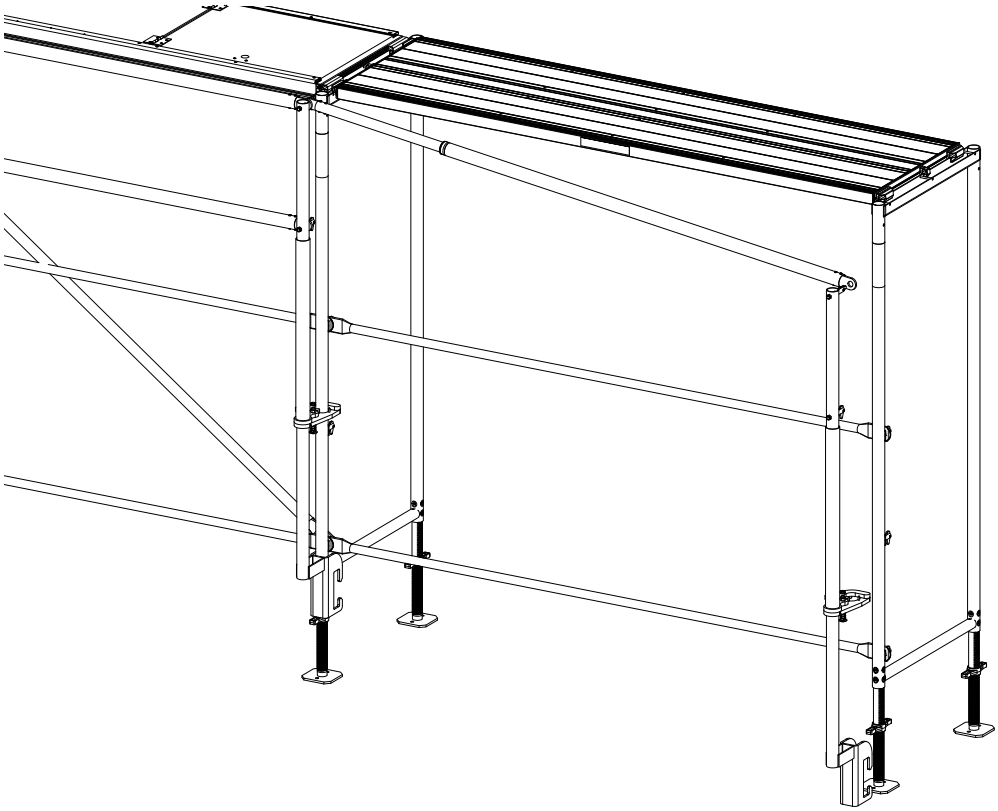
Risk of injury caused by falling from scaffold!

If they are not properly secured, guardrails attached to drop latches can unintentionally be released.

Always position the guardrails such that the drop latches face the plank!

Always attach the drop latches in the vertical position.

Step 2 Slide the upper AGS Vario guardrail to the upper clevis pin on the next AGS Post G3 (code:653450). Check that the anti-luce fitting is folded down!



Step 3 Place the lower bracket of the AGS Post G3 on the base jack wing nut.

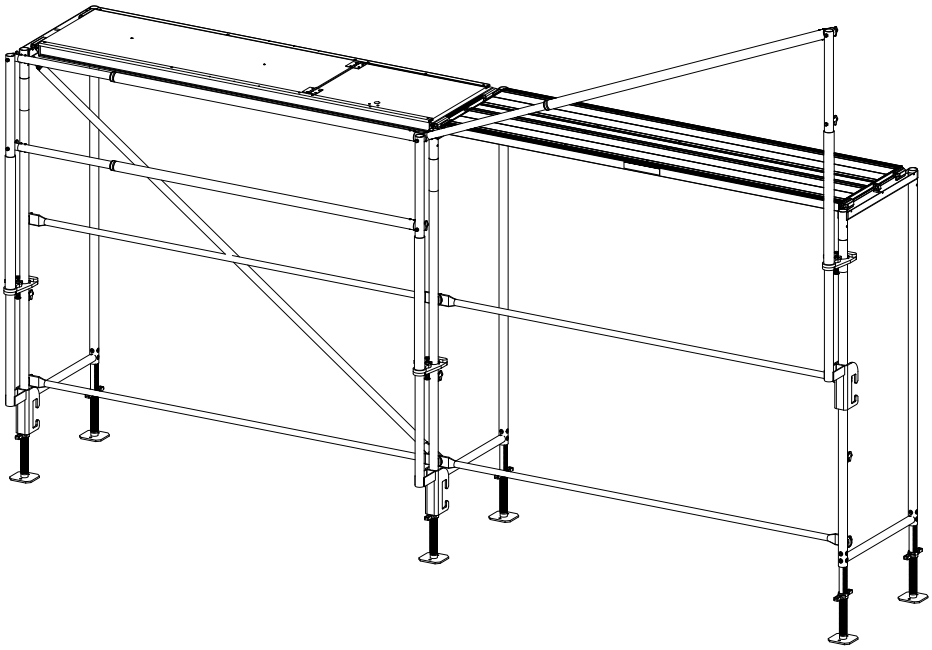
Step 4 Use the same method as described above to install the edge protection for the remaining scaffold bays.

Raising edge protection to first scaffold level

☞	The illustrations are greatly simplified and show only the edge protection on the long side. Other components such as the scaffold retainer, ladders and side edge protection at the end faces are not shown. Of course these components have to be in place on the actual scaffolding.

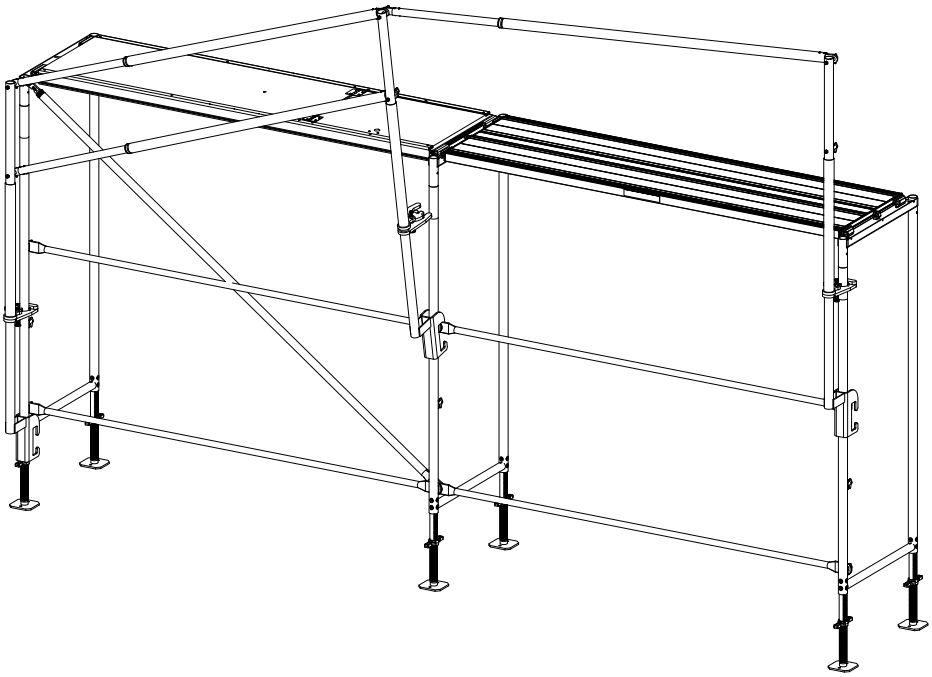
Step 1 Unlock the locking claw on the last AGS Post G3, pull off the post and lift it approx. 1.00 m, and then slide the lower bracket over the handrail. Place the AGS Post G3 on the handrail.

Step 2 Press the locking claw against the vertical frame tube. The locking claw clicks into place.

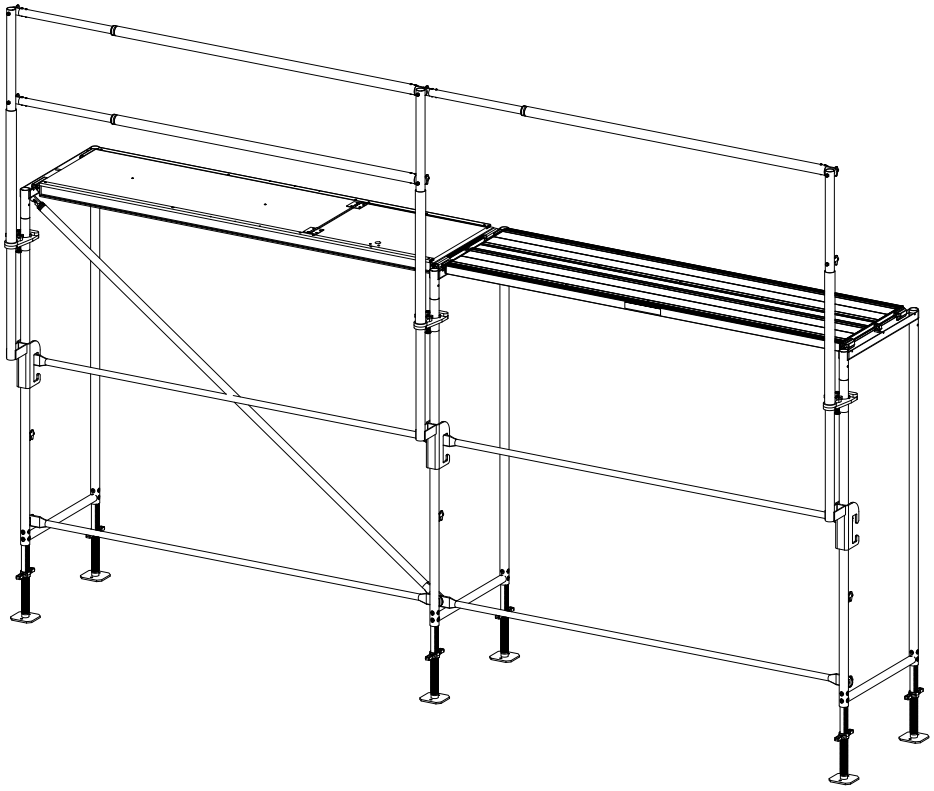


Step 3 Place the next AGS Post G3 on the handrail in the same way.

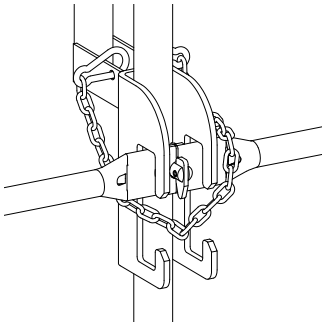
Step 4 Press the locking claw against the vertical frame tube. The locking claw clicks into place.



Step 5 Place the rest of the AGS Posts G3 (code:653450) on the respective guardrail in the same way and lock them to the BOSTA vertical frame.



Step 6 Secure both AGS Posts G3 from uplift while materials are being transported vertically in the respective scaffold bays.
Connect one of the snap hooks on the AGS Post G3 Lift-off Retainer (code:653970) in the respective hole at the bottom of the AGS Post G3. Wrap the chain around the guardrail once and then secure the other snap hook in the second hole at the bottom of the AGS Post G3.



Assembling the next level and raising the edge protection onto next-higher level

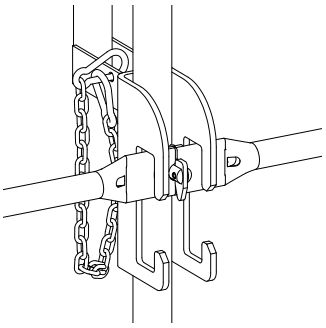
The illustrations are greatly simplified and show only the edge protection on the long side. Other components such as the scaffold retainer, ladders and edge protection at the end faces are not shown. Of course these components have to be in place on actual scaffolding.

CAUTION

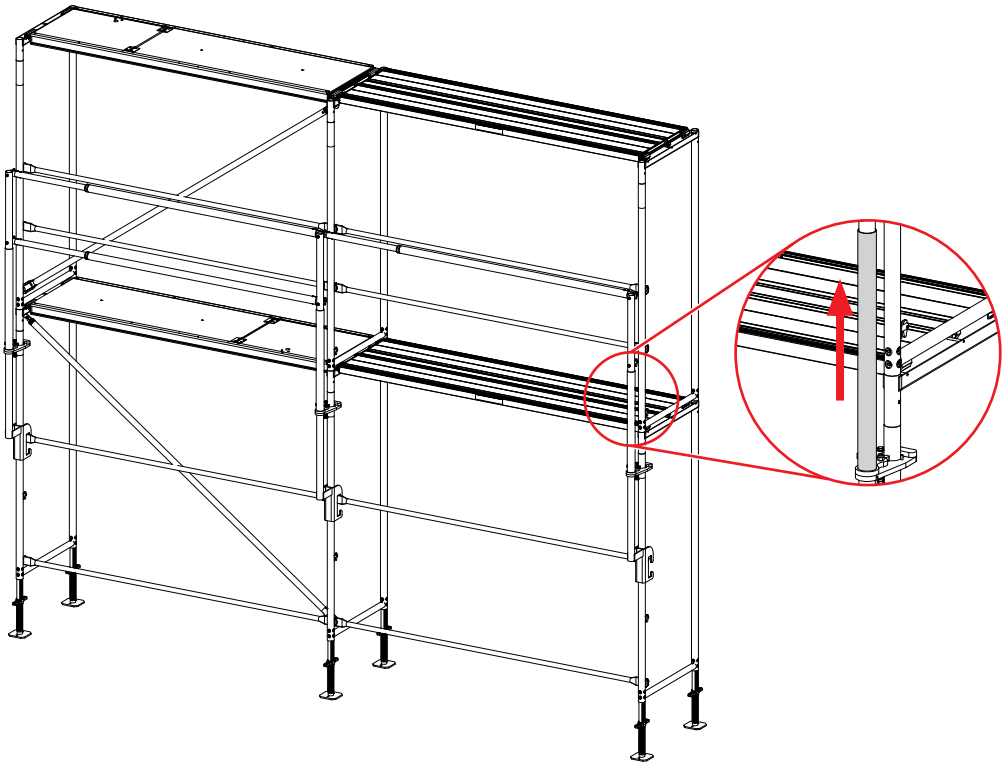
Risk of injury from falling parts!

Components may slip out of the worker's hand while erecting the next level of the scaffold or while repositioning the edge protection. Prevent injury caused by falling parts! Restrict access to the working area.

Step 1 When material transport is finished, raise the edge protection to the next scaffold level, release one snap hook of the AGS Post G3 Lift-off Retainer code:653970), remove the chain from the guardrail and secure in the other snap hook.

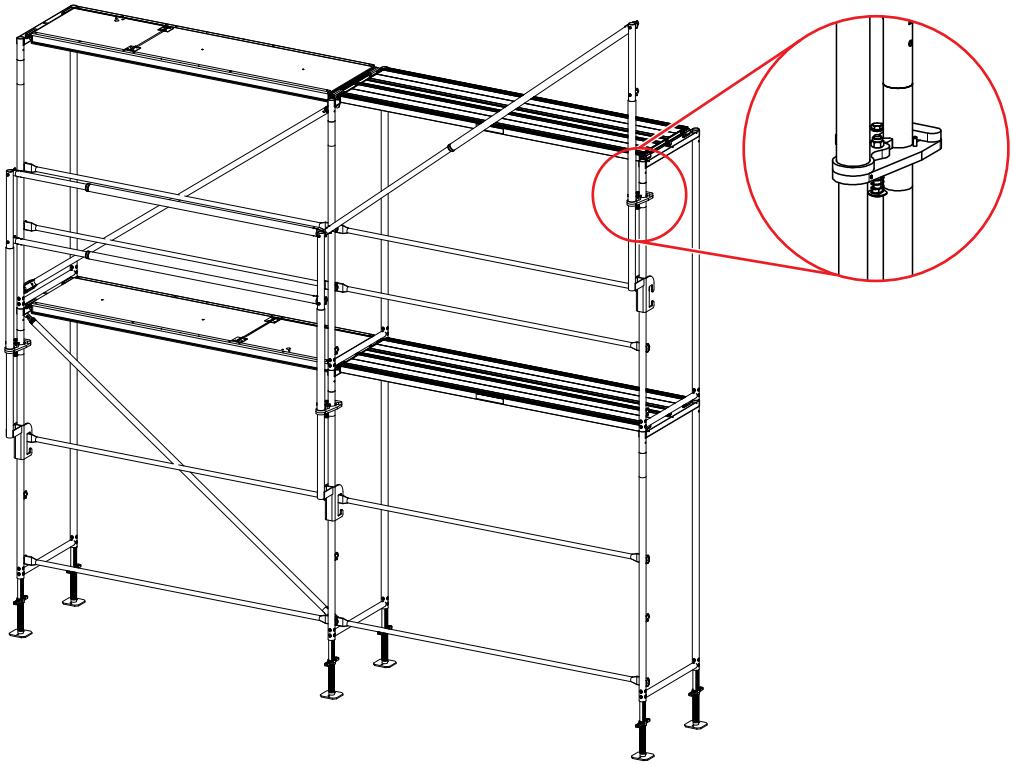


Step 2 Standing inside the secured area of scaffold, pull up the outermost AGS Post G3 (code:653450) by grasping the outer tube. This unlocks the locking claw.
Lift the lower bracket over the centre of the lower handrail and press the post out slightly. This unlocks the AGS Post G3.

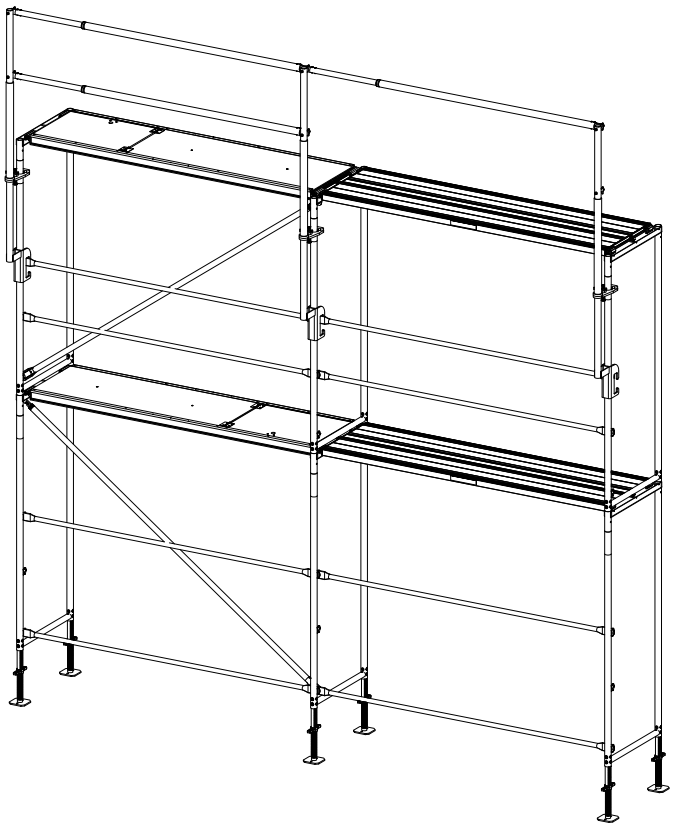


Step 3 Lift the AGS Post G3 approx. 2.00 m and slide the lower bracket onto the handrail. Place the AGS Post G3 on the handrail.

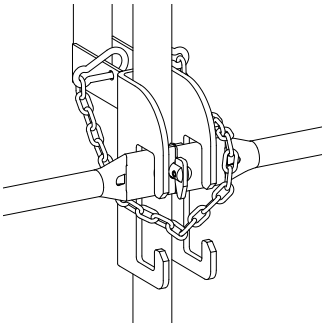
Step 4 Press the locking claw against the vertical frame tube. The locking claw clicks into place.



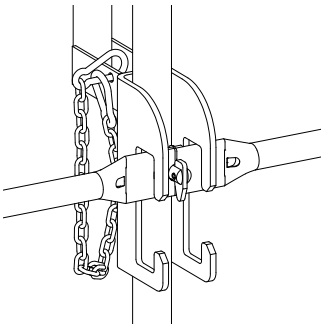
Step 5 Place the rest of the AGS Posts G3 on the respective handrail in the same way and lock them to the vertical frame.



Step 6 Secure both AGS Posts G3 from uplift while materials are being transported vertically in the respective scaffold bays.
Connect one of the snap hooks on the AGS Post G3 Lift-off Retainer (code:653970) in the respective hole at the bottom of the AGS Post G3, wrap the chain around the guardrail once, and then secure the other snap hook in the second hole at the bottom of the AGS Post G3.

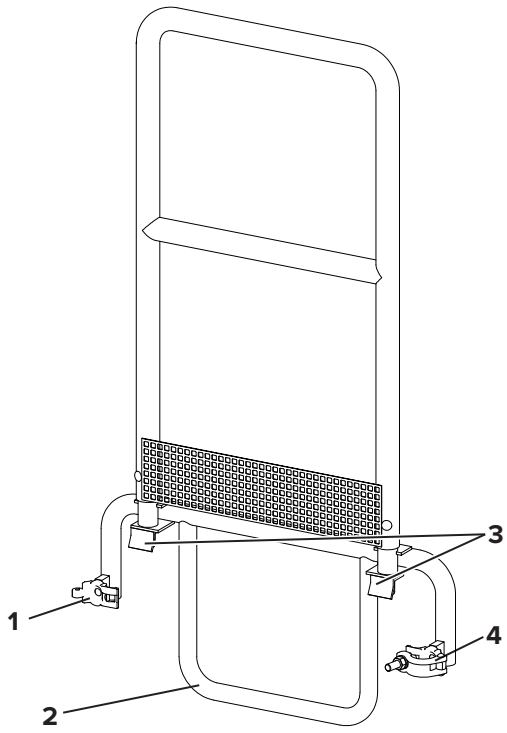


When material transport is finished, raise the edge protection to the next scaffold level, release one snap hook of the AGS Post G3 Lift-off Retainer, remove the chain from the guardrail and secure in the other snap hook.



7.11.2 Erecting the temporary side edge protection along the end faces

BOSTA 70 AGS End Guardrail G2



1 Guidance for ergonomic installation
2 Handle
3 U-profile hooks
4 Half coupler

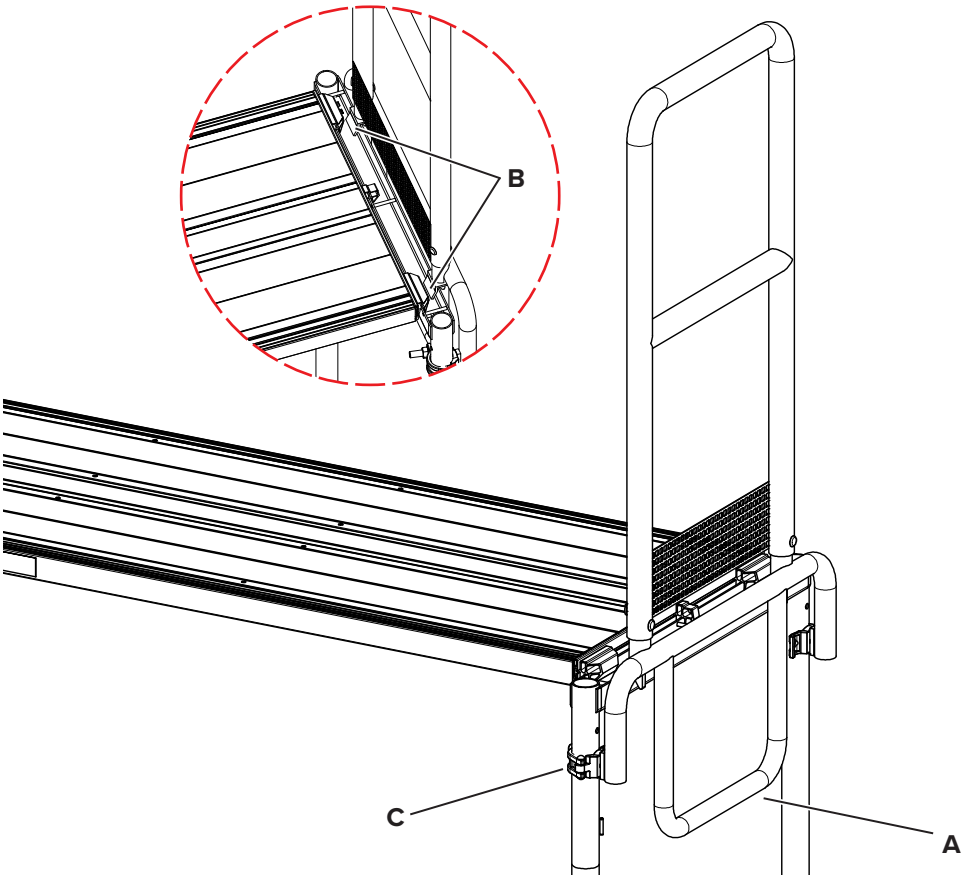
Attaching the BOSTA 70 AGS End Guardrail G2

Step 1 Working from the ground or the next-lower scaffold level, hold the BOSTA 70 AGS End Guardrail G2 (code:653490) by the handle (**A**) and place it on the U-profile of the vertical frame.

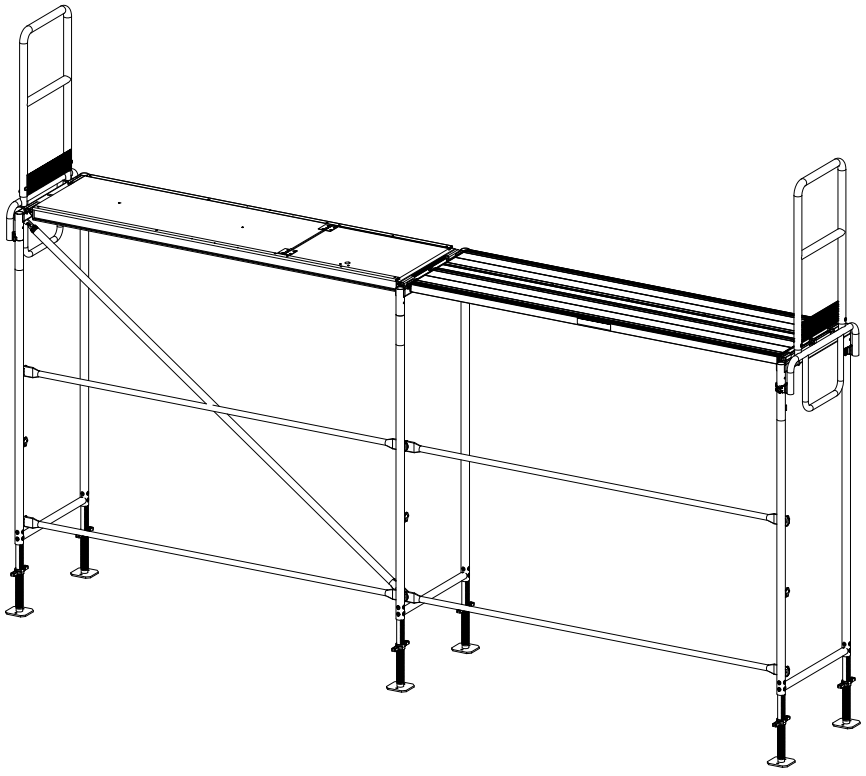
Step 2 Slide the end guardrail up until both U-profile hooks (**B**) are above the U-profile on the vertical frame. Lower the end guardrail and guide the U-profile hook into the U-profile.

Unless stated otherwise, all dimensions in mm.

Step 3 Lower the end guardrail and secure it to the vertical frame with the half coupler (**C**). Torque 50.00 Nm.



Step 4 Secure the other end face of the scaffold in the same way.



For clarity, the edge protection is not shown in this illustration. Complete edge protection must, however, be in place before climbing onto the upper scaffold level!

7.11.3 Disassembling the scaffold

With the BOSTA 70 AGS End Guardrail G2

Detach the BOSTA 70 AGS End Guardrail G2 (code:653490) by reversing the assembly steps.

Step 1 Detach the half couplers of the BOSTA 70 AGS End Guardrail G2 from the vertical frame.

Step 2 Slide the BOSTA 70 AGS End Guardrail G2 out from the U-profile on the vertical frame and take it down.

Step 3 Detach the end guardrail from the other side of the scaffold in the same way.

With temporary edge protection along the longer side

To disassemble the scaffold, attach and reposition the temporary edge protection as described here.

The temporary edge protection is attached to the next-to-last scaffold level. System edge protection (double guardrail) has to still be attached to the uppermost scaffold level during assembly of the temporary edge protection.

The typical sequence is described here:

Step 1 Attach the advance guardrail to the next-to-last scaffold level.

Step 2 Disassemble the uppermost scaffold level.

Step 3 Descend to the next-lower scaffold level.

Step 4 Press the spring-loaded bolt on the first AGS Post G3 (code:653450) to open the locking claw.

Step 5 Lift the AGS Post G3 off of the handrail on the scaffold level in which you are standing and then slide the lower bracket down 2.00 m and onto the lower handrail.

Step 6 Rest the AGS Post G3 on the lower guardrail.

Step 7 Press the locking claw against the vertical frame tube.

The locking claw clicks into place.

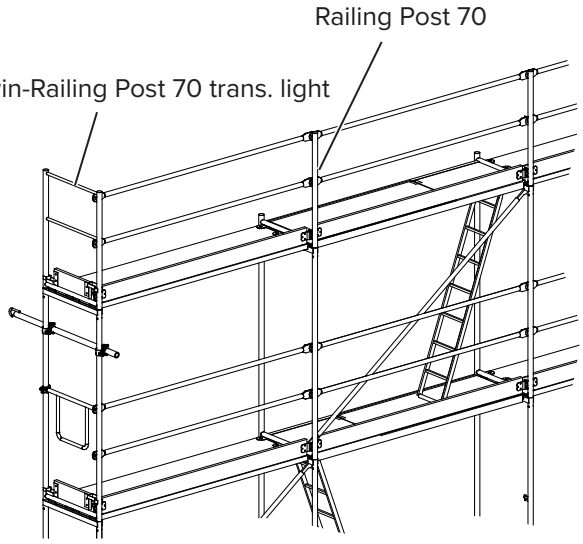
Step 8 Move the rest of the AGS Posts G3 in the same way.

7.12 Ties

The ties should be set as erection of the scaffold progresses. Arrange the ties as shown on pages 95 to 114!

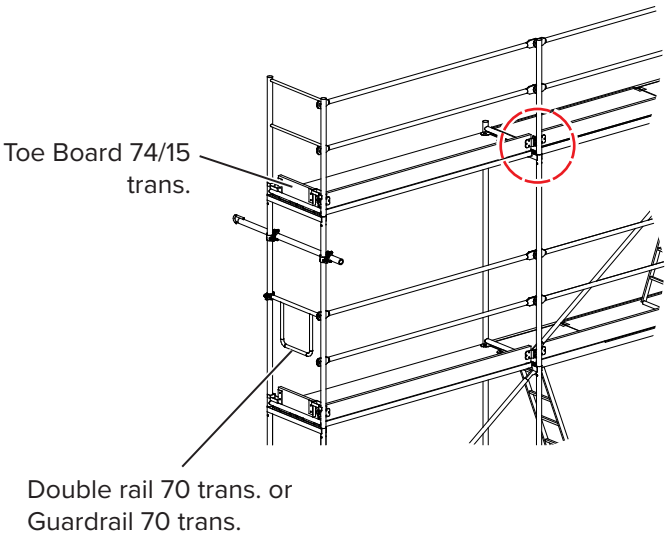
7.13 Top scaffold level

Railing Posts 70 (code:452980) on the long side and Twin Railing Posts 70 trans. light (code:652880) on the end faces of the scaffold hold the edge protection and also prevent the planks from uplift. Secure these components on both sides with a Frame Pin Ø8 mm (code:61312). Secure the vertical frame of the next-lower scaffold level with Frame Pins Ø8 mm as well.

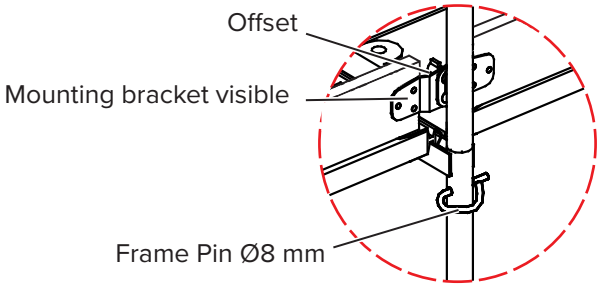


7.14 Completing the edge protection

Add guardrails and toe boards if not yet in place.



Verify that the clevis pins are positioned correctly.



The toe boards are always fastened in the top hole of the mounting bracket. The mounting bracket is visible only from the exterior (i.e. the offset faces out),

7.15 Edge protection with variable railing post

The BOSTA 70 Intermediate Railing Bracket (code:652830) is used as a variable railing post to form edge protection in scaffold corners or by staircase exits.

It can be moved along the edge of the plank and then secured in the proper place with the locking profile. Edge protection and toe boards are attached to the drop latches.

No other uses are permitted and require the special approval of the manufacturer.

WARNING

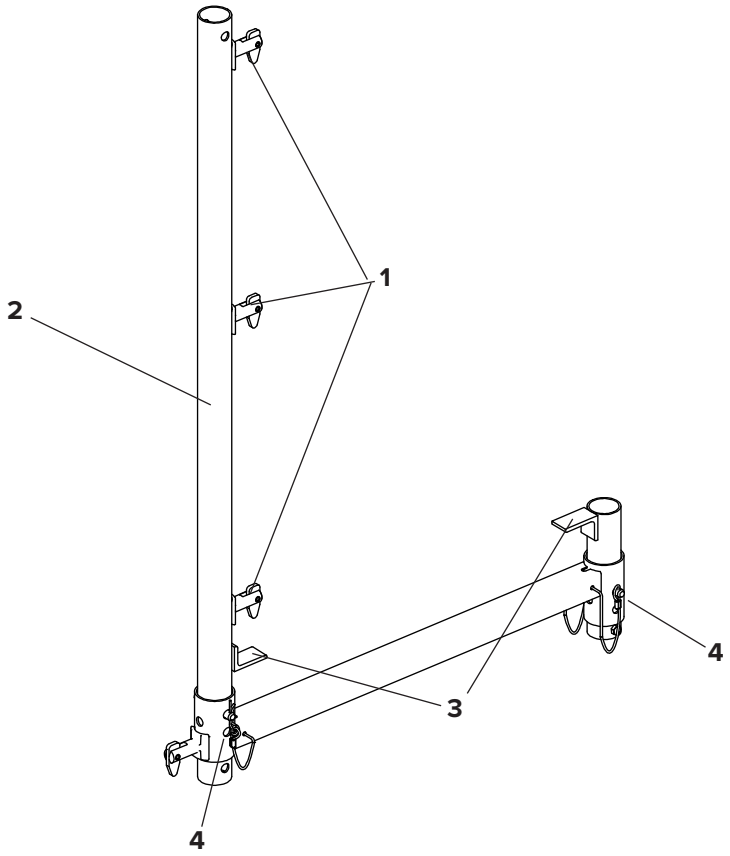
Risk of falling from height!

There is always a risk of falling when erecting, modifying, or dismantling scaffolds.

Work has to be planned and performed such that the risk of falling is eliminated to the greatest extent possible and any remaining risk is minimised!

Some of the illustrations in this document show assembly states or simplified views. They are not always complete from a safety point of view. Safety devices may not always appear in the illustrations, but they are nevertheless mandatory.

7.15.1 BOSTA 70 Intermediate Railing Bracket



1 Clevis pin with drop latch, to hold guardrails and toe board
2 Post
3 Bracket to prevent scaffold deck uplift
4 Holes used to adjust the various scaffold deck heights

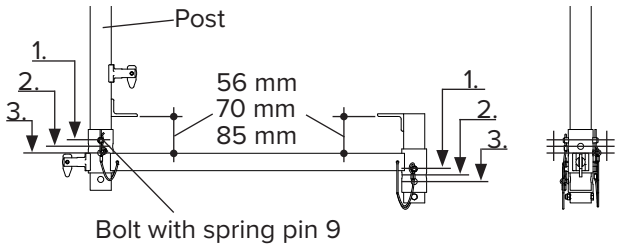
7.15.2 Attaching BOSTA 70 Intermediate Railing Bracket

Securing BOSTA 70 Intermediate Railing Bracket

The hole in which the BOSTA 70 Intermediate Railing Bracket should be fastened is a factor of the respective scaffold decks.

Hole position	Value [mm]	Type of plank
1	85	Alu frame deck
2	70	Steel plank
3	56	Hollow box plank Alu plank Timber plank

Step 1 Use the bolt to secure the BOSTA 70 Intermediate Railing Bracket (code:652830) in the position for the respective plank.

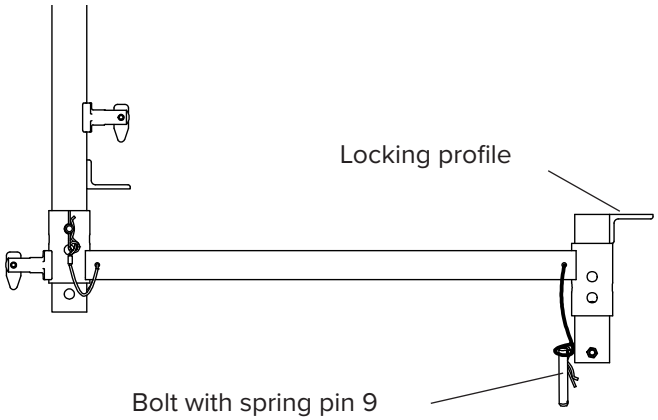


Step 2 Secure the bolt with the spring cotter pin.

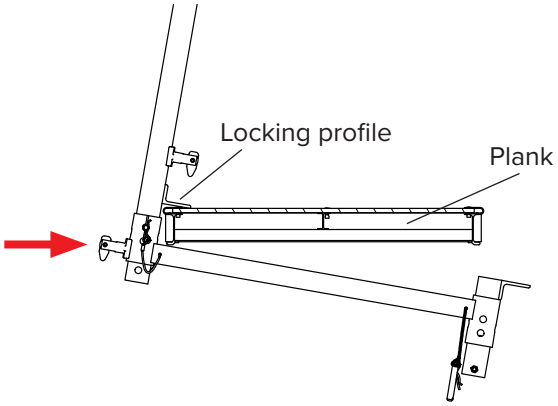
Attaching BOSTA 70 Intermediate Railing Bracket

Step 1 Pull the adjusting pin out of the outer locking profile.

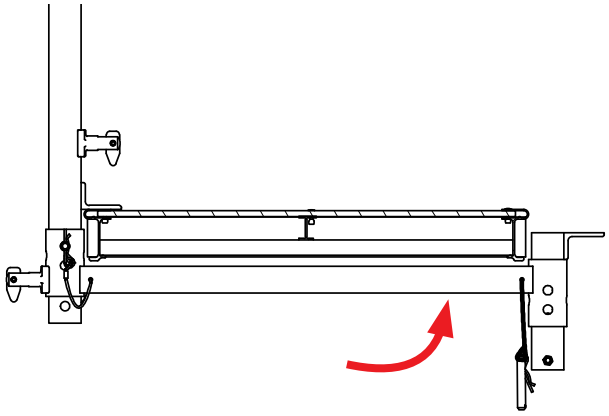
Step 2 Pivot the locking profile outward.



Step 3 Push the BOSTA 70 Intermediate Railing Bracket (code:652830) onto the plank. The bracket on the post now rests on the plank.

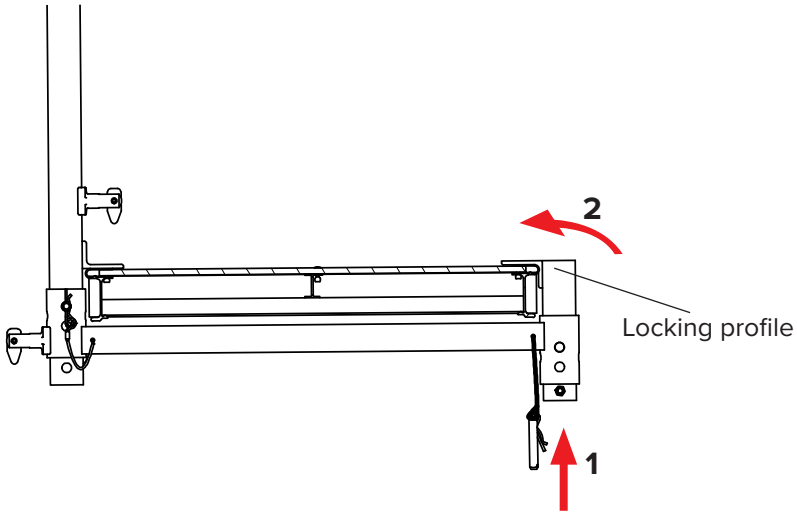


Step 4 Pivot the BOSTA 70 Intermediate Railing Bracket up.

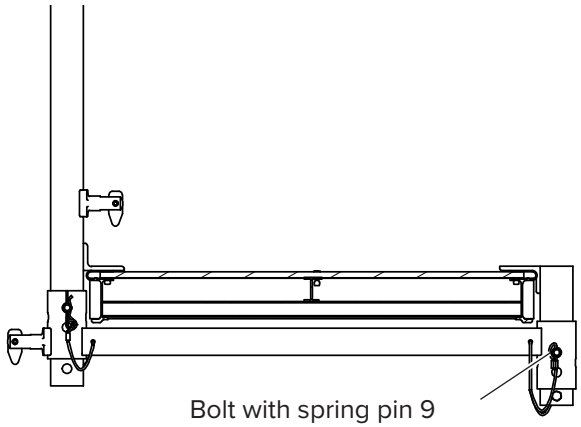


Unless stated otherwise, all dimensions in mm.

Step 5 Push up (1) the locking profile and rotate it (2) such that it rests on the plank.



Step 6 Use the bolt to fasten the locking profile in the same position as the post and secure it with the spring pin 9.



8 Moving scaffold components

When erecting scaffolds in which the top decks are more than 8.00 m from the ground, use a construction hoist to erect and dismantle the scaffold. Manual winches are also considered construction hoists.

Manual winches must be used only if they are equipped with a return lock. Scaffold components must always be slung such that they cannot slip off of the rope and fall to the ground. Use only transport equipment that can be lifted by crane.

When using construction hoists, take into consideration the addition loads when planning and placing the ties. Comply with the manufacturer's specifications regarding construction hoists.

The only case in which a construction hoist is not essential is when the scaffold bay height does not exceed 14.00 m and the scaffold length is no more than 10.00 m.

Double guardrails are mandatory on scaffold bays in which materials are transported vertically by hand. In this case the toe board can be omitted.

If the hazard assessment does not specify otherwise, the lower guardrail can be omitted in scaffold bays used only to transport scaffold components horizontally when erecting or disassembling the scaffold.

Never throw scaffold components off of the scaffold!

When components are stored on the scaffold, always leave a width of 200 mm free to be able to walk past the components.

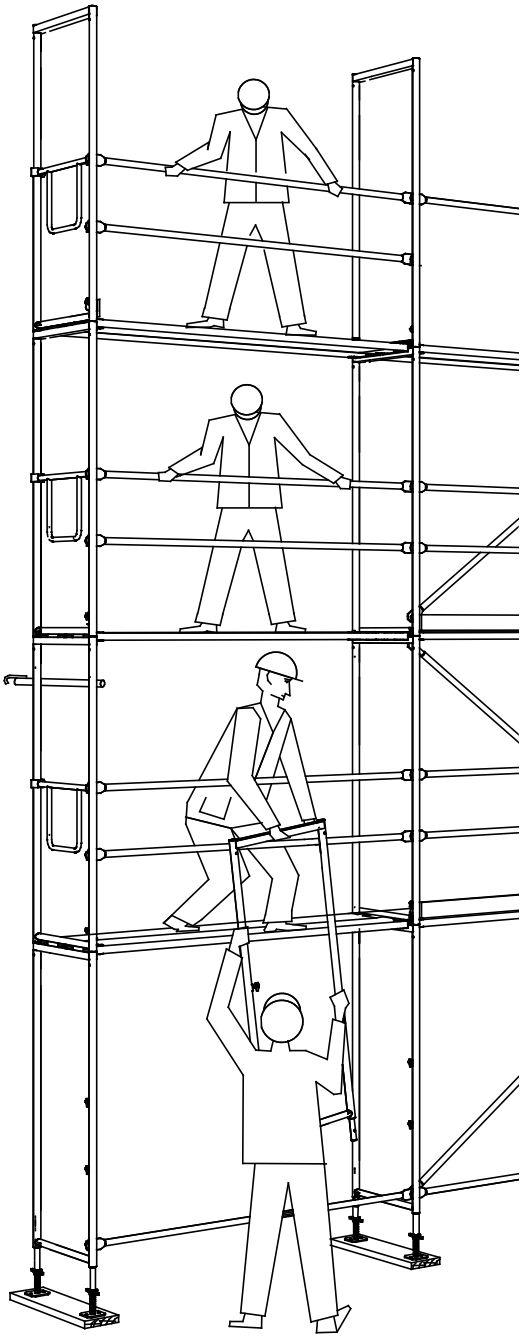
WARNING

Risk of injury from falling formwork components!

When components are transported vertically by hand, one person has to be on each scaffold level. Always wear personal protective equipment!

Use caution when passing components to others and when accepting them!

Do not let go of the components until the other person has confirmed that he is gripping them firmly!



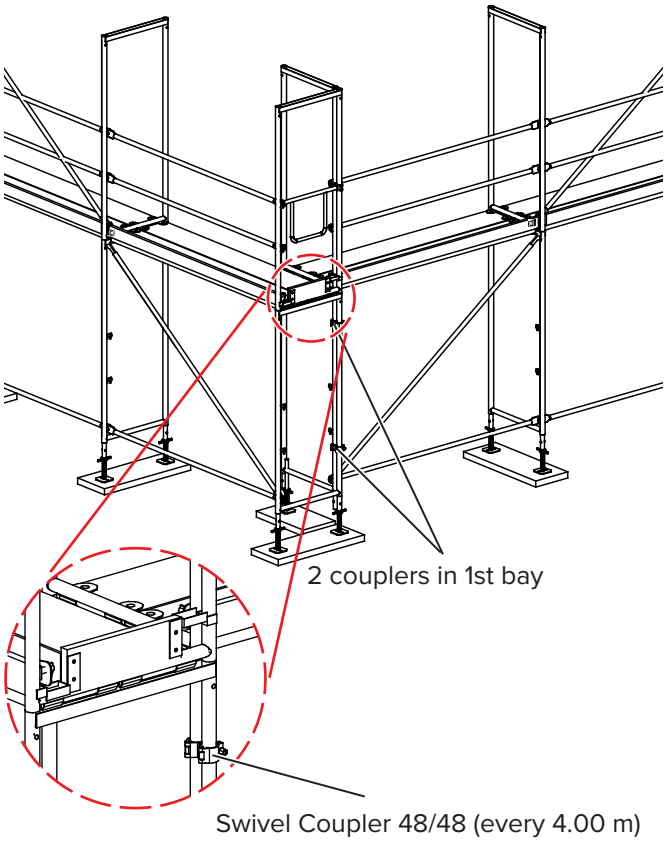
9 Corners

9.1 Forming corners

With two complete scaffold units

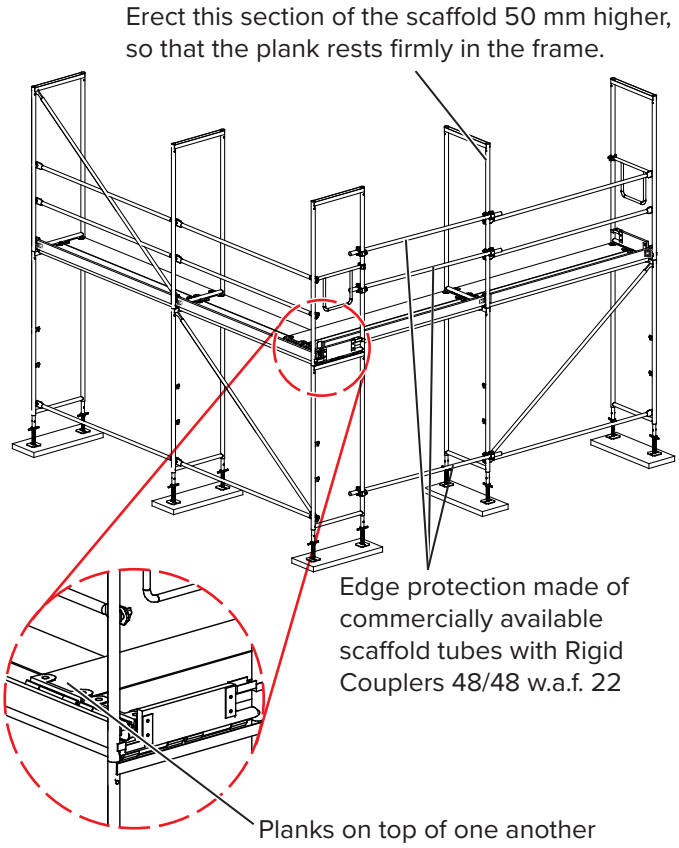
The scaffold must be erected around corners in the full width. Two complete scaffolds are erected at a right angle to one another. Ensure that the scaffold planks of the corner scaffold are level to each other. The two scaffold sections that come together at the corner must be secured to each other at the first scaffold level with two couplers, then after that, with one coupler at every second scaffold level (every 4.00 m).

Scaffold connection at corner



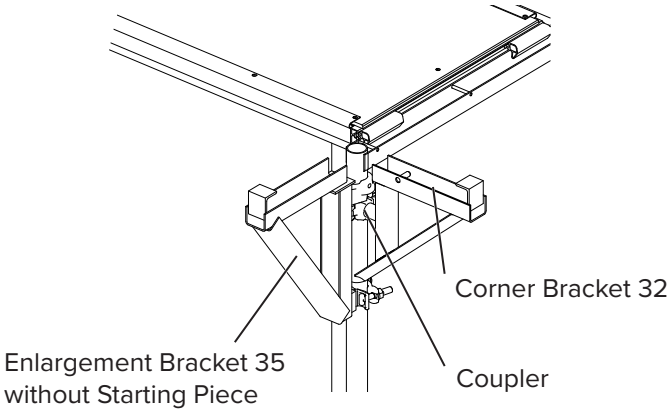
With overlapping planks

When forming a corner with overlapping planks, the adjoining scaffold bay is created using only planks and edge protection components – no side edge protection is used. The overlapping planks must be secured to prevent uplift.



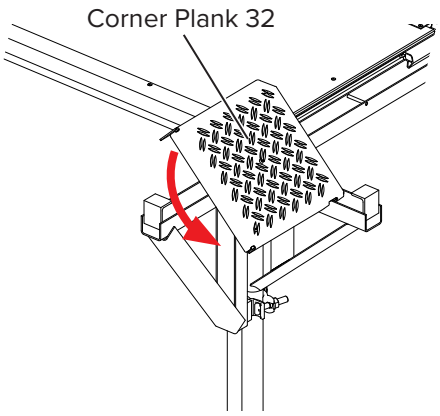
9.2 Forming corners with interior brackets

When scaffolds are erected in interior corners of a building using Enlargement Brackets 35 without Starting Piece (code:652089) facing the façade, a Corner Bracket 32 (code:652768) with Corner Plank 32 (code:652760) is needed to form a continuous plank surface.

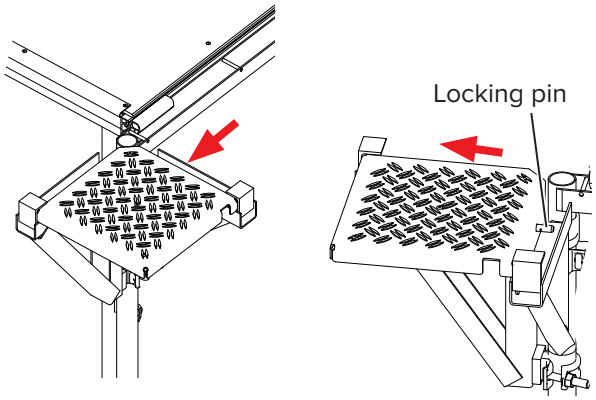


The Corner Bracket 32 must always be screwed onto the vertical frame in the corner, to the right (or left, when standing on the scaffold) of the Enlargement Bracket 35 without Starting Piece.

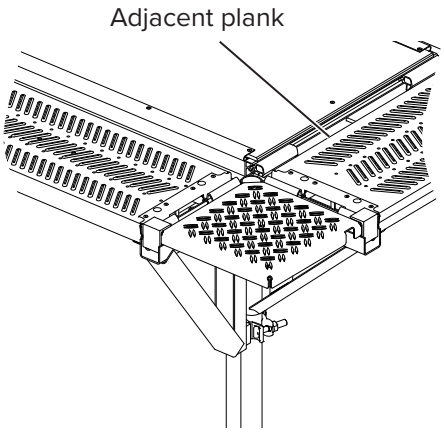
Next, the Corner Plank 32 is placed in the Corner Bracket 32.



Once the Corner Plank 32 is in place, slide it laterally. This causes the safety pin to catch in the hole on the Corner Bracket 32.

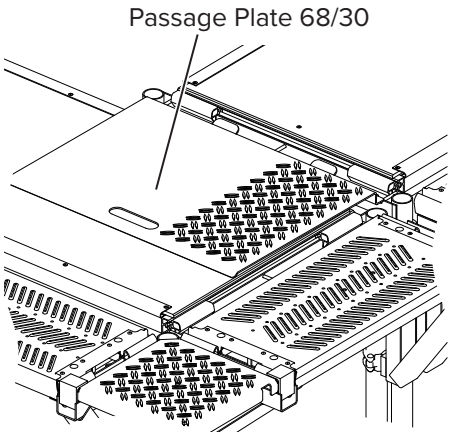


Once the plank adjacent to the Corner Bracket 32 is put into place, the Corner Plank 32 can no longer shift.

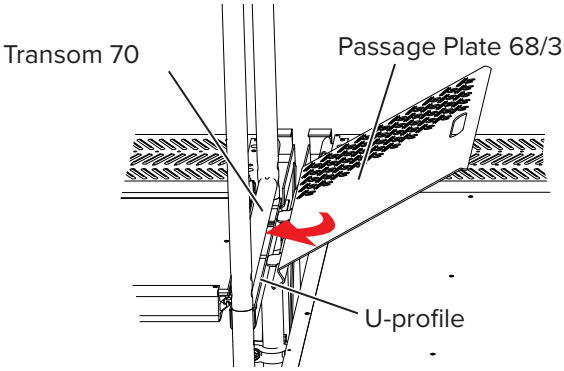


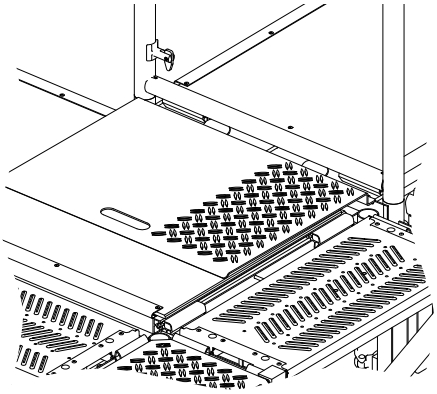
9.3 Junctions in corners

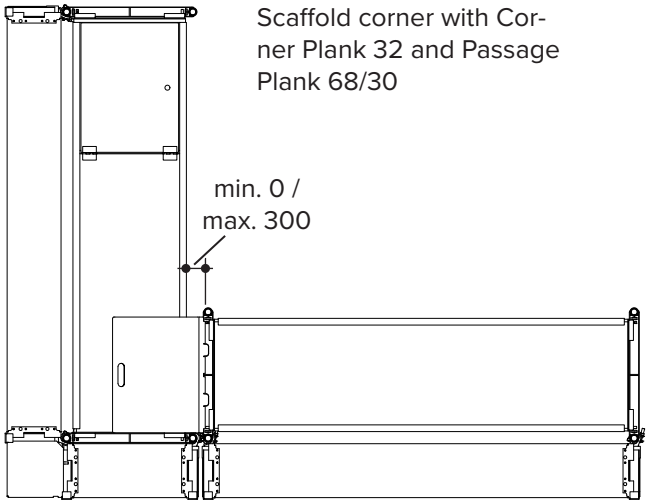
Since scaffold corners consist of two separate scaffolds connected at the corner, the gap between the planks has to be covered with a Crossover Plate 68/30 (code:652758).



To do this, slide the Crossover Plate 68/30 between the transom on the upper vertical frame and the U-profile on the lower vertical frame and place it on the plank.







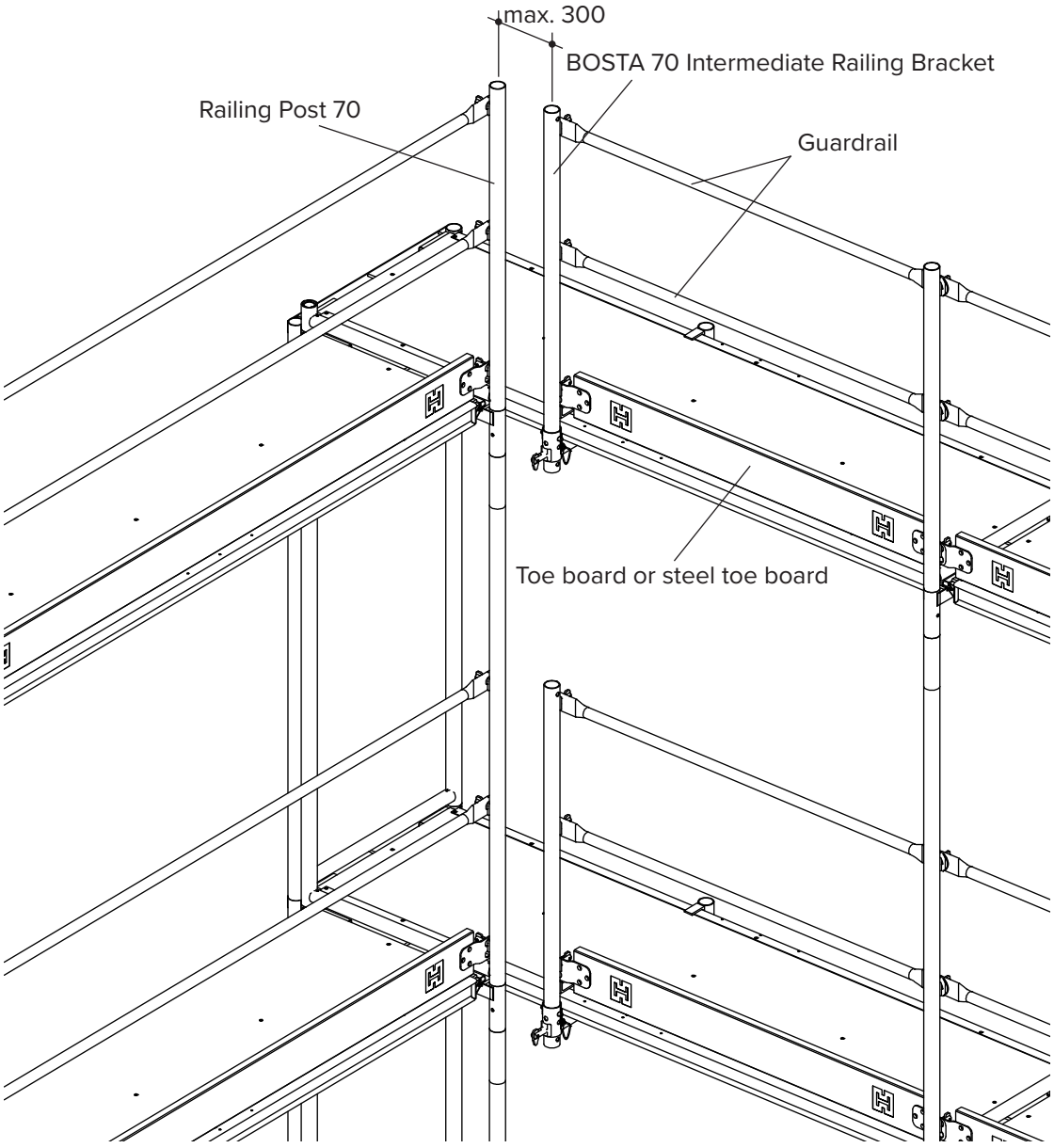
Scaffold corner with Corner Plank 32 and Passage Plank 68/30

9.4 Guardrails in inner corners

The BOSTA 70 Intermediate Railing Bracket (code:652830) can be used as a variable railing post to create guardrails in building corners using standard scaffold parts instead of scaffold tubes and couplings.

The edge protection is then made up of the guardrail and toe board.

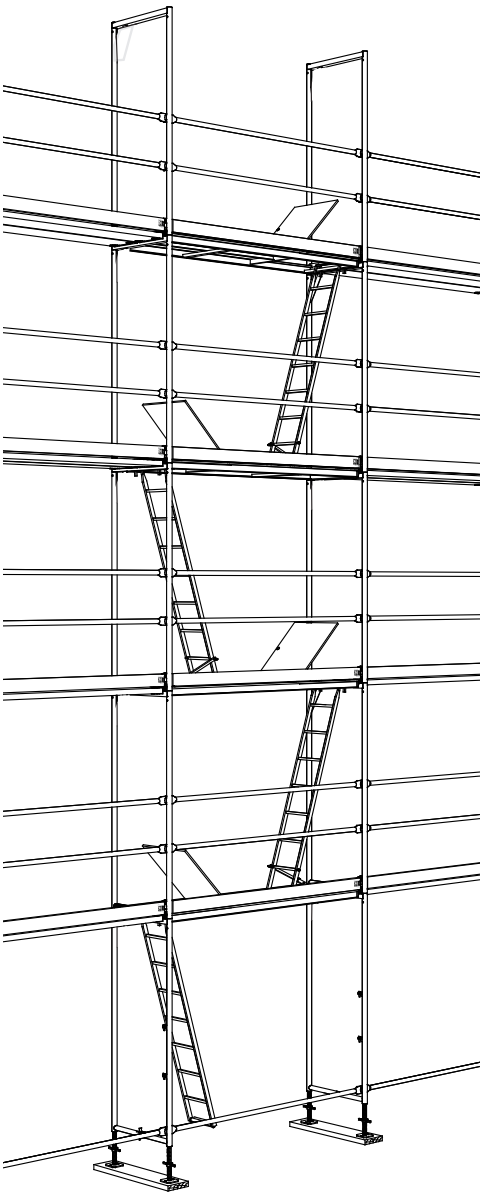
The Railing Post 70 (code:452980) and the BOSTA 70 Intermediate Railing Bracket must not be spaced more than 300 mm apart. If the space is greater than 300 mm, the gap must be closed with scaffold tubes and couplings.



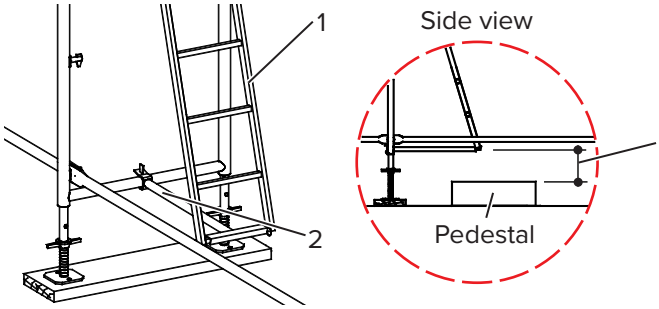
10 Interior scaffold ladders

Before beginning work on the first level of the scaffold, the ladder has to be installed. Select a scaffold bay suitable for the process. The passage decks must be placed in this scaffold bay, and the Ladders 200 A (code:136318) are hooked into place here. The bottom ladder with the Ladder Lock (code:422753) in the inclined position must be attached to the transom on the vertical frame. All other ladders in the ladder passage decks must be braced by the AGS Post G3 Lift-off Retainer (code:653970).

Ladders must be added as erection of the respective scaffold level progresses. Unless someone is climbing through them, the hatches must always remain closed.



Bottom ladder in ladder passage

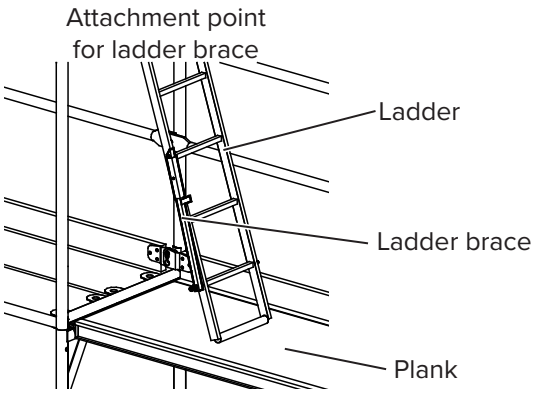


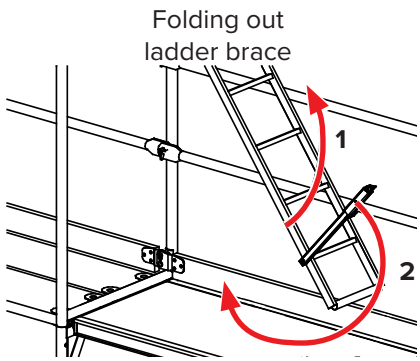
1. Ladder 200 A (code:136318)
2. Ladder Lock (code:422753), only for the first ladder

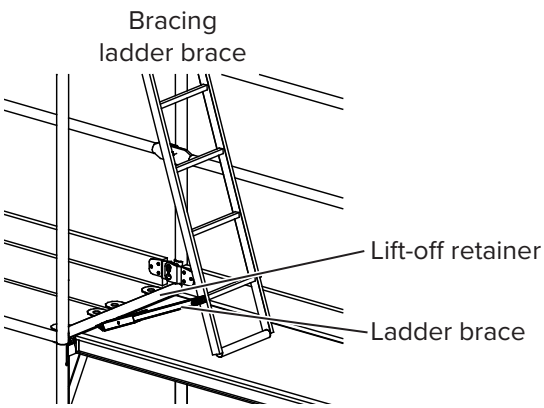
Additional ladders in ladder passage

The load on planks causes them to sag and the contact point of the ladder to shift. Extreme deformation can displace the ladder when the load is relieved.

To prevent this from happening, a brace is installed on the left side of the ladder. The brace has to be folded out and propped up by the transom on the vertical frame.





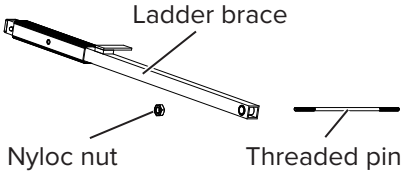


Unless stated otherwise, all dimensions in mm.

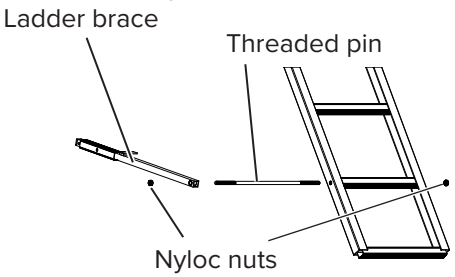
If Alu Passage Decks with Ladder (code:492910 and code:465031) are used with older ladders, the integrated ladders must be retrofitted with a ladder brace.

To do this, drill a hole Ø12 mm in the right and left side of the ladder at the height of the first rung.
Then slide a threaded pin M10 through the rung, attach the ladder brace to the left side of the pin, and secure on both sides with Nyloc nuts. Do not tighten the hexagonal nuts; then the ladder brace would no longer be flexible.

Components of ladder brace



Assembly of ladder brace



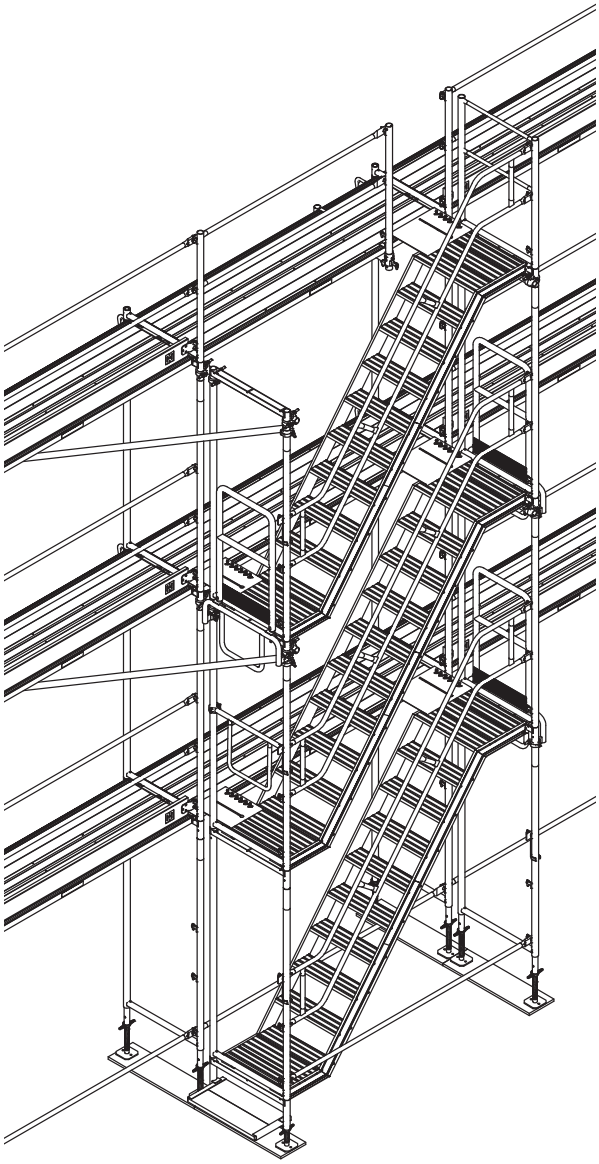
The inner scaffold ladders are tied in the same way as the standard design. The first tie is placed at the second scaffold level. Then ties are placed every 4.00 m.

11 Scaffold staircase

The alu staircase G2 assembly is set up in front of the façade scaffold to allow quick and safe ascent onto the scaffold. It must be connected every 4.00 m to both vertical frames, meaning spaced 2.00 m apart, using scaffold retainers and couplers. The retainers tie the staircase as well as the vertical frames to the building. The tying pattern of the façade scaffold is irrelevant. The first tie position is no more than 4.50 m above the ground. Always use the Base Jack 50/3.3 (code:144131) or the Base Jack 70/3.3 (code:54630) (jack extension < 265 mm), with an overlap of at least 250 mm. Use the scaffold retainers and couplers to connect the alu staircase G2 to the scaffold. The regulations pertaining to occupational safety must be complied with. Always comply with the locally applicable ordinance on industrial health and safety. The maximum erection height of the scaffold is 24.50 m.

The nominal live load capacity is:

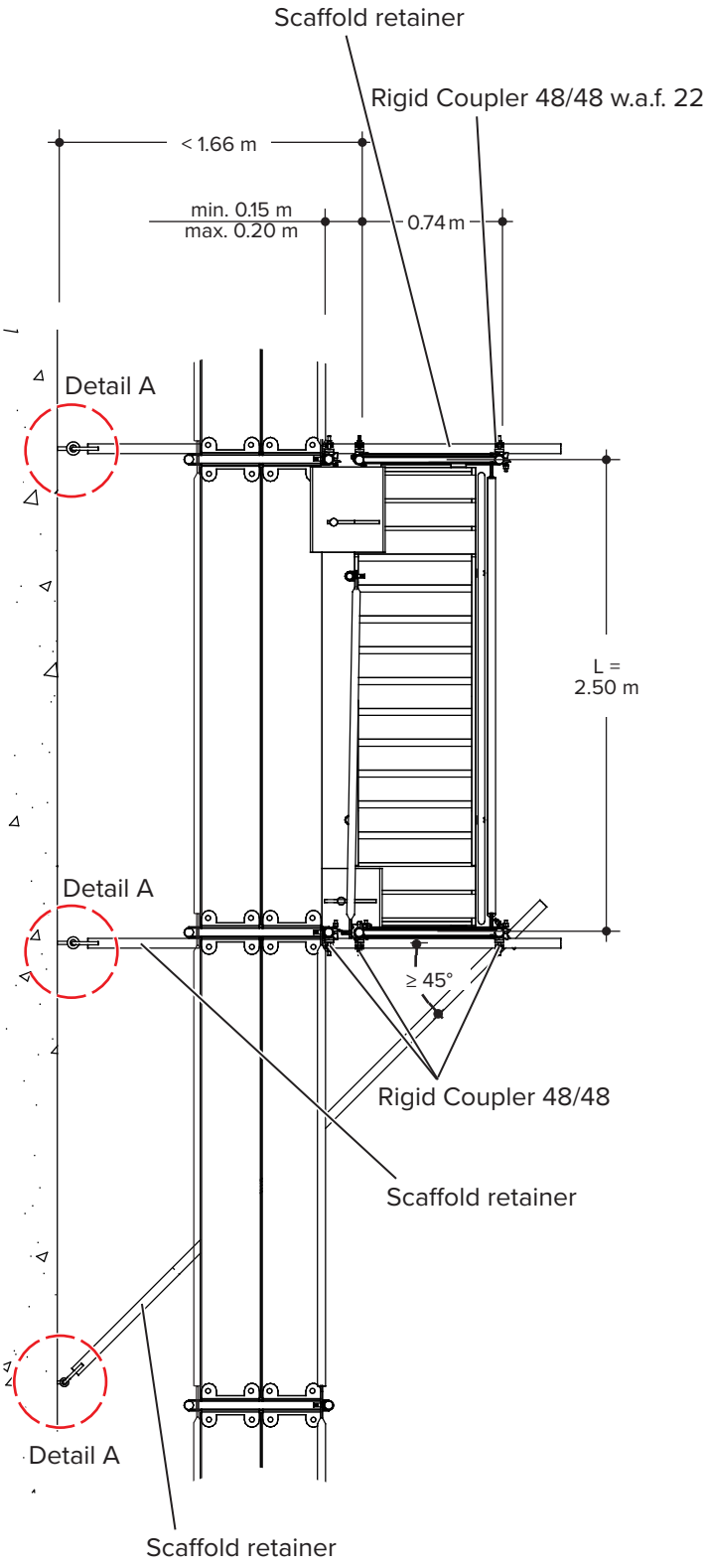
- Specific nominal load of 1.00 kN/m^2 distributed over up to five levels
- Concentrated load of 1.50 kN over an area of 0.20 m x 0.20 m
- Only one person per level
- No more than eight persons on the scaffold staircase at the same time



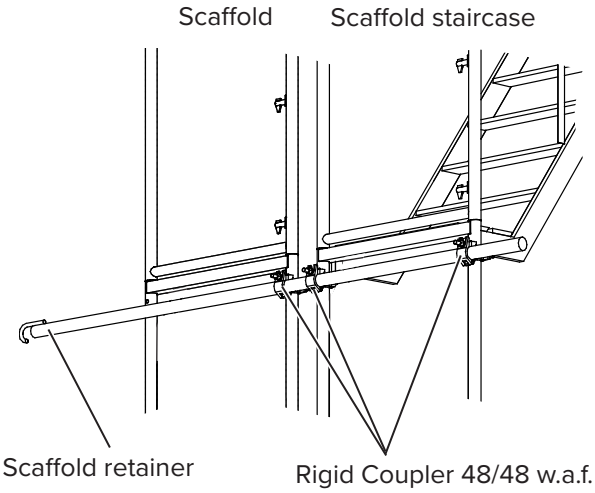
Unless stated otherwise, all dimensions in mm.

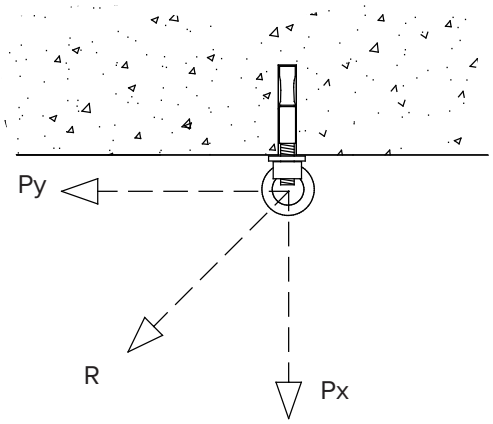
11.1 Tying scaffold staircase

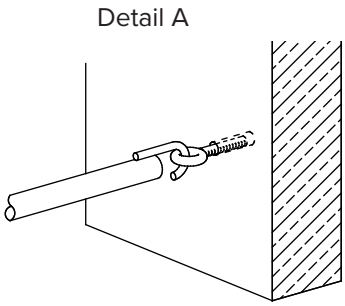
The lowest tie to the façade must be no higher than 4.50 m. Subsequent ties must be spaced no more than 4.00 m apart. The staircase must always be tied to the façade at the top and the next-higher stairway exit.



The staircase is connected to the scaffold with long scaffold retainers hooked into eye bolts embedded in the façade.







Loads occurring when tying scaffold staircases			
Tie load [m]	**Px [kN]**	**Py [kN]**	**R [kN]**
4.00	4.50	3.50	5.70
8.00	7.00	7.00	9.90

Refer to section 12 "Tying" on page 95 for information on tying forces.

Unless stated otherwise, all dimensions in mm.

11.2 Alu Staircase G2 250/200

WARNING

Risk of falling during erection!

Implement protective measures taking into account the hazard assessment!

DANGER

Risk of fatal injury due to scaffold or staircase tipping over!

The staircase or scaffold can tip over if not tied properly. Risk of fatal injury.

- Tie the staircase at every second scaffold level.
- Follow the instructions on tying contained in the User Guide for the scaffold.

DANGER

Risk of serious and fatal injury due to falling from the staircase!

Until the Alu Staircase G2 Outer Handrail 250/200 (code:652860) is attached, there is a risk of falling from the staircase.

- Do not ascend the staircase until the Alu Staircase G2 Outer Handrail 250/200 is in place.
- Until then, use other means of ascending the scaffold to reach the next-higher level.

11.2.1 Erecting the first scaffold level

Step 1 If the ground cannot adequately bear the anticipated load, sturdy load-distributing substructures (e.g. scaffold planks) (**1**) must be used as the base for the base jacks.

Step 2 Place four base jacks (**2**) on a base that can bear the load. The base plates of the staircase tower and the scaffold must abut one another laterally.

Step 3 Attach the stairway access (**3**) to the base jacks on the side from which the staircase is to be ascended.

Step 4 Place the vertical frame 200/70 (**4**) on the other base jacks and have someone brace them.

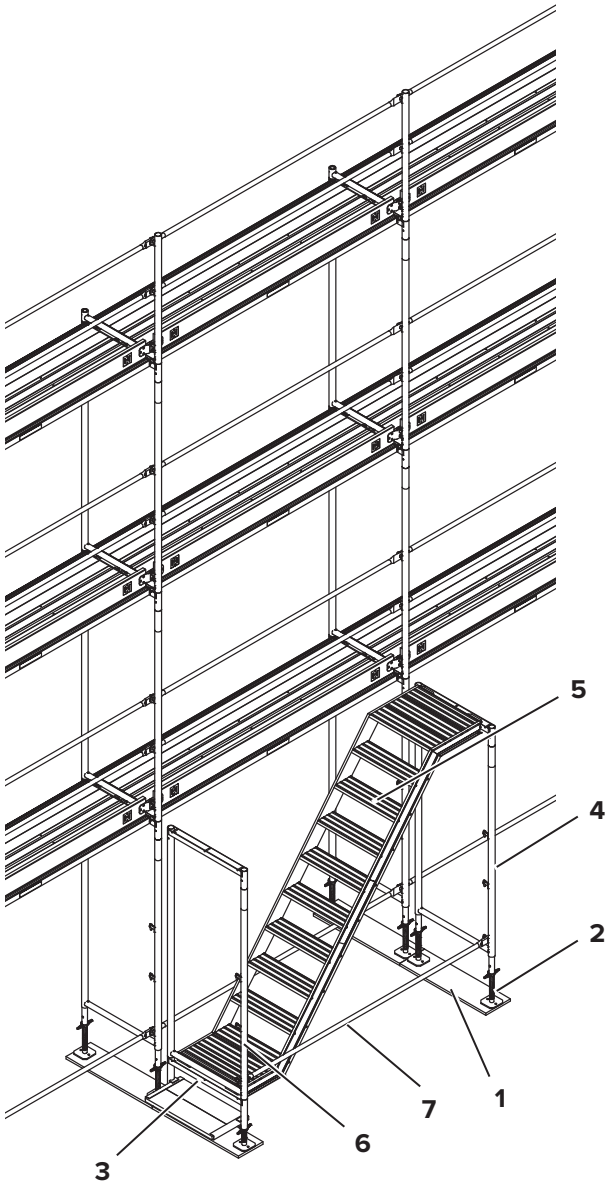
Step 5 Insert the supporting latches on the Alu Staircase G2 250/200 (code:652780) (**5**) into the U-profiles on the stairway access and the vertical frames at the same time.

Step 6 Place the second vertical frame 200/70 (**6**) on the stairway access.

Step 7 Turn the jack nuts to align the height of the vertical frame 200/70 to the stairway access.

Step 8 Hook the Guardrail 250 (code:2113) (**7**) to the lowest clevis pins on the vertical frame 200/70.

Step 9 Before using the Alu Staircase G2 250/200 for the first time, temporarily attach a diagonal counter to the direction of the staircase.

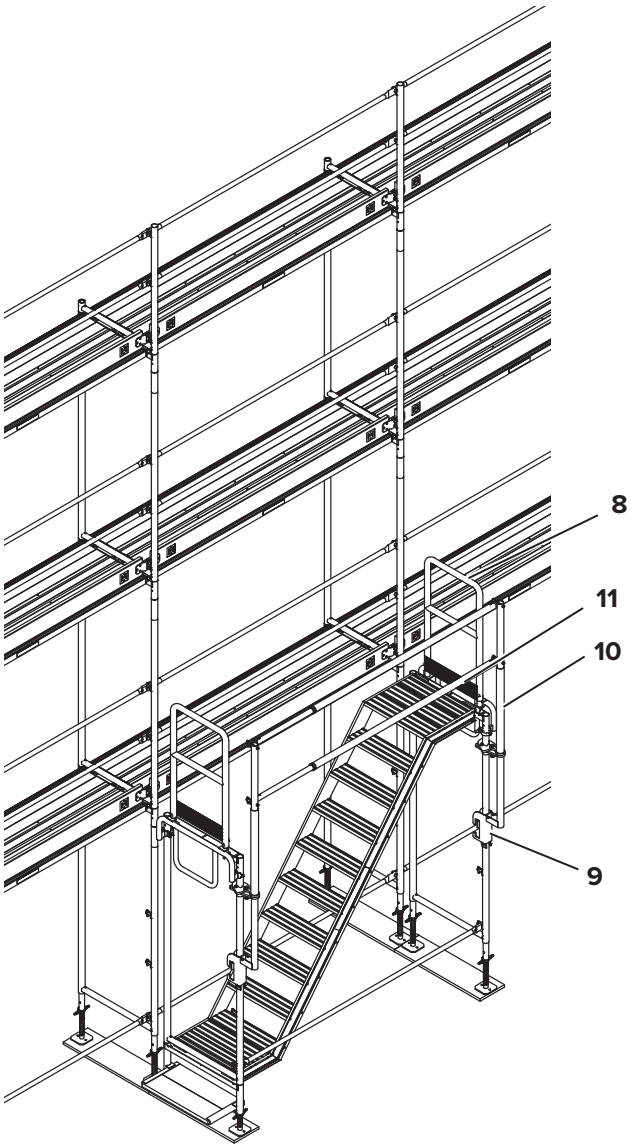


Unless stated otherwise, all dimensions in mm.

Step 10 Attach a BOSTA 70 AGS End Guardrail G2 (code:653490) (**8**) to both vertical frames (refer to section 7.11.2 "Erecting the temporary side edge protection along the end faces" on page 62).

Step 11 Attach the AGS Post Holders (code:652975) (**9**) to the uppermost clevis pins on the vertical frames 200/70.

Step 12 Use AGS Vario guardrails (**11**) to attach the AGS Posts G3 (code:653450) (**10**) to both AGS Post Fasteners (code:652965) (refer to section 7.11.1 "Erecting temporary edge protection along the outside face of the scaffold" on page 50).

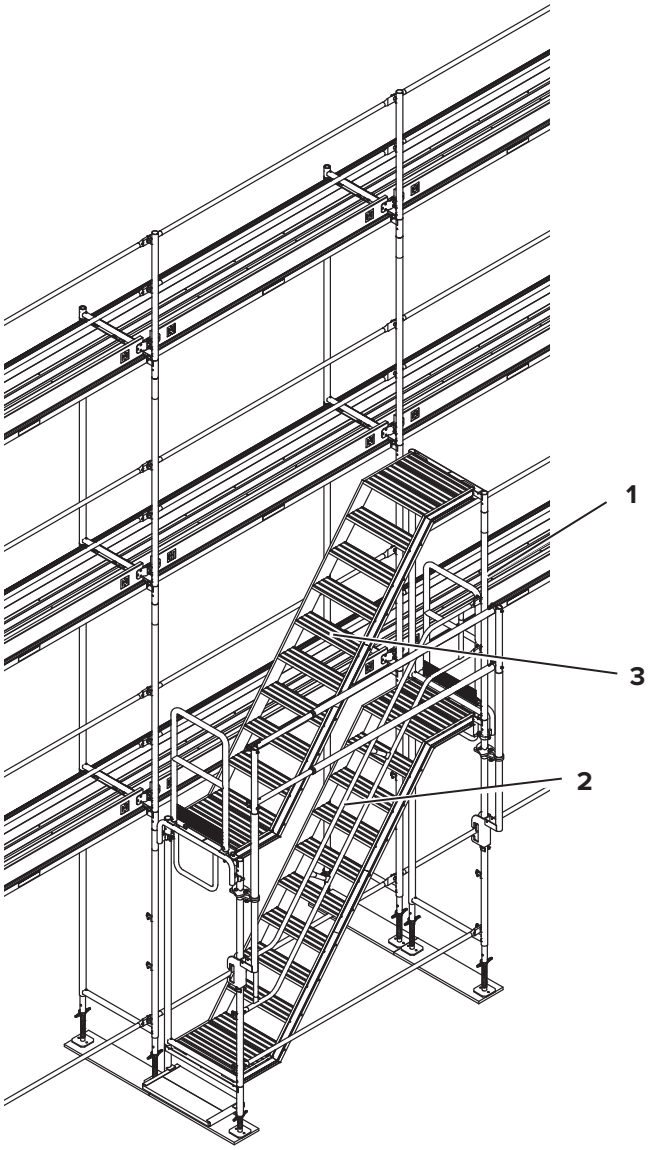


11.2.2 Erecting second scaffold level and higher

Step 1 Standing on the top landing, connect another vertical frame 200/70 (**1**).

Step 2 Hook the Alu Staircase G2 Outer Handrail 250/200 (code:652860) (**2**) in the two upper clevis pins on the vertical frame 200/70.

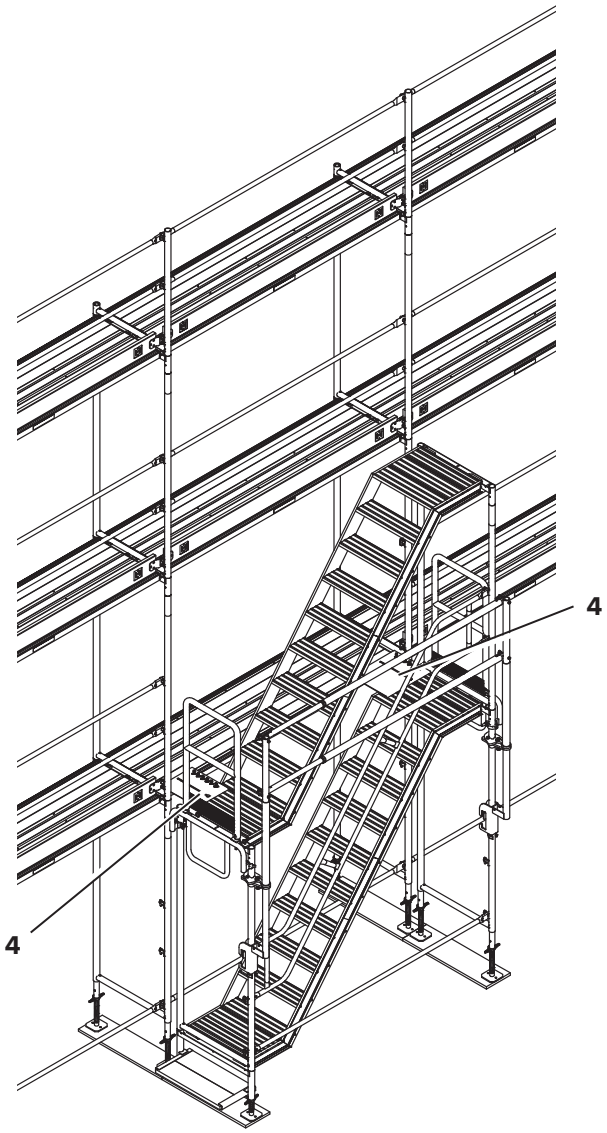
Step 3 Insert the supporting latches on the Alu Staircase G2 250/200 (code:652780) (**3**) into the U-profiles on the vertical frames.



Unless stated otherwise, all dimensions in mm.

Step 4 Remove the toe board and guardrail from the existing scaffold.

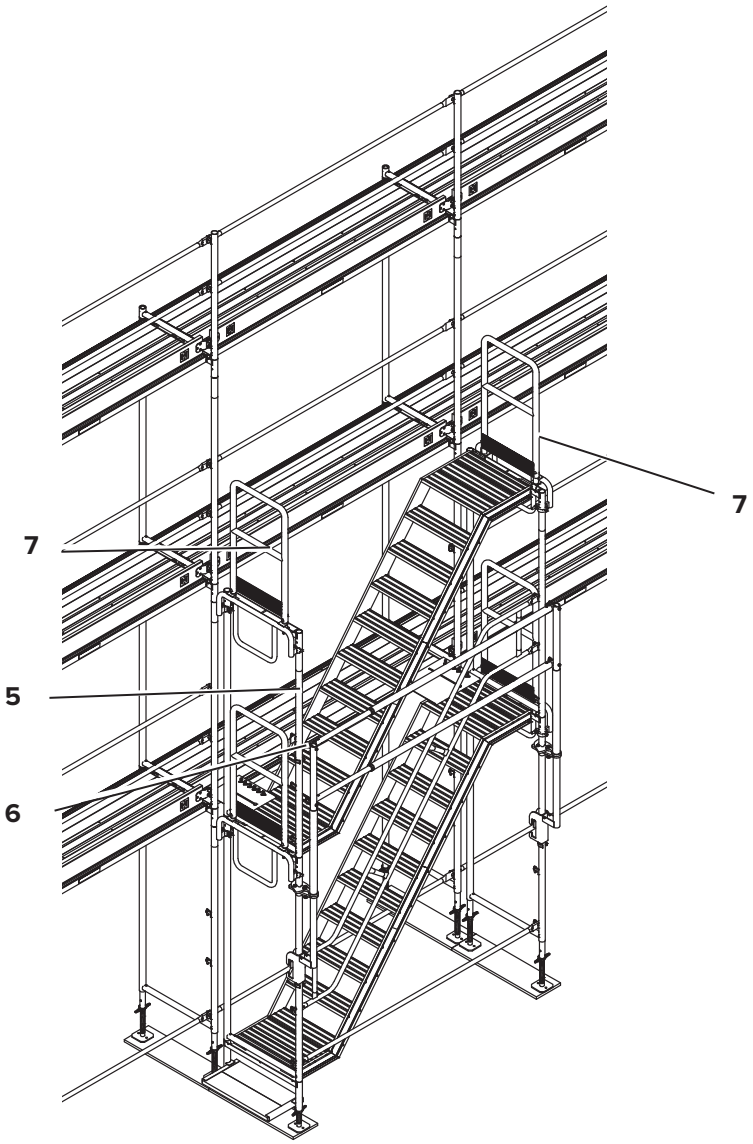
Step 5 Use Top and Bottom Gap Covers (code:653995 / code:653990) (**4**) to connect the landings of the Alu Staircase G2 250/200 to the existing scaffold).



Step 6 Attach additional vertical frames 200/70 (**5**) to the bottom landing.

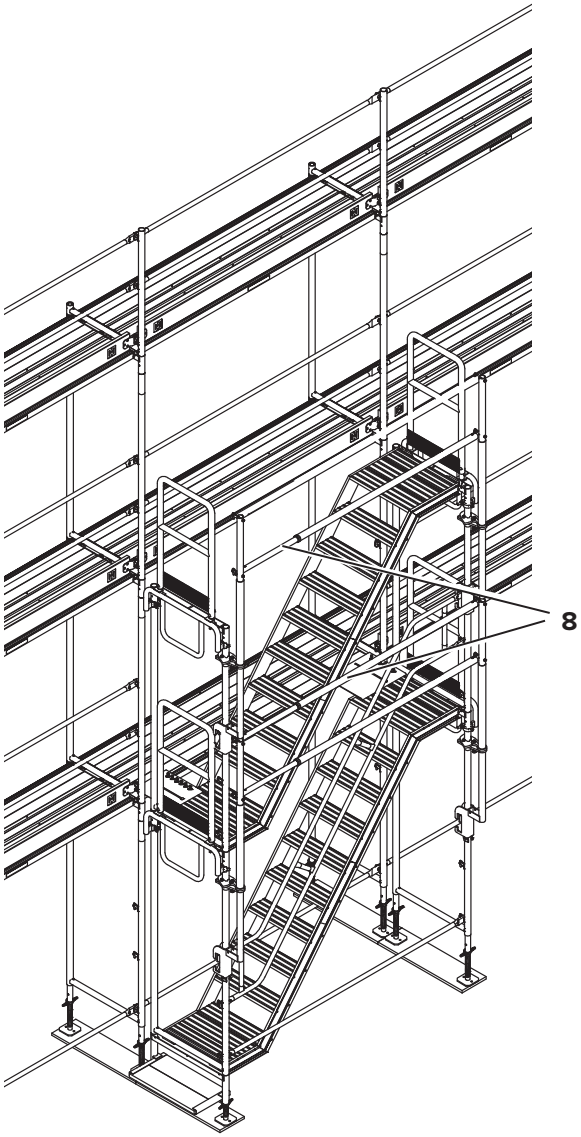
Step 7 Attach the AGS Post Holders (code:652975) (**6**) to the uppermost clevis pins on the vertical frame 200/70.

Step 8 Attach a BOSTA 70 AGS End Guardrail G2 (code:653490) (**7**) to the vertical frames 200/70 (refer to section 7.11.2 "Erecting the temporary side edge protection along the end faces" on page 62).



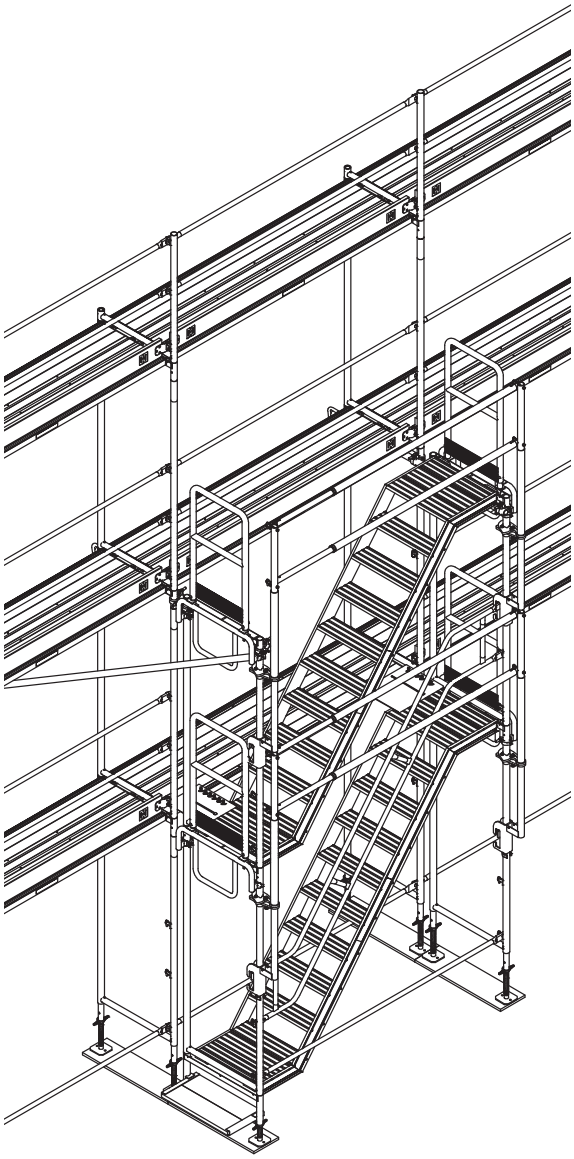
Unless stated otherwise, all dimensions in mm.

Step 9 Use AGS Vario guardrail to attach the AGS Post G3 (code:653450) (**8**) to the two uppermost handrails as described in section 7.11.1 "Erecting temporary edge protection along the outside face of the scaffold" on page 50.



Step 10 If the tying pattern so specifies (refer to section 12.4 "Standard design for load class 3" on page 100) place the ties as shown in section 11.1 "Tying scaffold staircase" on page 81.

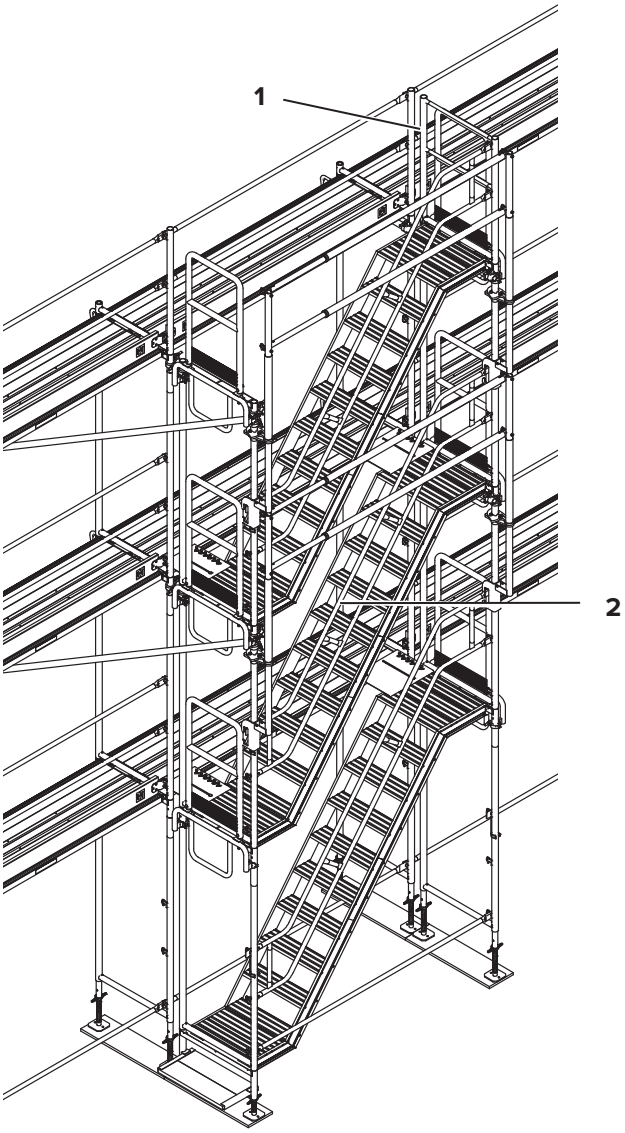
Step 11 Repeat steps 1 to 10 to achieve the desired staircase height.



11.2.3 Assembling uppermost scaffold level

Step 1 Attach the Twin Railing Post 70 trans. light (code:652880) (**1**) to the vertical frame 200/70 (code:410644) and protect it from uplift with the Frame Pin Ø8 mm (code:61312).

Step 2 Attach the Alu Staircase G2 Outer Handrail 250/200 (652860) (**2**) to the two upper clevis pins on the vertical frame 200/70.

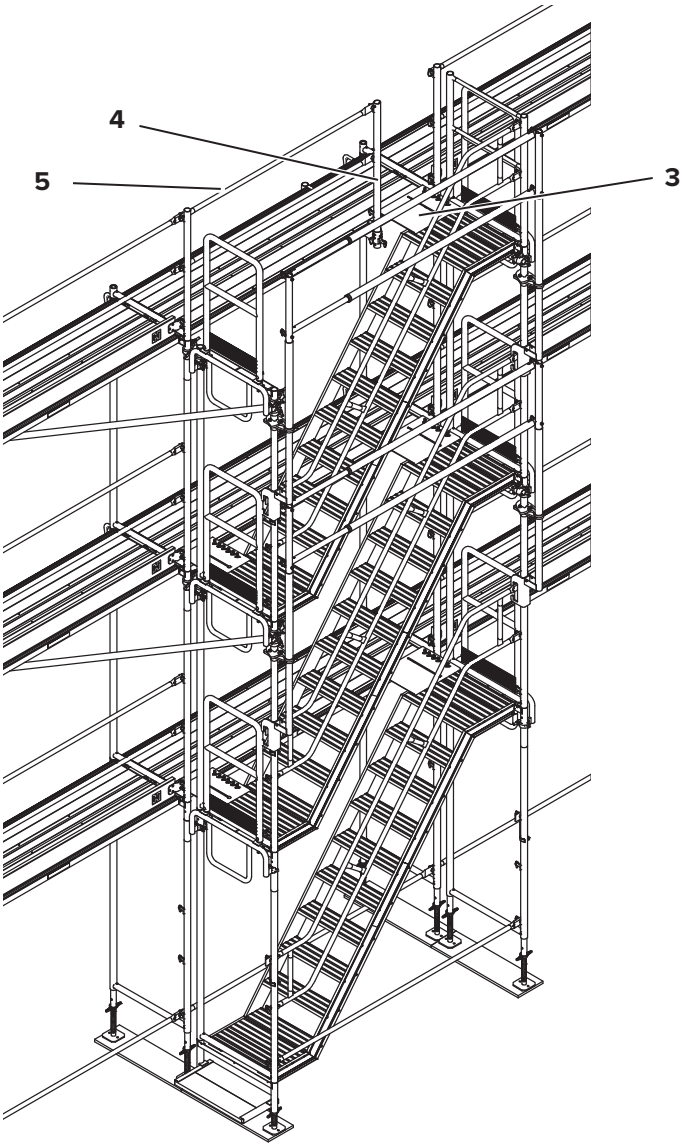


Step 3 Remove the toe board and guardrail from the scaffold.

Step 4 Use the Top Gap Cover (code:653995) (**3**) to connect the top landing of the Alu Staircase G2 250/200 to the existing scaffold.

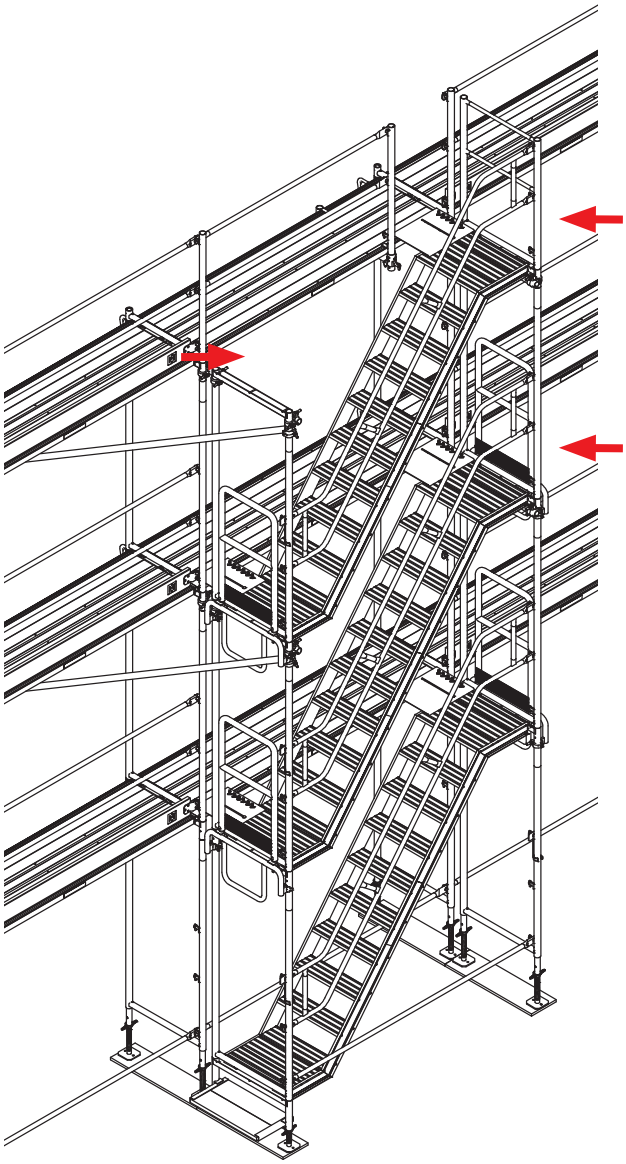
Step 5 Attach the BOSTA 70 Intermediate Railing Bracket (code:652830) (**4**) to the plank on the existing scaffold (section 7.15 "Edge protection with variable railing post" on page 66).

Step 6 Connect the Guardrail 190 (code:547658) (**5**) to the clevis pins on the BOSTA 70 Intermediate Railing Bracket at the height of the double guardrail.



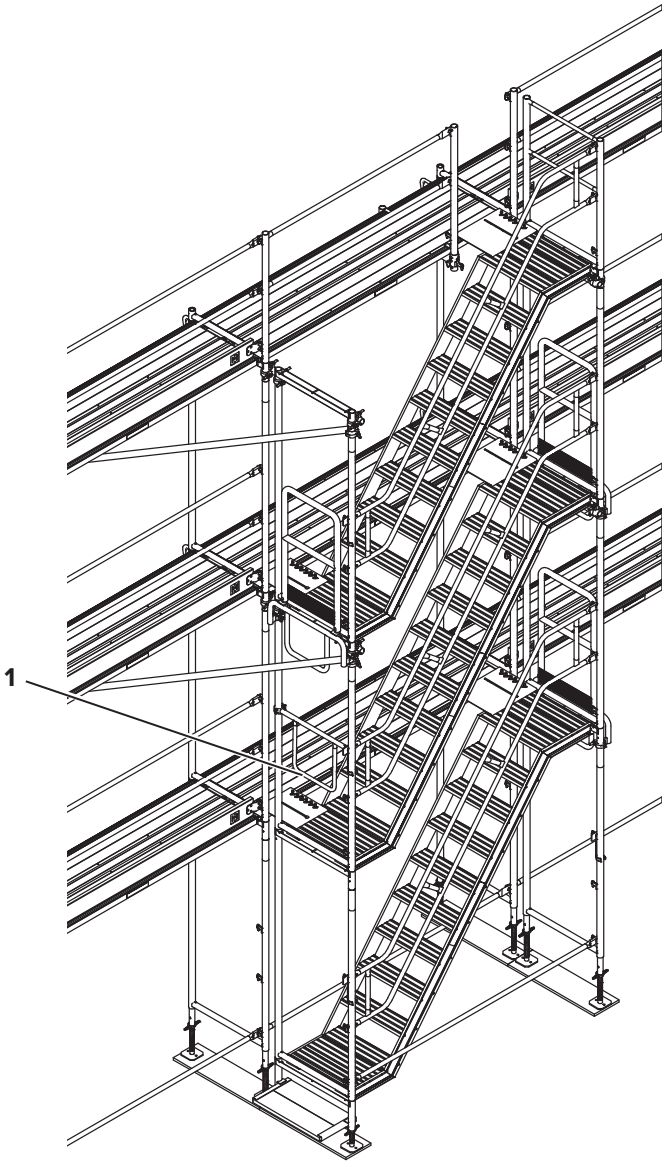
Step 7 Remove the AGS Railing Posts G3 (code:53450) and the AGS Vario guardrails from all of the bays.

Step 8 Remove the BOSTA End Guardrail G2 (code:653490) from the uppermost level.



Ascending the erected scaffold for the first time

Step 1 Before ascending the staircase and scaffold for the first time, install a Double Rail 70 trans. (code:534419) (**1**) at both ends of the Stairway Access (code:553656). Then remove the BOSTA 70 AGS End Guardrail G2 (code:653490).



Unless stated otherwise, all dimensions in mm.

12 Tying

12.1 General information

The tying forces and the tying pattern for the various scaffold configurations can be found on the following pages. All ties should be set along with erection of the scaffold. Eye bolts with an eye diameter of Ø23 mm are used to secure the ties.

Select dowels suitable for the surface to which the ties will be secured. The eye bolts are normally equipped with a wooden thread to screw them into plastic dowels and with a metric thread to screw them into metal spreader dowels or into tying systems.

The eye bolts must be of at least strength class 4.6 and have a diameter of at least Ø12 mm. The minimum protection of the screws from corrosion is for them to be galvanised. The eye must be welded onto the shaft to completely close it.

There are screw-in marks along the shaft of the eye bolt, the last of which is 20 mm from the ring. Regardless of the effective length, all eye bolts used as scaffold ties have to be screwed in all the way to the last mark. This is the only way for an eye bolt to effectively transfer tying forces parallel to the façade.

The tie screw is removed when the scaffold is dismantled. The open hole is then closed with plaster or a plastic cap. The plastic cap prevents moisture from penetrating the façade, and it also allows the hole to be used again later.

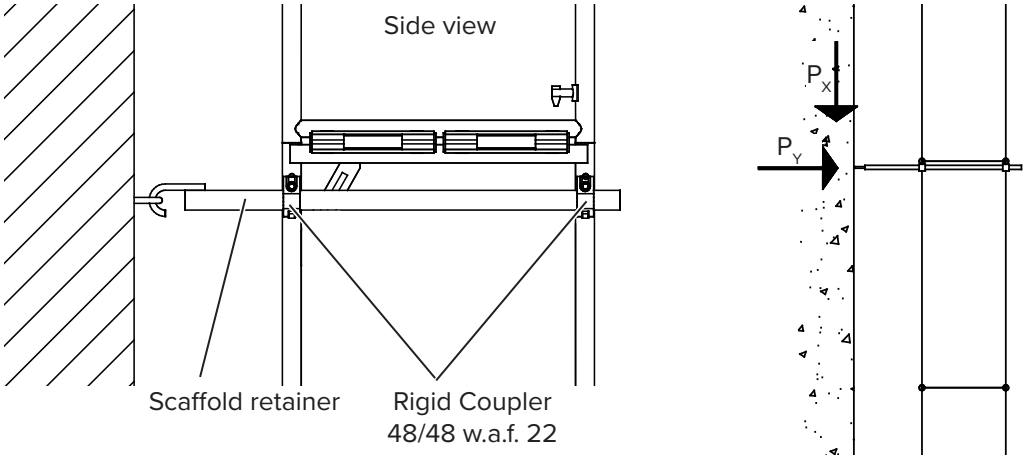
The tables on the following pages show the tying forces.

12.2 Scaffold retainers

Scaffold retainers can be attached to the scaffolding and to the wall in various ways. Anchoring variants A1 and A2 are provided for the standard designs of BOSTA 70 scaffolding.

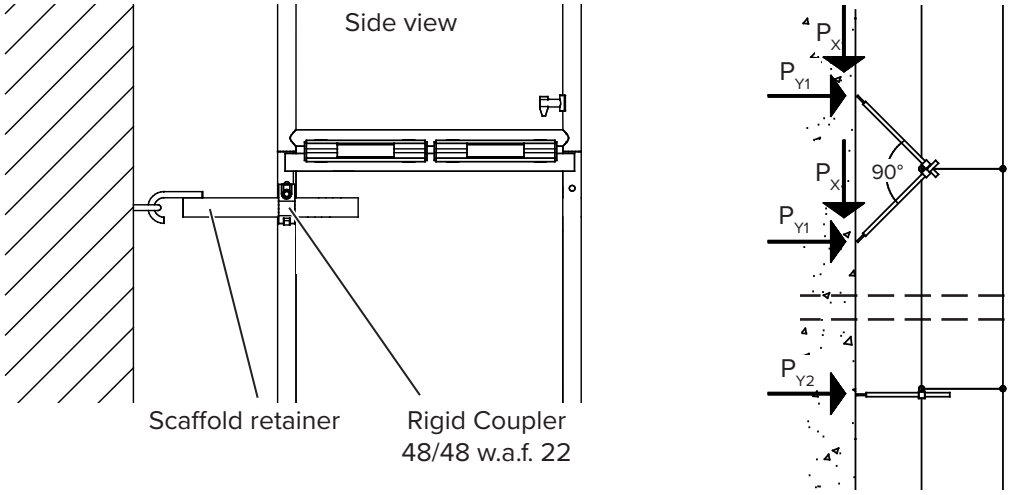
Tying method A1: long scaffold retainer

Long scaffold retainers are attached to the inner and outer posts of the vertical frames using Rigid Couplers 48/48 w.a.f. 22 (code:2514).



Tying method A2.1 short scaffold retainer

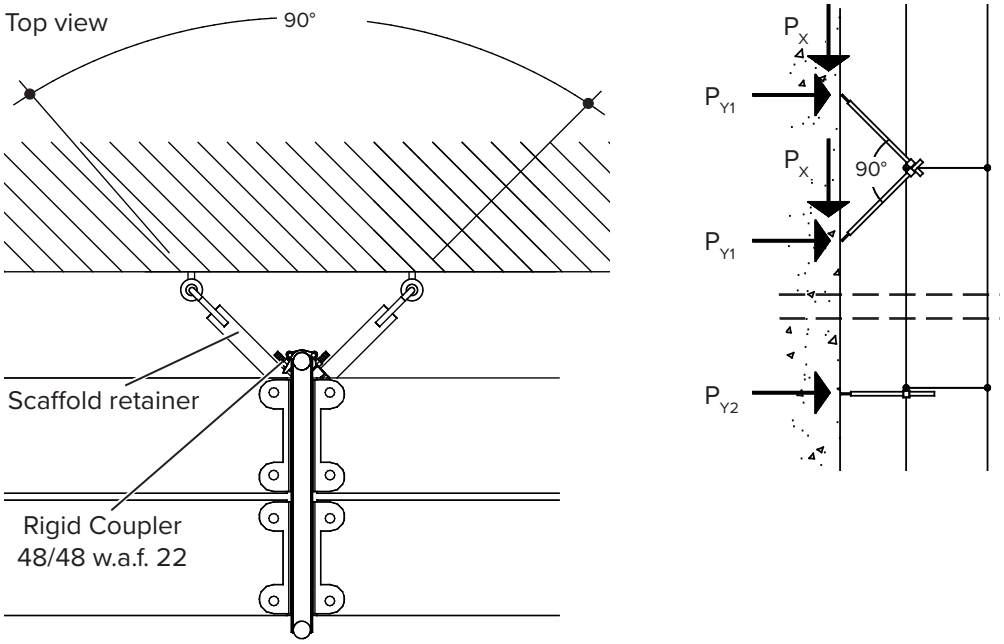
Short scaffold retainers are attached only to the inner post of the vertical frames.



Unless stated otherwise, all dimensions in mm.

Tying method A2.2 short scaffold retainer

Every third tie must be a V- tie.



Refer to section 13.6 "Façade insulation accessories" on page 126 for information on tying façade insulation.

12.3 Notes on configuring and checking tying points

- The tying forces have to be transferred to a sufficiently load-bearing structure (e.g. a building) using scaffold retainers and fasteners.
  Suitable fasteners are e.g. tying devices as specified by DIN 4426, "Equipment for building maintenance – safety requirements for workplaces and accesses – design and execution".
  Unsuitable fasteners are e.g. tying wires and ropes.
  Sufficiently load-bearing structures can be e.g.:
  - Rebar slabs, walls, props
  - Load-bearing masonry as specified by DIN 1053.

Structures that are not sufficiently load-bearing include snow fences, lightning rods, drainpipes, or window frames.

- The load capacity of the fasteners between the scaffold retainers and the load-bearing structure has to be proven to be suitable for the respective tying forces. Proof of the load capacity of the fasteners can be provided e.g. by:
  - The type approval granted by the Deutsches Institut für Bautechnik (German Institute for Structural Engineering) in Berlin
  - Load testing.
- If fasteners with type approval are used for tying, the respective requirements must be complied with. Conditions include:
  - Verification of capacity of load-bearing structure
  - Required component dimensions
  - Distance to edges
  - Special installation instructions.

- If load testing is required, the tests must be performed in the precise positions that will be subjected to the load.
- Always use suitable test equipment to perform load testing. Suitable testing devices are those approved by the German Social Accident Insurance. The quantity and location of the tying points to be tested must be determined by an expert. An expert is a person who, due to his technical training and experience, has the required skills and knowledge of scaffolding, is familiar with the relevant government regulations on occupational safety and accident prevention as well as with guidelines and generally accepted codes of practice, is capable of assessing the safety and condition of tying points.
- Apply the following criteria to load testing:
  - The load used for testing must be 1.2 times the required tying load Py.

  When testing the strength of the load-bearing structure, the scope of testing is a factor of the load-bearing structure:
  - At least 10% of all of the dowels used or at least five load tests when testing rebar.
  - At least 30% of all of the dowels used or at least five load tests when testing other materials.
- If single or multiple fasteners cannot absorb the load, the expert must:
  - Determine the cause
  - Find a different fastener
  - Increase the scope of testing, if necessary.
- A written record of the test results must be kept for as long as the scaffold is in use.
- The typing report in the appendix on page 162 can be used for this purpose.

Overview of suitable planks and their load classification pursuant to DIN EN 12811- 1

		Load classification pursuant to DIN EN 12811-1 for bay length [cm]									
Type of plank	**Width [cm]**	**74**	**82**	**101**	**113**	**125**	**150**	**200**	**250**	**300**	**400**
Steel plank S (SP)	18	–	6	–	6	6	6	6	5	4	4
Alu deck G2 (AP G2)	32	6	6	6	6	6	6	6	5	3	–
Timber plank (TP)	32	6	–	–	–	6	6	5	4	3	–
Hollow box plank (HBP)	32	6	–	–	–	6	6	5	4	3	–
Steel plank (SP)	32	–	6	–	6	6	6	6	5	4	3
Alu plank (AP)	32	–	–	–	–	6	6	6	6	5	3
Alu plank G2 (AP G2)	67	6	6	6	6	6	6	6	5	3	–
Alu frame deck (AFD)	67	–	–	–	–	–	–	3	3	3	–

Imposed load pursuant to DIN EN 12811-1

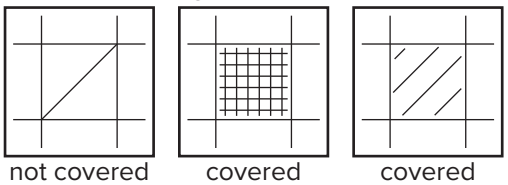
Load class (LC)	**Specific nominal load p [kN/m²]**	**Concentrated load [1)]**		**Partial area load**	
		P_1 [kN]	**P_2 [kN]**	**kN/m²**	**Ac**
1	0.75[2]	1.5	1.0	–	–
2	1.50	1.5	1.0	–	–
3	2.00	1.5	1.0	–	–
4	3.00	3.0	1.0	5.0	0.4 × AB
5	4.50	3.0	1.0	7.5	0.4 × AB
6	6.00	3.0	1.0	10.0	0.4 × AB

[1)] P_1 Load area 0.5 m × 0.5 m, but at least 1.5 kN per plank
P_2 Load area 0.2 m × 0.2 m

[2)] For planks p = 1.50 kN/m²
A_B = Plank surface pursuant to DIN EN 12811-1

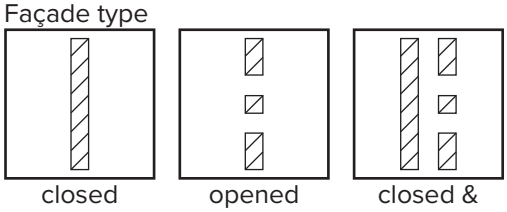
Meaning of pictograms

Scaffold covering



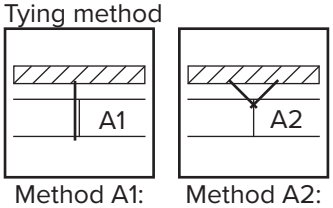
not covered | covered with net | covered with tarp

Façade type



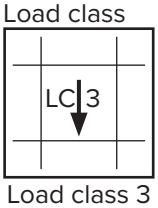
closed | opened | closed & opened

Tying method



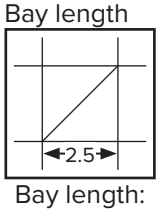
Method A1: long scaffold retainer | Method A2: short scaffold retainer

Load class



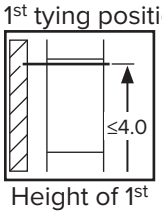
Load class 3

Bay length



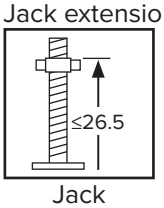
Bay length: up to 2.50 m

1st tying position



Height of 1st tying position: up to 4.00 m

Jack extension



Jack extension: up to 26.50 cm

Unless stated otherwise, all dimensions in mm.

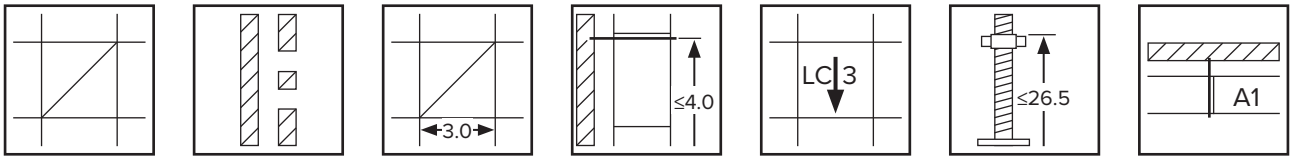
12.4 Standard design for load class 3

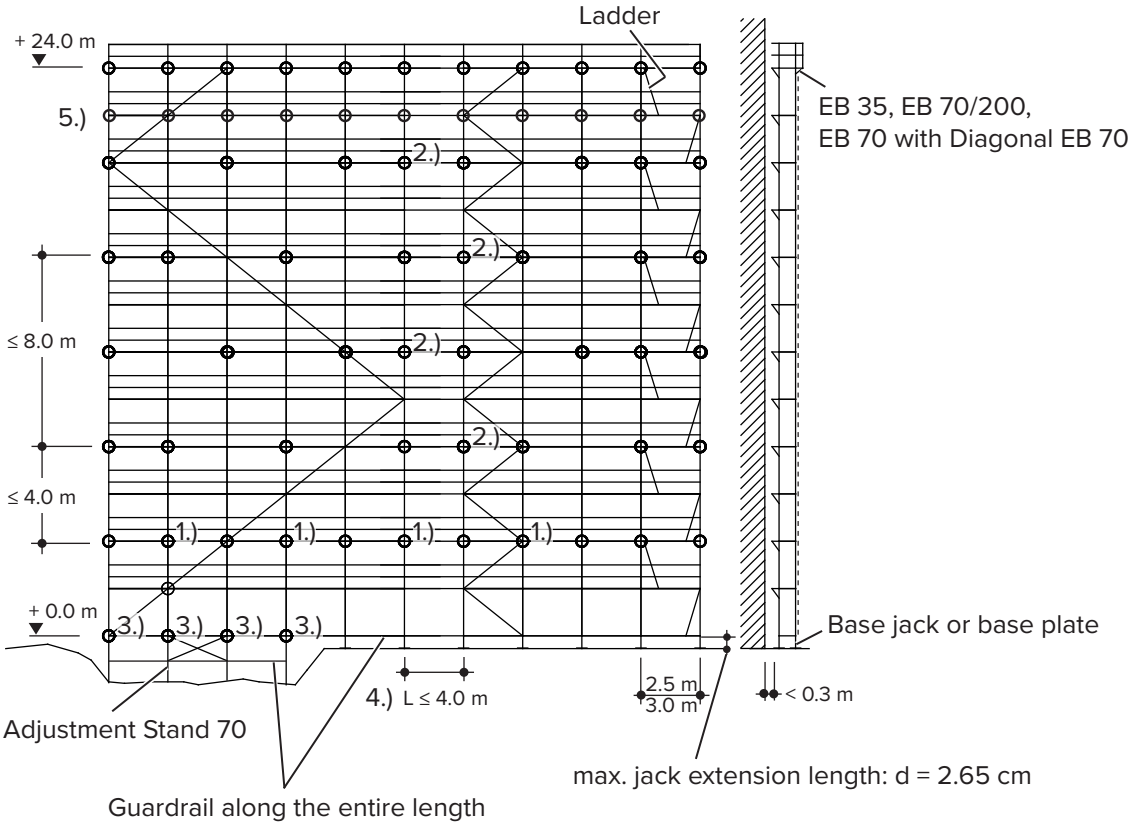
12.4.1 Assembly option 1: Scaffold not covered, tying method A1

- Diagonal braces along the entire staircase, dog-legged (as shown) or each flight in the same direction, all the way to the top of the tower.
- A single diagonal must not be used to brace more than five bays. All of the scaffold levels are equipped with three-part edge protection (refer to page 70 to see the exception).

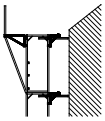
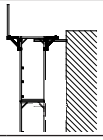
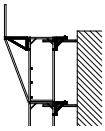
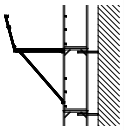
1. Additional tying:
   - For open façade with all planks except alu frame decks longer than 2.50 m.
   - When using a 4.00 m long bridging bay.
2. Additional tying with open façade at the 4.0 m long bridging bay.
3. Additional tying when using adjustment stands with criss-cross braces made up of a coupling and lateral bracing on the interior and exterior of the guardrails.
4. A 4.0 m bay can be installed, but only every fifth bay.
5. Additional tying when using an assembly consisting of an Enlargement Bracket 70 (code:424226) and a Diagonal EB 70 cpl. (code:554959).

Assembly option 1





Unless stated otherwise, all dimensions in mm.

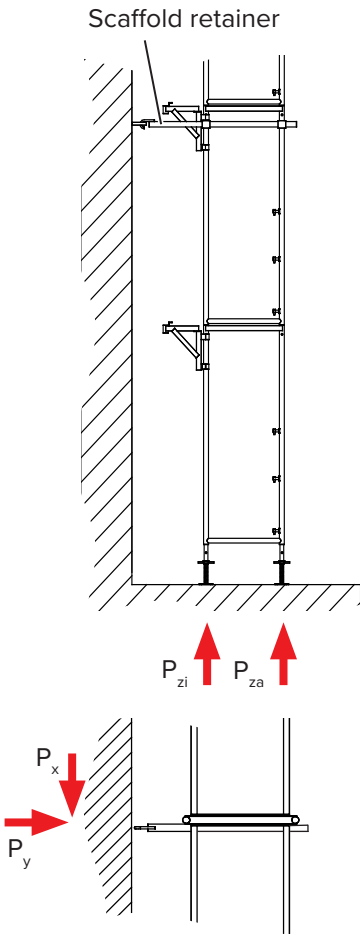
Type of scaffold	Tie hole grid	Bay length = 3.00 m Open + closed façade	
		Px [kN]	Py [kN]
Protective roof scaffold level with exterior bracket 0.70 m and interior bracket 0.35 m 	Upper tie	0.90	+1.95 / -3.10
	Lower tie	0.60	+3.85 / -2.70
Protective scaffold level with exterior bracket 0.35 m and interior bracket 0.35 m 	Upper tie	0.95	± 1.95
	Lower tie	–	–
Protective scaffold level with exterior bracket 0.70 m and interior bracket 0.35 m 	Upper tie	0.80	+1.20 / -2.15
	Lower tie	0.65	+4.20 / -3.25
Protective roof level 	Upper tie	0.70	+3.00 / -6.90
	Lower tie	0.50	+5.05 / -1.10

- = tension / + = pressure

Scaffold not covered, tying method A1

	Tying forces: open façade		Tying forces: closed façade	
	Long retainer		Long retainer	
Tie position H [m]	**Px [kN]**	**± Py [kN]**	**Px [kN]**	**± Py [kN]**
24	1.01	2.63	1.01	1.06
22	–	–	–	–
20	1.39	4.55	1.39	1.79
18	–	–	–	–
16	1.31	4.02	1.31	1.58
14	-	-	-	-
12	1.20	3.72	1.20	1.36
10	–	–	–	–
8	1.06	3.21	1.06	1.20
6	–	–	–	–
4	0.90	3.10	0.90	1.24
2	–	–	–	–

Support	P_{zi} = 16.80 kN
	P_{za} = 19.05 kN

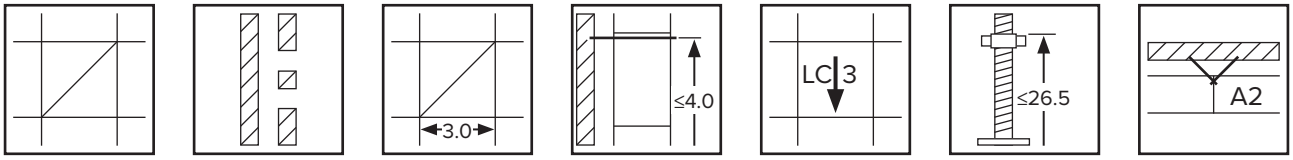


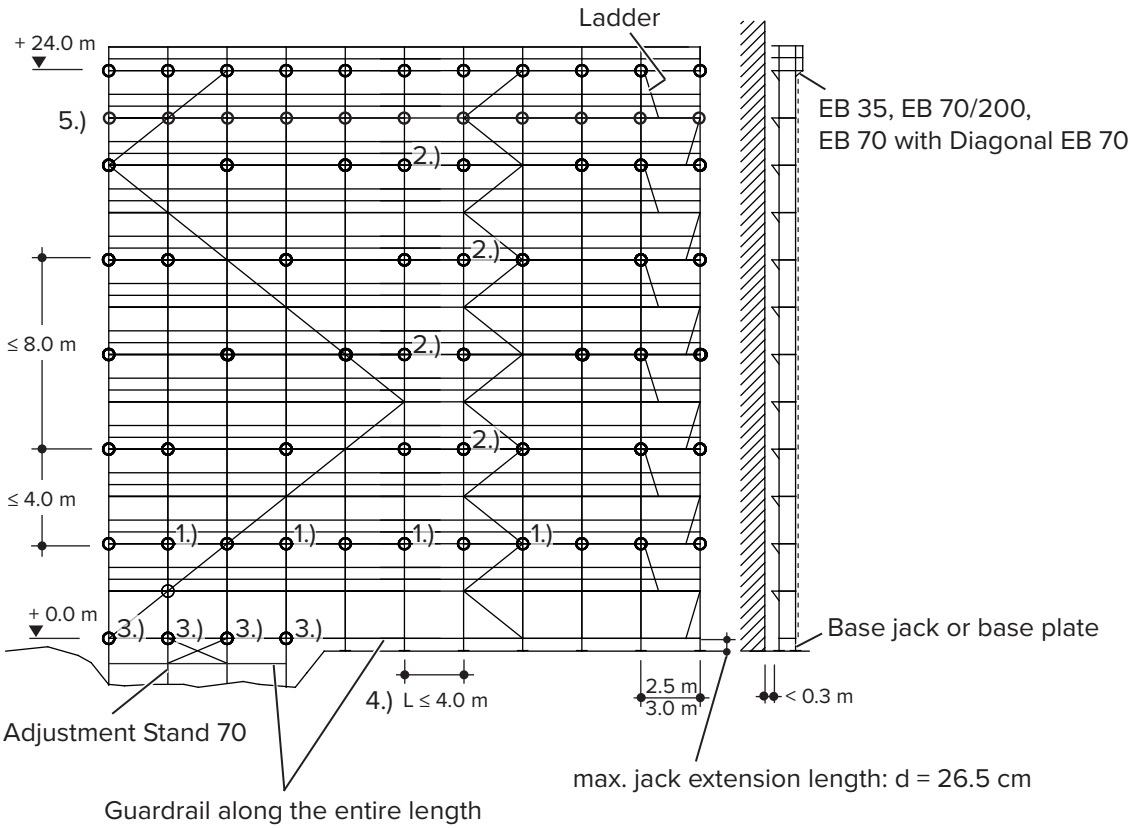
12.4.2 Assembly option 2: Scaffold not covered, tying method A2

- Diagonal braces along the entire staircase, dog-legged (as shown) or each flight in the same direction, all the way to the top of the tower.
- A single diagonal must not be used to brace more than five bays. All of the scaffold levels are equipped with three-part edge protection (refer to page 70 to see the exception).

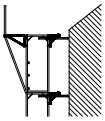
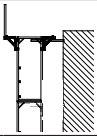
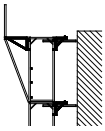
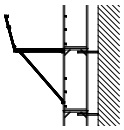
1. Additional tying:
   - For open façade with all planks except alu frame decks longer than 2.50 m.
   - When using a 4.00 m long bridging bay.
2. Additional tying with open façade at the 4.0 m long bridging bay.
3. Additional tying when using adjustment stands with criss-cross braces made up of a coupling and lateral bracing on the inside and outside of the guardrails.
4. A 4.0 m bay can be installed, but only every fifth bay.
5. Additional tying when using an assembly consisting of an Enlargement Bracket 70 (code:424226) and a Diagonal EB 70 cpl. (code:554959).

Assembly option 2





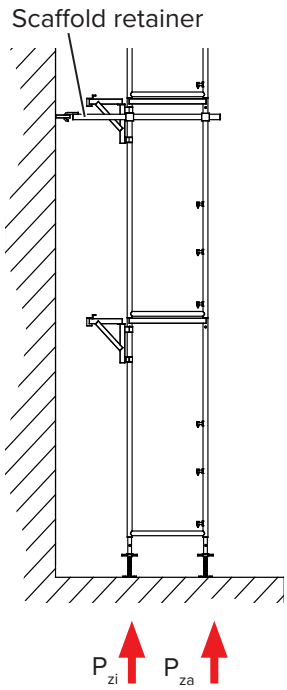
Unless stated otherwise, all dimensions in mm.

Type of scaffold	Tie hole grid	Bay length = 3.00 m Open + closed façade		
		Px [kN]	Py1 [kN]	Py2 [kN]
Protective roof scaffold level with exterior bracket 0.70 m and interior bracket 0.35 m 	Upper tie	1.55	+1.15 / -1.55	+1.95 / -3.10
	Lower tie	1.90	+1.90 / -1.35	+3.85 / -2.70
Protective scaffold level with exterior bracket 0.35 m and interior bracket 0.35 m 	Upper tie	1.05	± 1.05	± 1.95
	Lower tie	–	–	–
Protective scaffold level with exterior bracket 0.70 m and interior bracket 0.35 m 	Upper tie	1.10	+1.00 / -1.10	+1.20 / -2.15
	Lower tie	2.10	+2.10 / -1.60	+4.20 / -3.25
Protective roof level 	Upper tie	3.45	+1.50 / -3.45	+3.00 / -6.90
	Lower tie	2.55	+2.55 / -0.85	+5.05 / -1.10

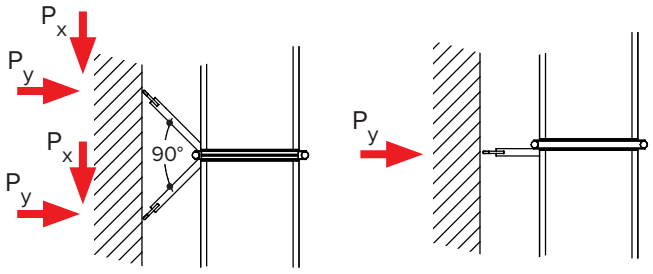
- = tension / + = pressure

Scaffold not covered, tying method A2

	Tying forces: open façade			Tying forces: closed façade		
	V-tie		Short retainer	V-tie		Short retainer
Tie position H [m]	Px [kN]	± Py [kN]	± Py [kN]	Px [kN]	± Py [kN]	± Py [kN]
24	1.31	1.31	2.63	1.18	1.18	1.06
22	–	–	–	–	–	–
20	2.62	2.62	4.55	2.62	2.62	1.79
18	–	–	–	–	–	–
16	2.33	2.33	4.02	2.33	2.33	1.58
14	–	–	–	–	–	–
12	2.12	2.12	3.72	2.12	2.12	1.36
10	–	–	–	–	–	–
8	1.99	1.99	3.21	1.99	1.99	1.20
6	–	–	–	–	–	–
4	1.87	1.87	3.10	1.87	1.87	1.24
2	–	–	–	–	–	–



Support	P_{zi} = 16.80 kN
	P_{za} = 19.05 kN

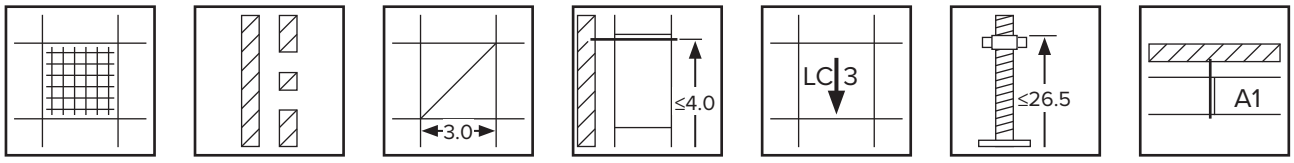


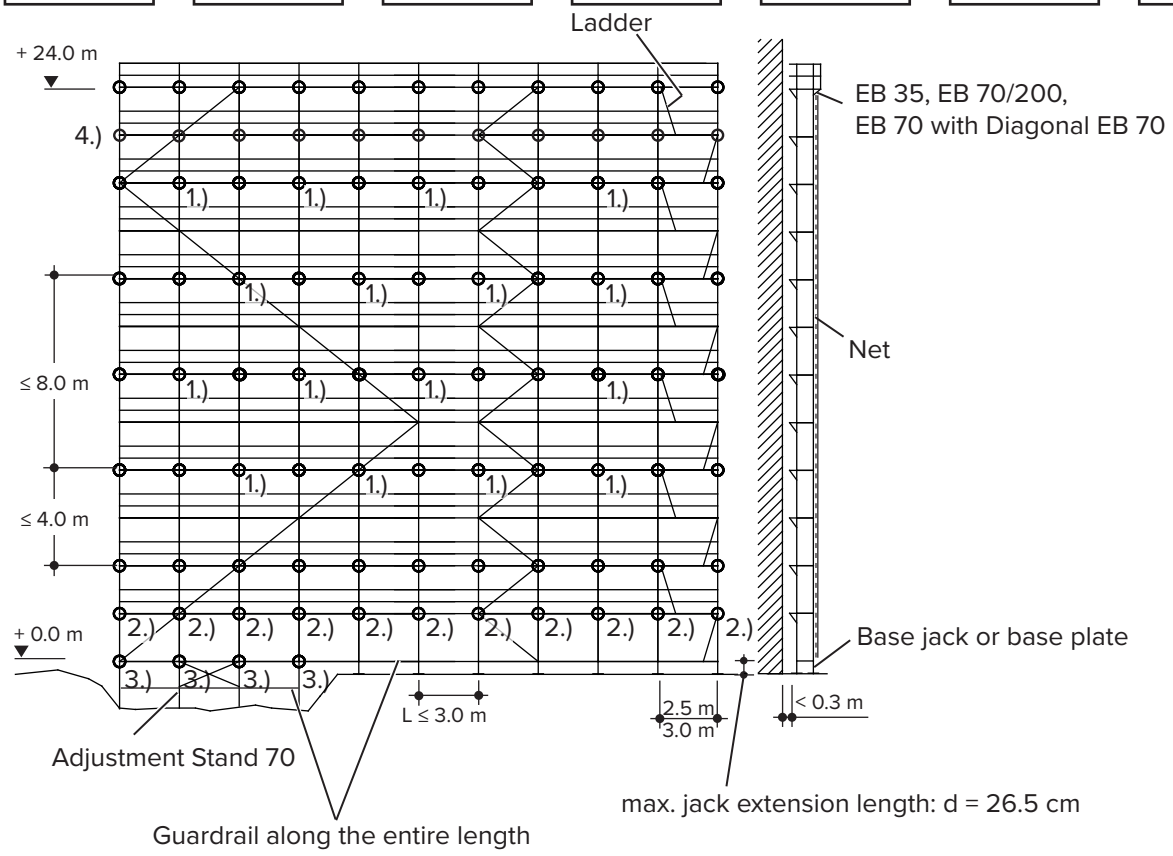
12.4.3 Assembly option 3: Scaffold with net cover, tying method A1

- Diagonal braces along the entire staircase, dog-legged (as shown) or each flight in the same direction, all the way to the top of the tower.
- A single diagonal must not be used to brace more than five bays. All of the scaffold levels are equipped with three-part edge protection (refer to page 70 to see the exception).

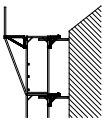
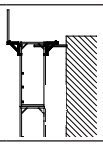
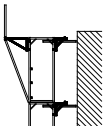
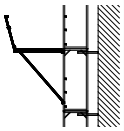
1. Additional tying with open façade
2. Additional tying with open façade and L = 3.00 m.
3. Additional tying when using adjustment stands with criss-cross braces made up of a coupling and lateral bracing on the inside and outside of the guardrails.
4. Additional tying when using an assembly consisting of an Enlargement Bracket 70 (code:424226) and a Diagonal EB 70 cpl. (code:554959).

Assembly option 3





Unless stated otherwise, all dimensions in mm.

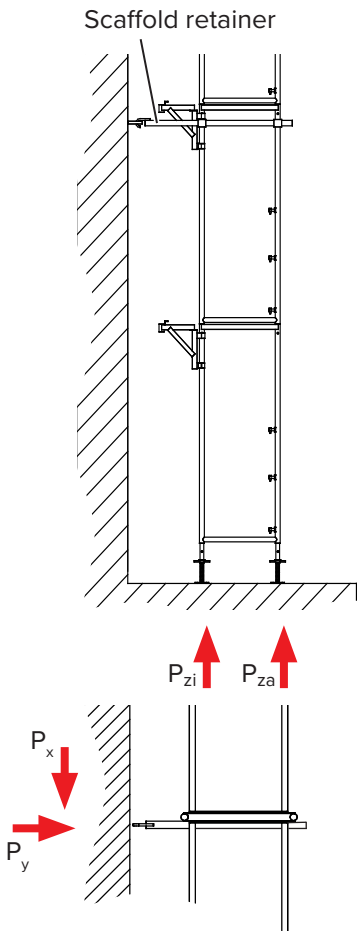
Type of scaffold	Tie hole grid	Bay length = 3.00 m Open + closed façade	
		Px [kN]	Py [kN]
Protective roof scaffold level with exterior bracket 0.70 m and interior bracket 0.35 m 	Upper tie	1.20	2.35 / -3.50
	Lower tie	0.90	+2.65 / -1.50
Protective scaffold level with exterior bracket 0.35 m and interior bracket 0.35 m 	Upper tie	1.30	± 2.45
	Lower tie	–	–
Protective scaffold level with exterior bracket 0.70 m and interior bracket 0.35 m 	Upper tie	1.10	+1.60 / -2.55
	Lower tie	0.95	+3.00 / -2.05
Protective roof level 	Upper tie	1.25	+3.35 / -7.30
	Lower tie	1.00	+5.45 / -1.50

- = tension / + = pressure

Scaffold with net cover, tying method A1

	Tying forces: open façade		Tying forces: closed façade	
	Long retainer		Long retainer	
Tie position H [m]	**Px [kN]**	**± Py [kN]**	**Px [kN]**	**± Py [kN]**
24	1.38	3.02	0.99	1.52
22	–	–	–	–
20	1.50	4.70	1.38	2.45
18	–	–	–	–
16	1.41	3.75	1.30	3.09
14	–	–	–	–
12	1.29	3.61	1.18	2.56
10	–	–	–	–
8	1.12	3.54	1.02	1.74
6	–	–	–	–
4	0.93	3.24	0.65	1.87
2	0.70	1.63	–	–

Support	
	P_{zi} = 14.10 kN
	P_{za} = 16.25 kN

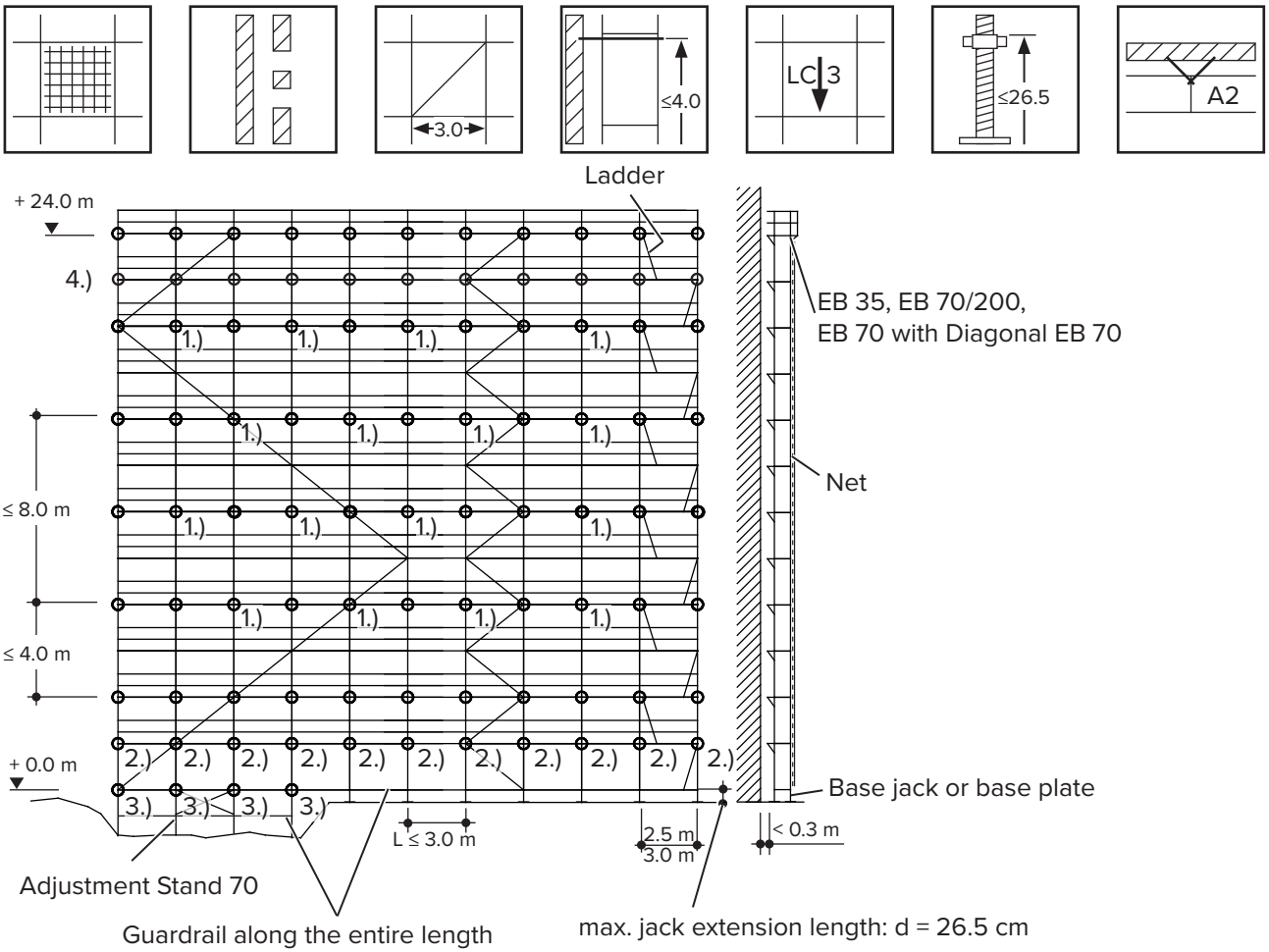


12.4.4 Assembly option 4: Scaffold with net cover, tying method A2

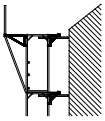
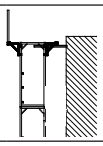
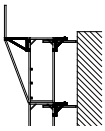
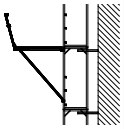
- Diagonal braces along the entire staircase, dog-legged (as shown) or each flight in the same direction, all the way to the top of the tower.
- A single diagonal must not be used to brace more than five bays. All of the scaffold levels are equipped with three-part edge protection (refer to page 70 to see the exception).

1. Additional tying with open façade
2. Additional tying with open façade and L = 3.00 m.
3. Additional tying when using adjustment stands with criss-cross braces made up of a coupling and lateral bracing on the inside and outside of the guardrails.
4. Additional tying when using an assembly consisting of an Enlargement Bracket 70 (code:424226) and a Diagonal EB 70 cpl. (code:554959).

Aufbauvariante 4



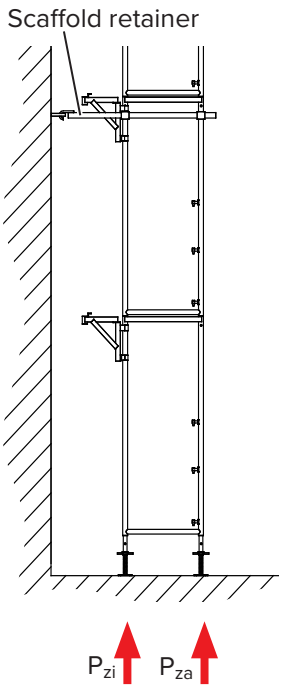
Unless stated otherwise, all dimensions in mm.

Type of scaffold	Tie hole grid	Bay length = 3.00 m Open + closed façade		
		Px [kN]	Py1 [kN]	Py2 [kN]
Protective roof scaffold level with exterior bracket 0.70 m and interior bracket 0.35 m 	Upper tie	1.75	+1.60 / -1.75	+2.35 / -3.50
	Lower tie	1.30	+1.30 / -1.20	+2.65 / -1.50
Protective scaffold level with exterior bracket 0.35 m and interior bracket 0.35 m 	Upper tie	1.75	± 1.75	± 2.45
	Lower tie	–	–	–
Protective scaffold level with exterior bracket 0.70 m and interior bracket 0.35 m 	Upper tie	1.50	± 1.50	+1.60 / -2.55
	Lower tie	1.50	+1.50 / -1.25	+3.00 / -2.05
Protective roof level 	Upper tie	3.65	+2.00 / -3.65	+3.35 / -7.30
	Lower tie	2.70	+2.70 / -1.65	+5.45 / -1.50

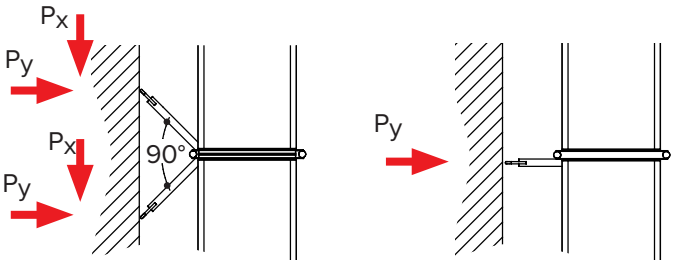
- = tension / + = pressure

Scaffold with net cover, tying method A2

	Tying forces: open façade			Tying forces: closed façade		
	V-tie		Short retainer	V-tie		Short retainer
Tie position H [m]	Px [kN]	± Py [kN]	± Py [kN]	Px [kN]	± Py [kN]	± Py [kN]
24	1.89	1.89	3.02	1.13	1.13	1.52
22	–	–	–	–	–	–
20	2.37	2.37	4.70	2.60	2.60	2.45
18	–	–	–	–	–	–
16	2.27	2.27	3.75	2.38	2.38	3.09
14	–	–	–	–	–	–
12	2.12	2.12	3.61	2.20	2.20	2.56
10	–	–	–	–	–	–
8	1.91	1.91	3.54	2.08	2.08	1.74
6	–	–	–	–	–	–
4	1.73	1.73	3.24	0.98	0.98	1.87
2	1.12	1.12	1.63	–	–	–



Support	P_{zi} = 14.10 kN
	P_{za} = 16.25 kN

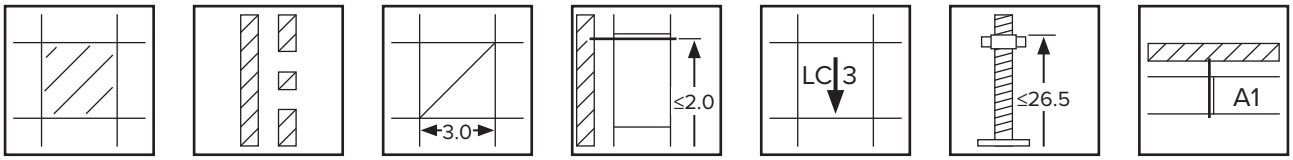


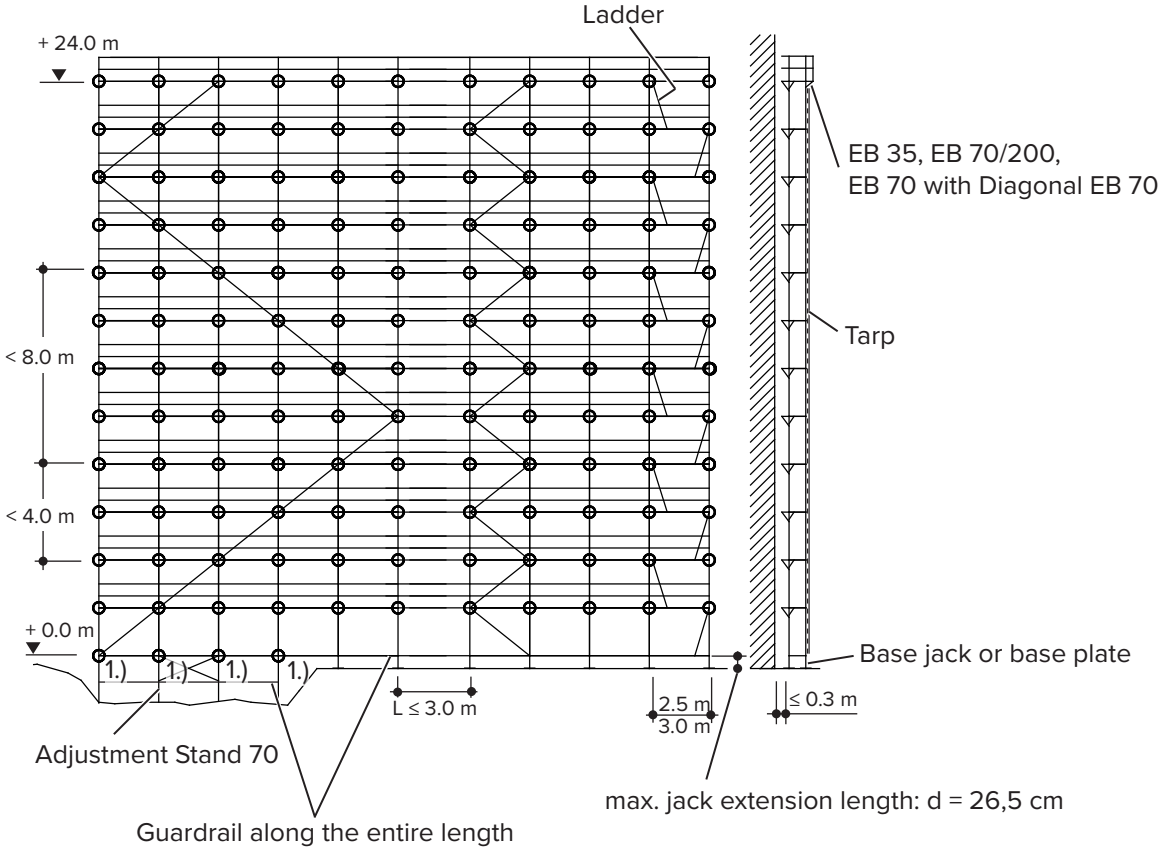
12.4.5 Assembly option 5: Scaffold with tarpaulin cover, tying method A1

- Diagonal braces along the entire staircase, dog-legged (as shown) or each flight in the same direction, all the way to the top of the tower.
- A single diagonal must not be used to brace more than five bays. All of the scaffold levels are equipped with three-part edge protection (refer to page 70 to see the exception).

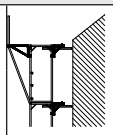
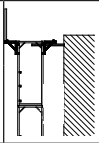
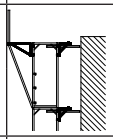
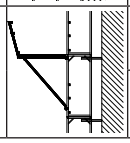
1. Additional tying when using adjustment stands with criss-cross braces made up of a coupling and lateral bracing on the inside and outside of the guardrails.

Assembly option 5





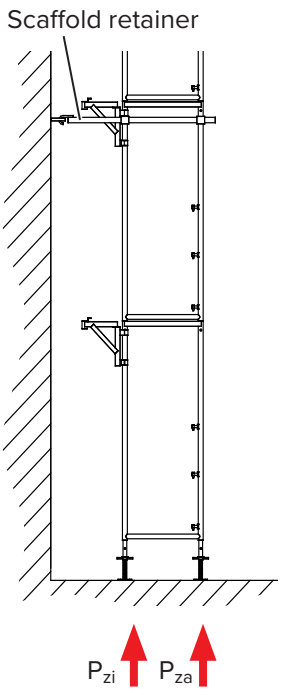
Unless stated otherwise, all dimensions in mm.

Type of scaffold		Tie hole grid	Bay length = 3.00 m Open + closed façade	
			Px [kN]	Py [kN]
Protective roof scaffold level with exterior bracket 0.70 m and interior bracket 0.35 m		Upper tie	1.05	3.80 / -4.75
		Lower tie	0.80	+6.95 / -5.15
Protective scaffold level with exterior bracket 0.35 m and interior bracket 0.35 m		Upper tie	0.85	+3.20 / -2.95
		Lower tie	–	–
Protective scaffold level with exterior bracket 0.70 m and interior bracket 0.35 m		Upper tie	1.00	+3.05 / -3.75
		Lower tie	0.80	+7.30 / -5.70
Protective roof level		Upper tie	1.00	+5.85 / -9.30
		Lower tie	0.75	+7.95 / -3.50

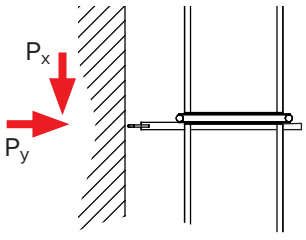
- = tension / + = pressure

Scaffold with tarpaulin cover, tying method A1

	Tying forces: open façade			Tying forces: closed façade		
	Long retainer			Long retainer		
Tie position H [m]	**Px [kN]**	**± Py [kN]**	**± Py [kN]**	**Px [kN]**	**± Py [kN]**	**± Py [kN]**
24	0.83	+3.78	-4.03	0.83	+3.78	-1.55
22	0.87	+7.13	-5.35	0.87	+7.13	-1.62
20	0.84	+5.73	-5.18	0.84	+5.73	-1.45
18	0.81	+5.68	-5.07	0.81	+5.68	-1.42
16	0.79	+5.49	-4.94	0.79	+5.49	-1.37
14	0.76	+5.36	-4.82	0.76	+5.36	-1.34
12	0.73	+5.21	-4.69	0.73	+5.21	-1.31
10	0.70	+5.09	-4.58	0.70	+5.09	-1.27
8	0.67	+4.91	-4.42	0.67	+4.91	-1.23
6	0.64	+4.92	-4.43	0.64	+4.92	-1.23
4	0.60	+4.24	-3.82	0.60	+4.24	-1.06
2	0.59	+5.85	-5.27	0.59	+5.85	-1.46



Support	P_{zi} = 14.10 kN
	P_{za} = 16.25 kN

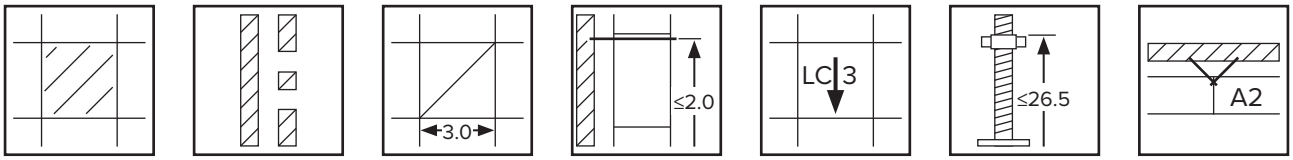


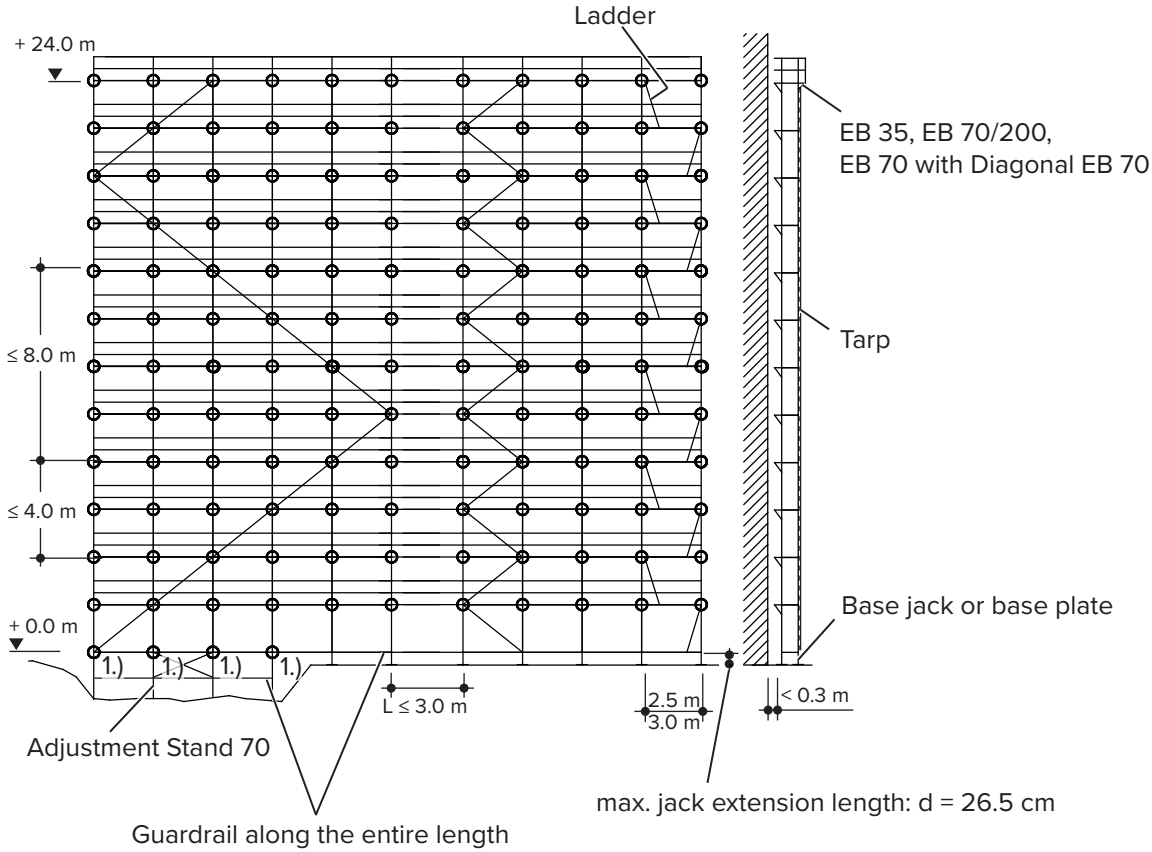
12.4.6 Assembly option 6: Scaffold with tarpaulin cover, tying method A2

- Diagonal braces along the entire staircase, dog-legged (as shown) or each flight in the same direction, all the way to the top of the tower.
- A single diagonal must not be used to brace more than five bays. All of the scaffold levels are equipped with three-part edge protection (refer to page 70 to see the exception).

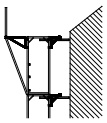
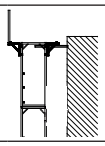
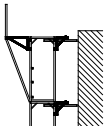
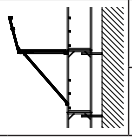
1. Additional tying when using adjustment stands with criss-cross braces made up of a coupling and lateral bracing on the inside and outside of the guardrails.

Assembly option 6

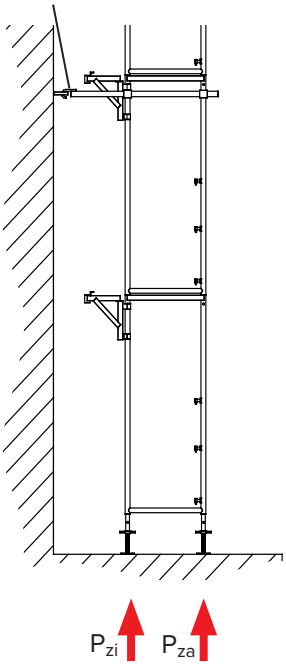




Unless stated otherwise, all dimensions in mm.

Type of scaffold	Tie hole grid	Bay length = 3.00 m Open + closed façade		
		Px [kN]	Py1 [kN]	Py2 [kN]
Protective roof scaffold level with exterior bracket 0.70 m and interior bracket 0.35 m 	Upper tie	2.35	+1.90 / -2.35	+3.80 / -4.75
	Lower tie	3.50	+3.50 / -2.60	+6.95 / -5.15
Protective scaffold level with exterior bracket 0.35 m and interior bracket 0.35 m 	Upper tie	1.60	+1.60 / -1.50	+3.20 / -2.95
	Lower tie	–	–	–
Protective scaffold level with exterior bracket 0.70 m and interior bracket 0.35 m 	Upper tie	1.90	+1.55 / -1.90	+3.05 / -3.75
	Lower tie	3.65	+3.65 / -2.85	+7.30 / -5.70
Protective roof level 	Upper tie	4.65	+2.95 / -4.65	+5.85 / -9.30
	Lower tie	3.95	+3.95 / -1.75	+7.95 / -3.50

Scaffold retainer

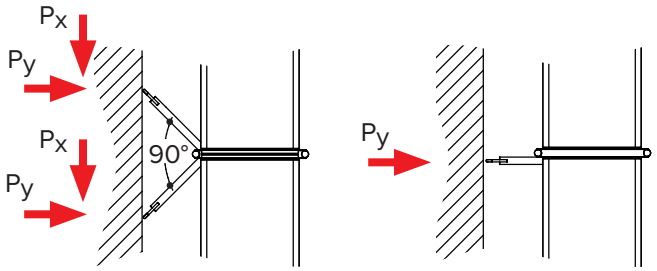


- = tension / + = pressure

Scaffold with tarpaulin cover, tying method A2

	Tying forces: open façade					Tying forces: closed façade				
	V-tie			Short retainer		V-tie			Short retainer	
Tie position		Pressure	Tension	Pressure	Tension		Pressure	Tension	Pressure	Tension
H [m]	Px [kN]	+ Py [kN]	- Py [kN]	+ Py [kN]	- Py [kN]	Px [kN]	+ Py [kN]	- Py [kN]	+ Py [kN]	- Py [kN]
24	2.02	1.89	- 2.02	3.78	- 4.03	1.89	1.89	- 1.18	3.78	- 1.55
22	3.57	3.57	- 2.68	7.13	- 5.35	3.57	3.57	- 1.36	7.13	- 1.62
20	2.87	2.87	- 2.59	5.73	- 5.18	2.87	2.87	- 1.27	5.73	- 1.45
18	2.84	2.84	- 2.54	5.68	- 5.07	2.84	2.84	- 1.24	5.68	- 1.42
16	2.75	2.75	- 2.47	5.49	- 4.94	2.75	2.75	- 1.20	5.49	- 1.37
14	2.68	2.68	- 2.41	5.36	- 4.82	2.68	2.68	- 1.16	5.36	- 1.34
12	2.61	2.61	- 2.35	5.21	- 4.69	2.61	2.61	- 1.13	5.21	- 1.31
10	2.55	2.55	- 2.29	5.09	- 4.58	2.55	2.55	- 1.10	5.09	- 1.27
8	2.46	2.46	- 2.21	4.91	- 4.42	2.46	2.46	- 1.07	4.91	- 1.23
6	2.46	2.46	- 2.22	4.92	- 4.43	2.46	2.46	- 1.04	4.92	- 1.23
4	2.12	2.12	- 1.91	4.24	- 3.82	2.12	2.12	- 0.98	4.24	- 1.06
2	2.93	2.93	- 2.64	5.85	-5.27	2.93	2.93	- 1.10	5.85	- 1.46

Support	
	P_{zi} = 16.80 kN
	P_{za} = 19.05 kN



12.4.7 Assembly option 7: Standard design of the last tie for free-standing scaffold levels

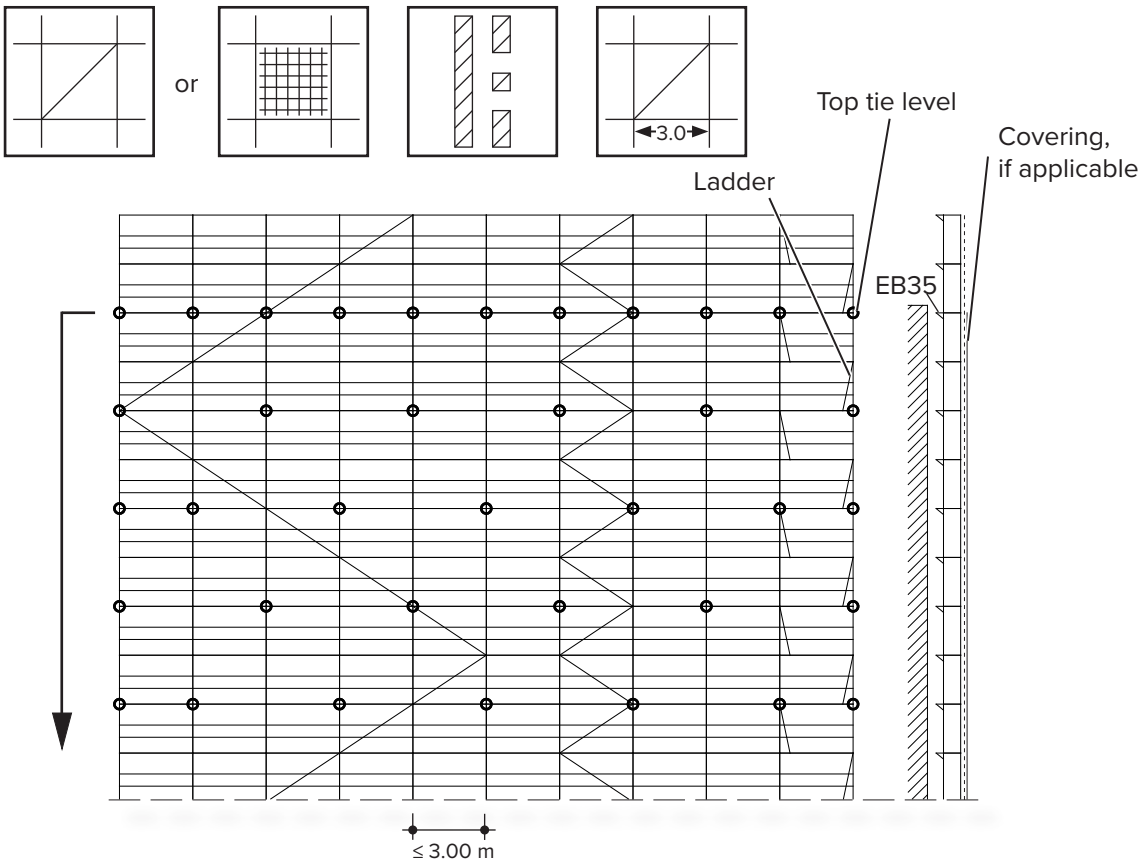
This standard design applies to both open and closed façades, to scaffolds with nets or not covered at all, and those with free-standing scaffold levels that extend beyond the uppermost tie level.

Information on the tying conditions as well as on other specifications relating to covered and uncovered scaffolds can be found in the standard design.

Tying forces per tying point at the highest tie level:

P_{I} = +5.35 kN;
P_{II} = 1.80 kN

Assembly option 7



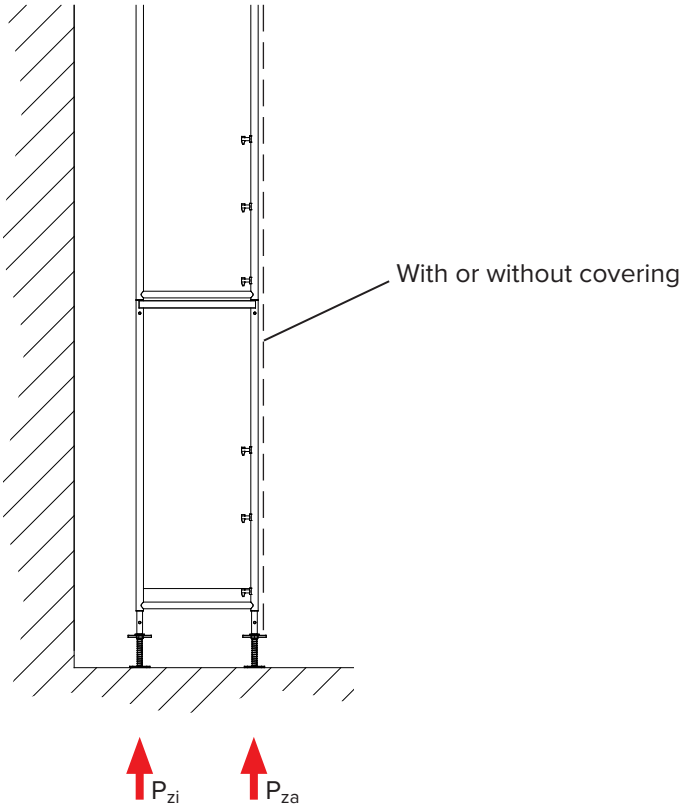
Unless stated otherwise, all dimensions in mm.

Spindle forces for façade scaffolds

BOSTA 70 covered and uncovered, support reactions at the base

(characteristic values in kN)

Scaffold height [m]	Bay width [m]	Without bridging		Bridging section 500		Bridging section 750	
		P_{zi} [kN]	P_{za} [kN]	P_{zi} [kN]	P_{za} [kN]	P_{zi} [kN]	P_{za} [kN]
24	2.50	12.25	13.85	18.05	19.95	21.30	23.50
	3.00	14.10	16.05	–	–	–	–
18	2.50	10.40	12.35	15.30	17.70	18.35	21.20
	3.00	12.05	14.20	–	–	–	–
12	2.50	8.55	10.85	12.50	15.40	15.40	18.90
	3.00	10.00	12.35	–	–	–	–



13 Notes on assembly of auxiliary components

13.1 Passage Frame 150 light

The Passage Frame 150 light (code:652890) (post spacing 1.55 m) enables a pedestrian passage to be constructed.

Diagonals for lateral bracing must be placed at the front and back of the Passage Frame 150 light at each fifth bay. Additional guardrails also have to be installed along the entire length.

As shown in the illustration, scaffold retainers have to be used on every vertical frame or, when appropriate, on every Passage Frame 150 light.

Pedestrian passages in public spaces generally have to be equipped with additional features, such as lighting, visual warnings, etc. The passages have to be made generally accessible to people with mobility issues. Ask local authorities about the respective requirements.

WARNING

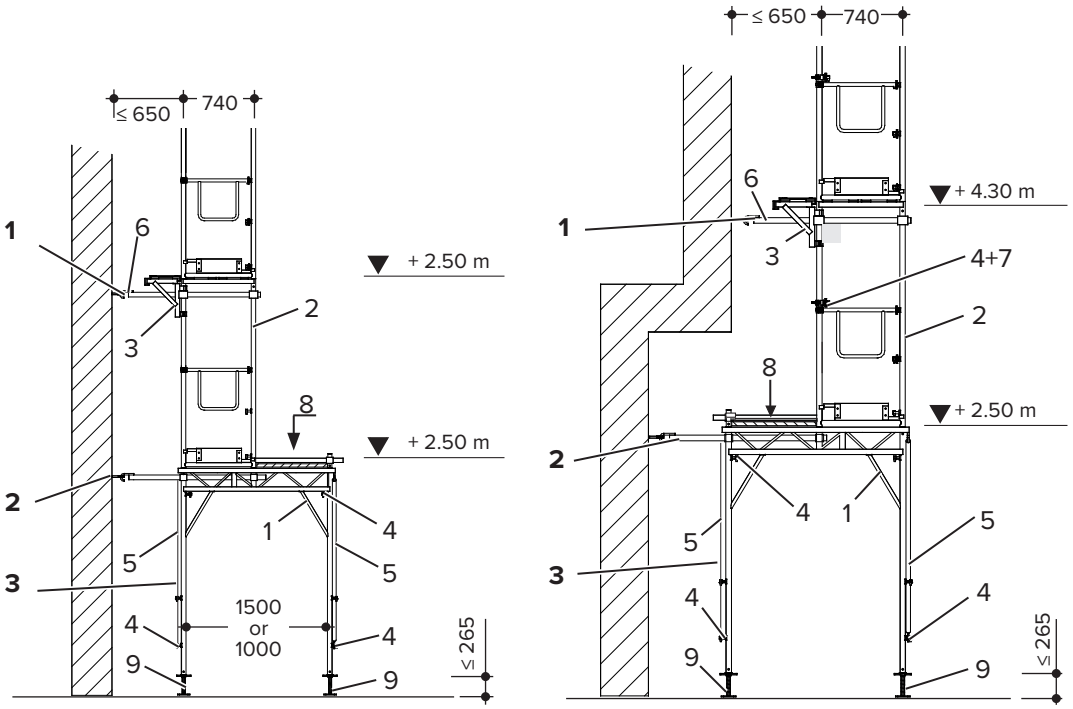
Risk of falling during erection of the first level on the Passage Frame 150 light!

Implement protective measures taking into account the hazard assessment!

Secure work areas to prevent falling from the scaffold, e.g. with a mobile scaffold.

If appropriate measures are not implemented, scaffolds must be erected only by qualified persons!

Passage Frames 150 light must not be installed next to bridges!



1 First tie level when bay length ≤ 2.50 m.
Bay lengths of ≤ 3.00 m are possible when alu frame decks are used.
2 First tie level when bay length ≤ 3.00 m.
3 Diagonals on both sides in every 5th bay.

1 Passage Frame 150
2 Vertical frame
3 Enlargement bracket
4 Guardrail
5 Diagonal
6 Scaffold retainer
7 Half Coupler 48/FB w.a.f. 22
8 Covering to prevent uplift (e.g. with tube and coupler)
9 Base Jack 50/33

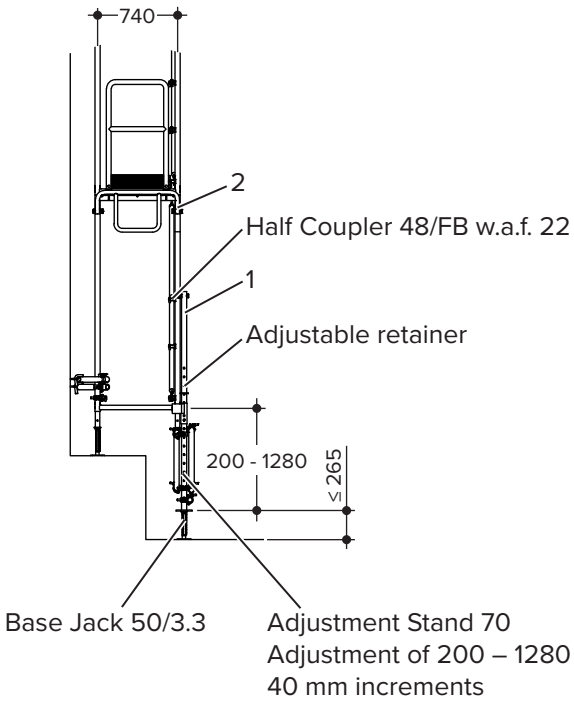
Use only with base jack Ø33 mm.

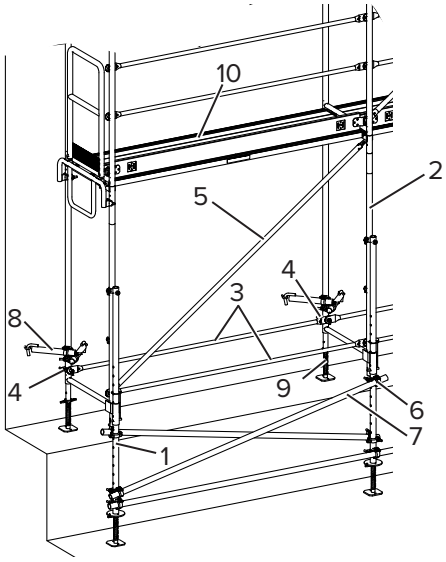
13.2 Adjustment Stands 70

Large offsets at the erection level can be bridged with the Adjustment Stands 70 (code:39835).

Comply with the following instructions:

1. Crossed bracing must be used at the base level at every 5th scaffold bay.
2. Use a Half Coupler 48/FB w.a.f. 22 (code:116370) to attach a second guardrail in the lower-most vertical frame, on the wall side.
3. An additional tie has to be set in each bay above the Adjustment Stands 70.
4. Adjustment Stands 70 must not be used by bridging sections.





1 Adjustment Stand 70
2 Vertical frame
3 Guardrail
4 Half Coupler 48/FB w.a.f. 22
5 Diagonal
6 Rigid Coupler 48/48 w.a.f. 22
7 Scaffold tubes
8 Scaffold retainer
9 Base Jack 50/3.3
10 Plank

Unless stated otherwise, all dimensions in mm.

13.3 Bridging sections 400, 500 and 750

WARNING	**Risk of falling during erection!** Implement protective measures taking into account the hazard assessment! Work only when standing on a safe and properly secured surface! When necessary, use Mobile Elevating Platforms (MEWP) and auxiliary scaffolds! Select attachment points for personal fall protection as explained in section 7.10.1 "Using personal fall protection equipment" on page 47.

CAUTION	**Risk of injury when lifting heavy components!** The bridge girders 500 and 700 are very heavy. Comply with relevant health and safety regulations on proper handling and lifting of heavy loads! Ensure that there are enough persons for the task or use suitable lifting equipment, e.g. chain hoists.

13.3.1 Bridging section 400

The bridging section 400 is a normal scaffold bay with planks that are 4.0 m long. However, additional ties are required in the bay (refer to pages 100, 103 and 119). No bridge girder is used.

13.3.2 Bridging sections 500 and 750

Bridge girders 500 and 750 can span two or three scaffold bays (500: 2 × 2.50 m; 750: 3x 2.50 m).

For a clearer view, the edge protection is not shown in this section.

Step 1 Connect the bridge girders in pairs to the half couplers on the vertical frame.

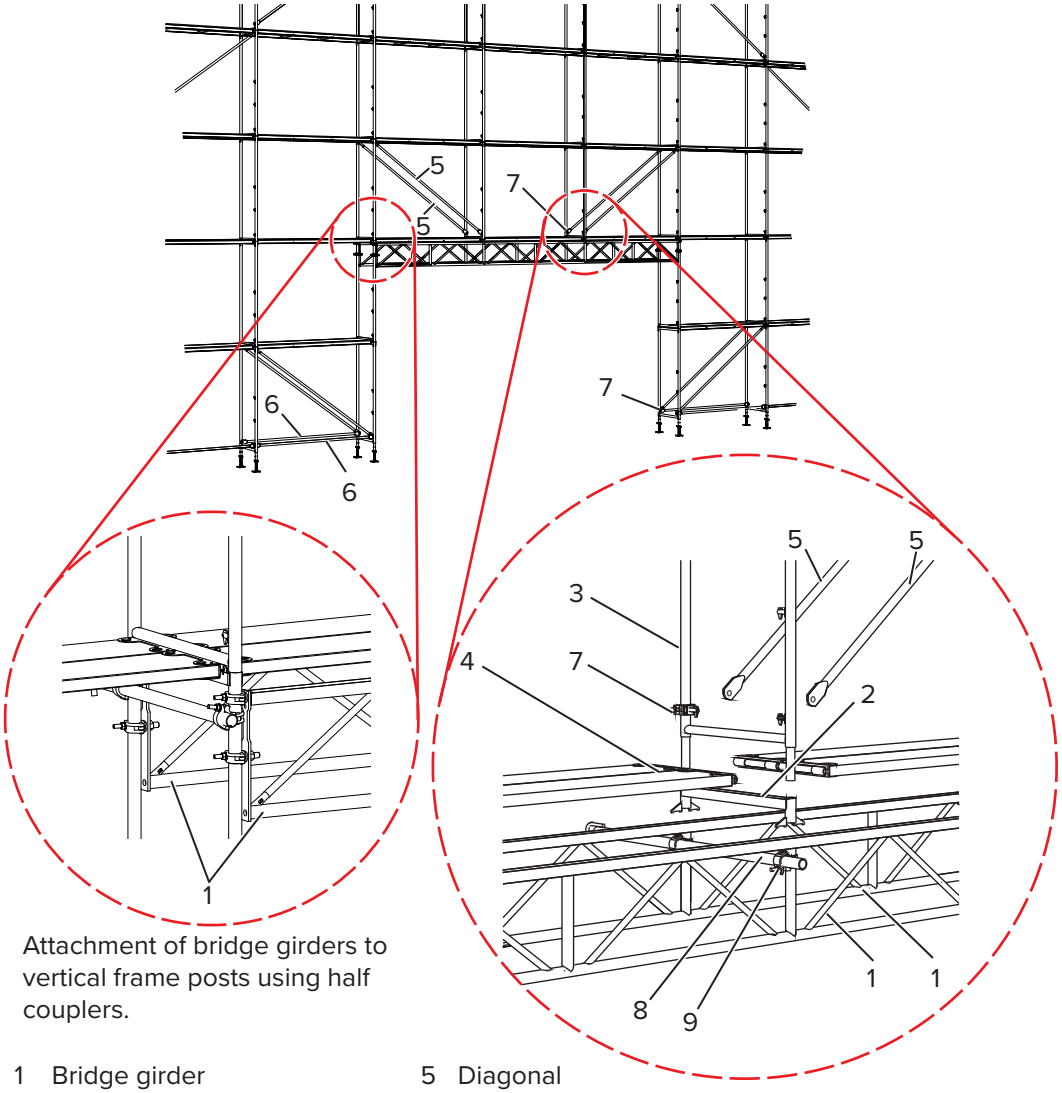
Step 2 Insert Cross Beam 70 (code:416446) and then place planks on the bridge girders. No more than ten scaffold levels must be erected above the bridging section.

Step 3 Use additional diagonals to secure the bays adjacent to and above the bridge girder.

Step 4 Use the Half Couplers 48/FB w.a.f. 22 (code:116370) to attach the lower end of the diagonals.

Step 5 Put the planks into place. All approved plank types may be used in bridging sections 500 and in the adjacent bays (< 2.50 m). Only the Alu Frame Deck 250/70 (code:437498) must be used in bridging sections 750!

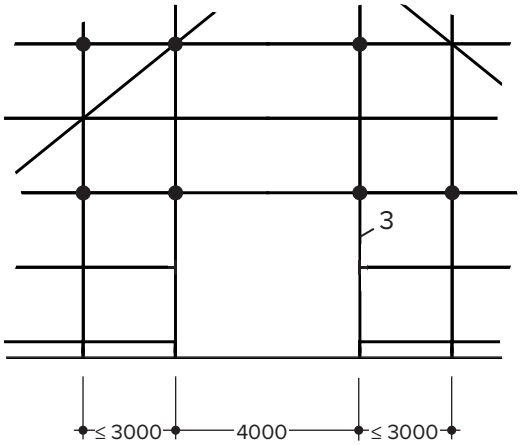
Step 6 Always tie the bridge section to suit the tying pattern for the rest of the scaffold.



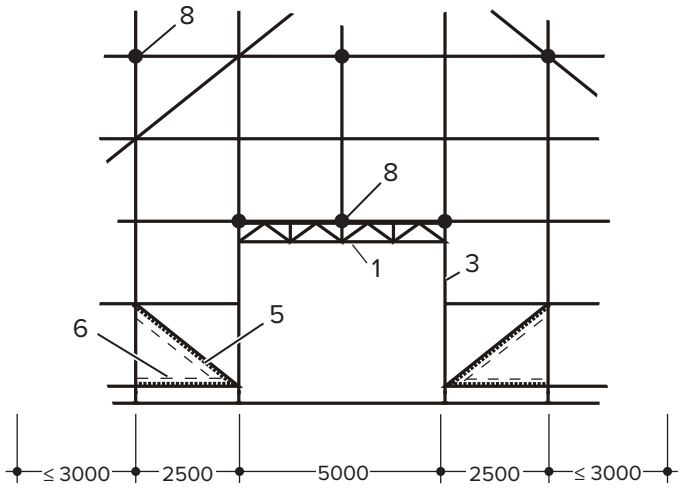
Attachment of bridge girders to vertical frame posts using half couplers.

1 Bridge girder 500 or 750
2 Transom 70
3 Vertical frame
4 Plank
5 Diagonal
6 Guardrail
7 Half Coupler 48/FB w.a.f. 22
8 Scaffold retainer
9 Rigid Coupler 48/48 w.a.f. 22

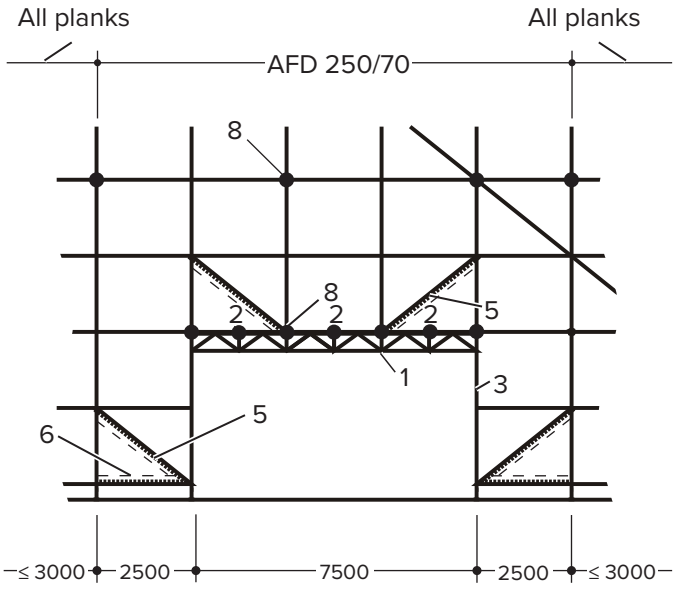
Bridging section 400



Bridge Girder 500



Bridge Girder 750



Tying pattern for bridging sections

1 Bridge girder 500 or 750
2 Transom 70
3 Vertical frame
4 Plank
5 Diagonal
6 Guardrail
7 Half Coupler 48/FB w.a.f. 22
8 Scaffold retainer

Unless stated otherwise, all dimensions in mm.

13.4 Enlargement brackets

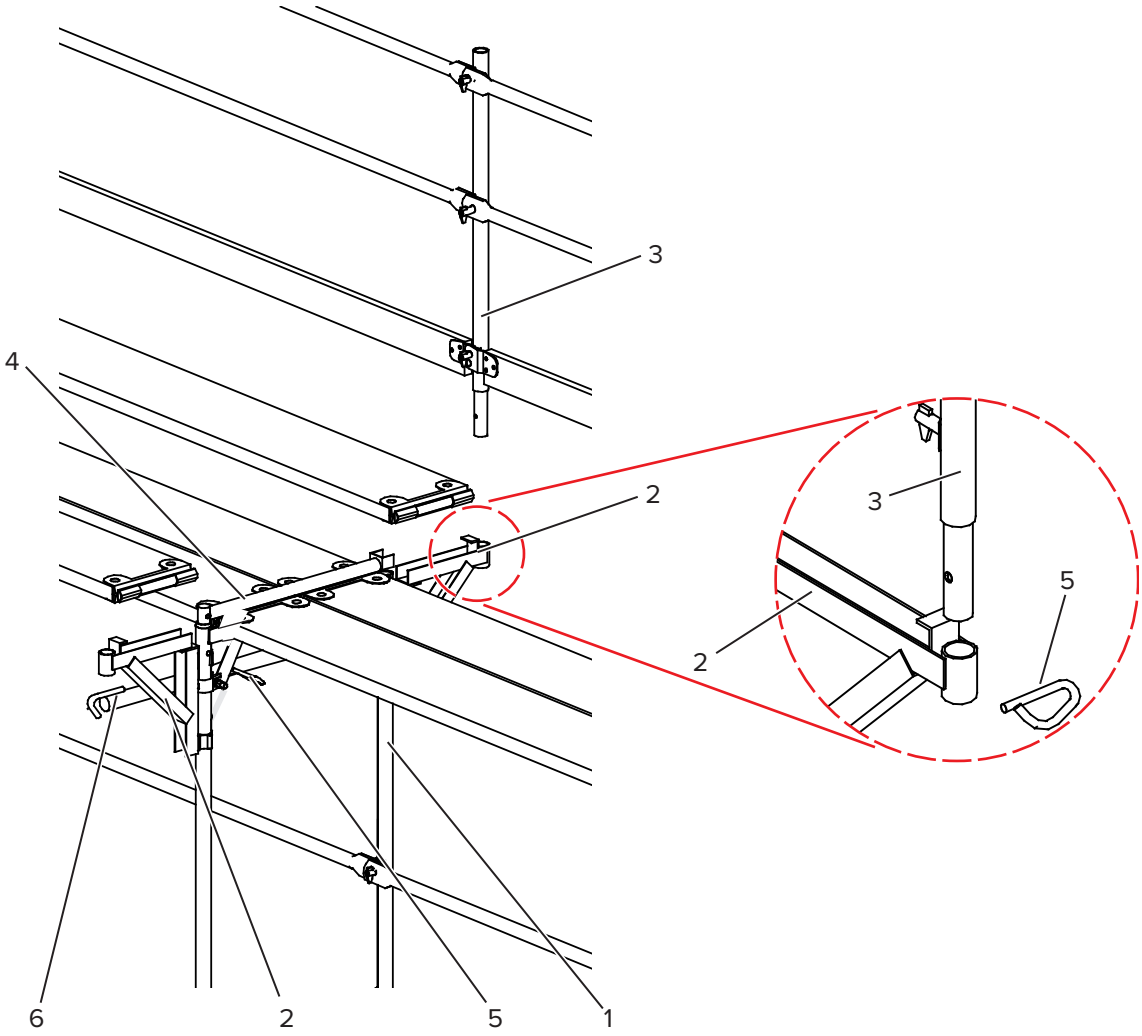
The width of the working platform of the BOSTA 70 scaffold can be increased by 350 mm or even by 740 mm, (the entire width of the system) using enlargement brackets.

First erect the scaffold level to which the enlargement brackets are to be attached, including two-part edge protection. Then, working from the secured area, install the enlargement bracket, the planks, and the two-part edge protection by the enlargement bracket. Use the previously attached knee rails as handrails by the enlargement bracket.

Enlargement Bracket 35

Hang the upper claw in the vertical frame post to attach it. Then screw on the lower half coupler. Frame Pins Ø8 mm (code:61312) that transfer the load are not essential, but they can be used to aid in erection.

Immediately secure the plank on the Enlargement Bracket (code:402599) to prevent uplift. The planks on the scaffold are secured with 1no. Frame Pin Ø8 mm each when the Bracket 70 Plank Retainer (code:442837) is put into place,



1 Vertical frame
2 Enlargement bracket
3 Single Post 70
4 Bracket 70 Plank Retainer
5 Frame Pin Ø8 mm
6 Scaffold retainer

Unless stated otherwise, all dimensions in mm.

The Enlargement Bracket 35 can be installed at every deck level on the interior of the scaffold (tying side), as well as at the top scaffold level on the exterior.

Always secure the Single Post 70 (code:133120) and the Bracket 70 Plank Retainer (code:442837) with the Frame Pins Ø8 mm.

Use scaffold tubes and couplers to create the side edge protection at the end face of the scaffold.

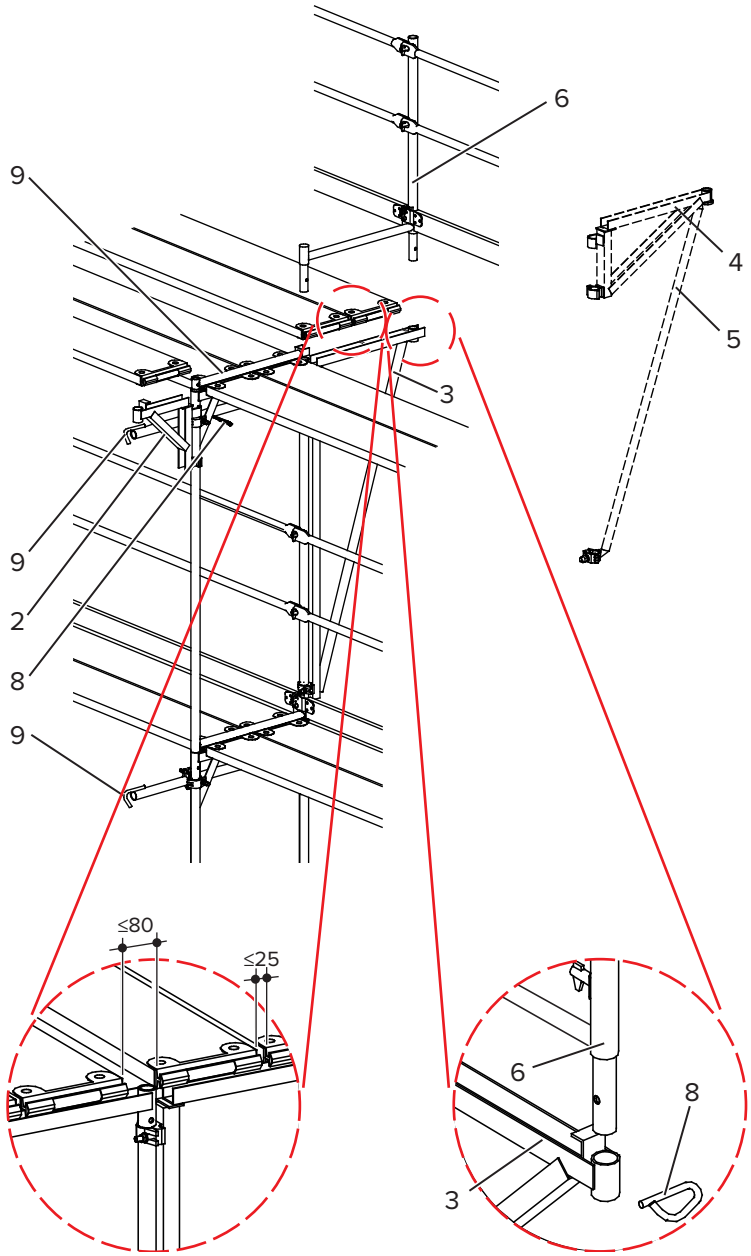
Secure as specified in section 7.13 "Top scaffold level" on page 65!

Enlargement Bracket 70 and 70/200

The working area on the top level of the scaffold is extended by 740 mm with the Enlargement Brackets 70/200 (consisting of an Enlargement Bracket 70 (code:424226) and a Diagonal EB 70 cpl. (code:554959)). Placing an Enlargement Bracket 35 (code:402599) on the interior of the scaffold creates a working area with a width of 1.80 m. The Enlargement Bracket 70/200 is attached to the vertical frame with two half couplers.

Th planks are secured to the scaffold with the Bracket 70 Plank Retainer (code:442837) and to the bracket with the Railing Post 70 (code:452980).

Tie the scaffold to every enlargement bracket at bracket level and at the next lower position.



1 Vertical Frame 200/70, light
2 Enlargement Bracket 35 light
3 Enlargement Bracket 70/200
4 Enlargement Bracket 70 light
5 Diagonal EB 70 cpl.
6 Railing Post 70
7 Bracket 70 Plank Retainer
8 Frame Pin Ø8 mm
9 Scaffold retainer

Unless stated otherwise, all dimensions in mm.

The lateral gap between the bracket plank and the main plank (before the enlargement bracket was attached) must not exceed 80 mm. The lateral gap between the scaffold planks on the enlargement bracket must be up to 25 mm wide.

Edge protection should be created as needed for the respective situation.

Secure as specified in section 7.13 "Top scaffold level" on page 65!

An Enlargement Bracket 70 (code:424226) and a Diagonal EB 70 cpl. (code:554959) can be used instead of the Enlargement Bracket 70/200.

13.5 BOSTA 70 IEP Rail G2

Inside edge protection can be created on a BOSTA 70 scaffold with the aid of a BOSTA 70 IEP Rail G2 (code:653480).

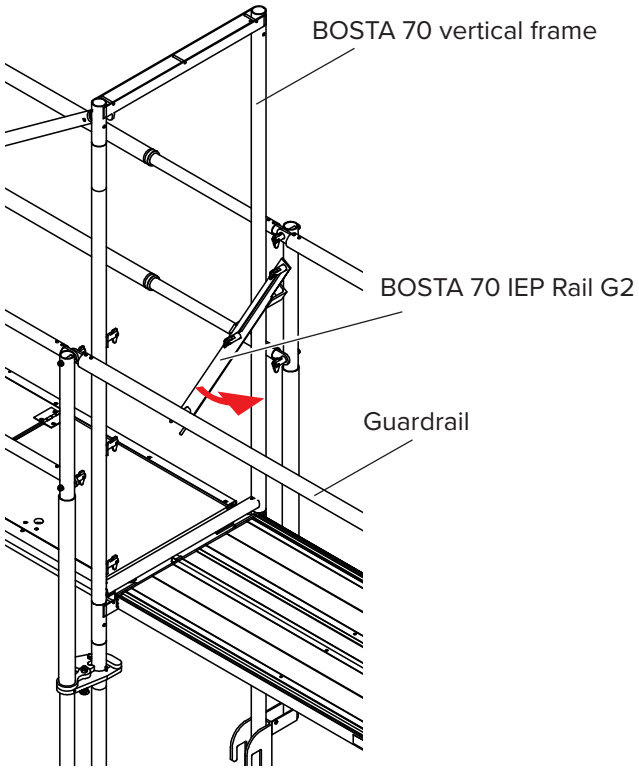
If the space between the façade and the scaffold deck is greater than 300 mm, interior side edge protection is required.

The BOSTA 70 IEP Rail G2 must be connected only to a BOSTA 70 vertical frame.

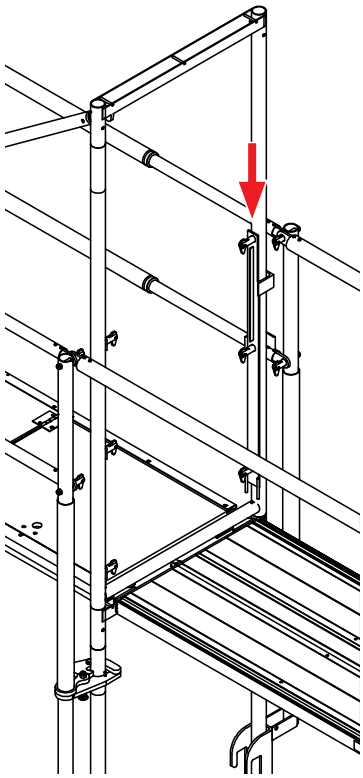
Up to 70no. BOSTA 70 IEP Rails G2 can be stored and transported in one Euro Lattice Box (code:548480).

13.5.1 Installing interior side edge protection

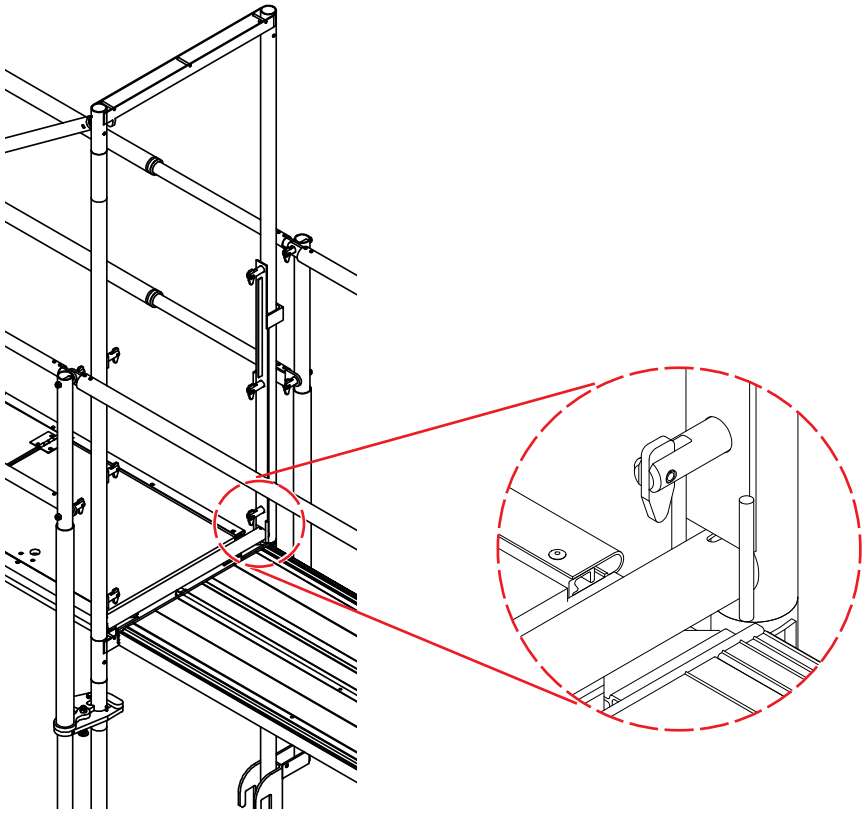
Step 1 Place the BOSTA 70 IEP Rail G2 (code:653480) diagonally on the tube of the vertical frame, with the section between the angles on the underside.



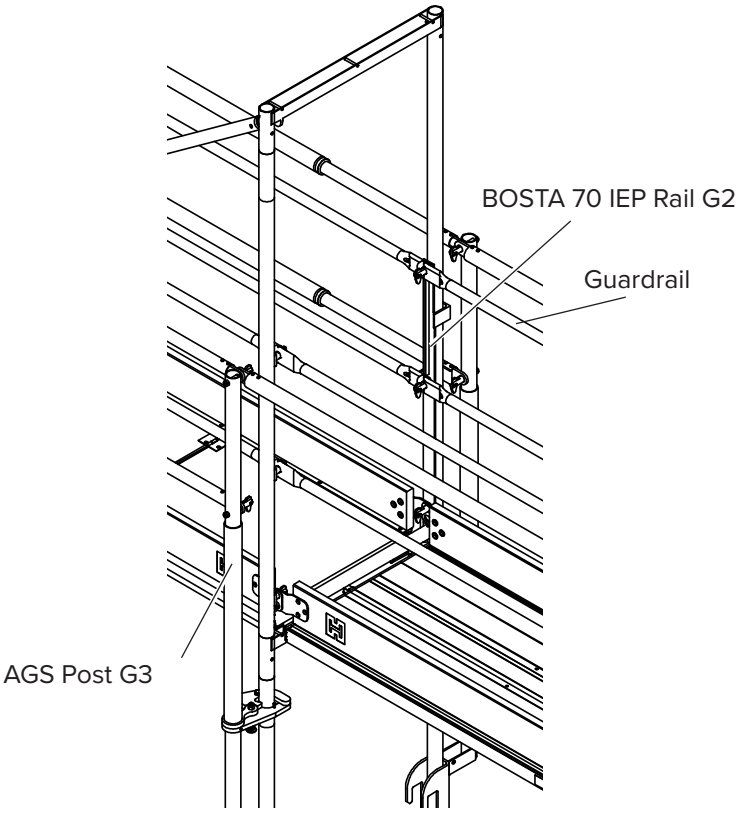
Step 2 Then move the BOSTA 70 IEP Rail G2 to the vertical position, such that the angles wrap around the tube.



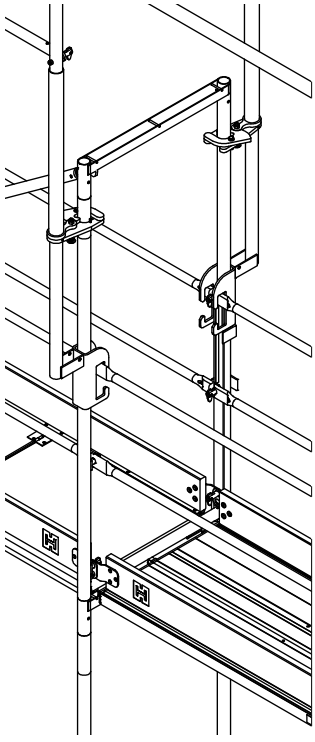
Step 3 Lower the BOSTA 70 IEP Rail G2 all the way, until the bolts grasp both sides of the vertical rail on the vertical frame.



Step 4 Attach guardrails and toe boards.



Step 5 Raise the AGS Railing Posts G3 (code:53450) to the next level.



13.6 Façade insulation accessories

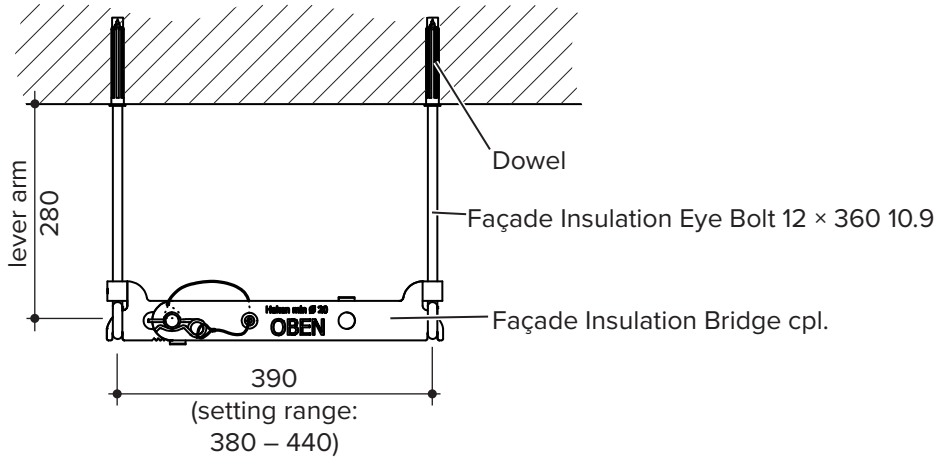
13.6.1 Façade Insulation Bridge cpl.

The Façade Insulation Bridges cpl. (code:652293) enables not only placement of sturdy new ties but also refurbishment of an existent tie that cannot sufficiently bear the load. The load-bearing capacity of the façade insulation assembly (consisting of the Façade Insulation Bridge cpl., the façade insulation eye bolts and the dowels) is 2.35 kN when placed parallel to the façade with a lever of 285 mm. The suspended structure must be no more than 220 mm thick.

Assembly

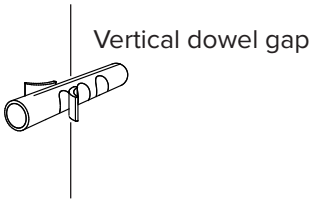
Façade scaffolds must be tied by the posts below the planks, but also as close as possible to the scaffold joints. The scaffold retainer has to be secured to both sides of the vertical frame with Rigid Couplers 48/48 w.a.f. 22S (code:2514) in compliance with DIN EN 74-1. If it is not possible to attach the scaffold retainers directly below the scaffold joint, the scaffold retainer can be placed up to 300 mm below the planks.

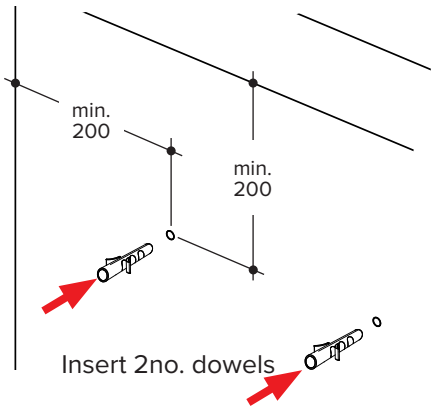
Depending on the conditions on site, the Façade Insulation Bridge cpl. (code:652293) may allow the scaffold retainer to be connected to both sides of the post.



Always comply with the required clearance when attaching the scaffold retainer.

The Façade Insulation Bridge cpl. helps to mark the dowel holes and then drill the holes with a suitable tool.



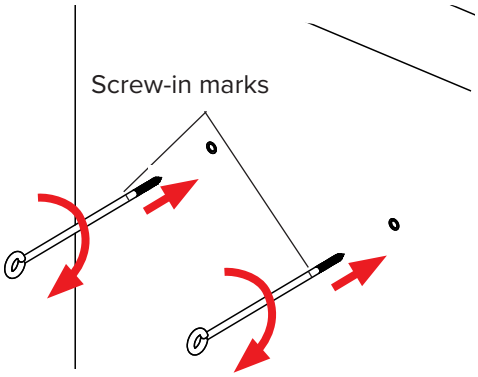


The holes must be at least 200 mm away from the edge of the scaffold.

Always comply with the dowel manufacturer's instructions.

Unless stated otherwise, all dimensions in mm.

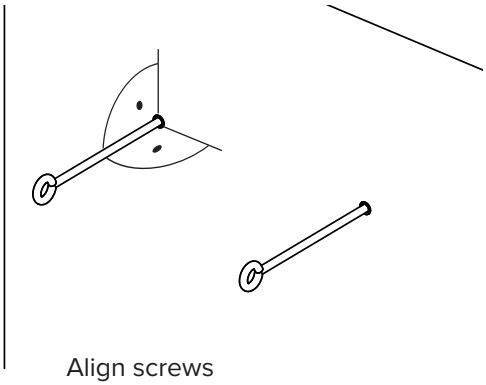
The next step is to screw the threads on the façade insulation eye bolts all the way into both dowels, making sure that they are inserted to the same depth.



Screw in both façade insulation eye bolts

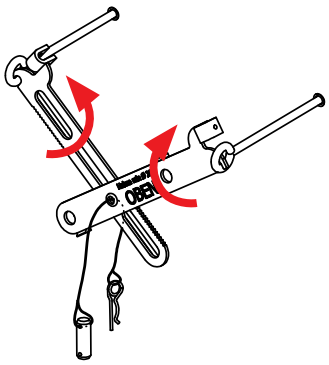
Screw both façade insulation eye bolts in as far as the screw-in marks.

It is essential that the screw axes are aligned perpendicular to the façade. Also ensure that the eyes on both façade insulation bolts are aligned vertically.



Align screws

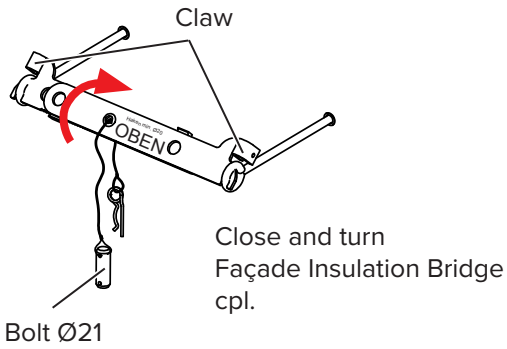
Next guide the open Façade Insulation Bridge cpl., with both hooks open, into the eyes of the façade insulation bolts. The claws must face up and towards the façade. The letters on the Façade Insulation Bridge cpl. have to be visible from above.



Hook in Façade Insulation Bridge cpl.

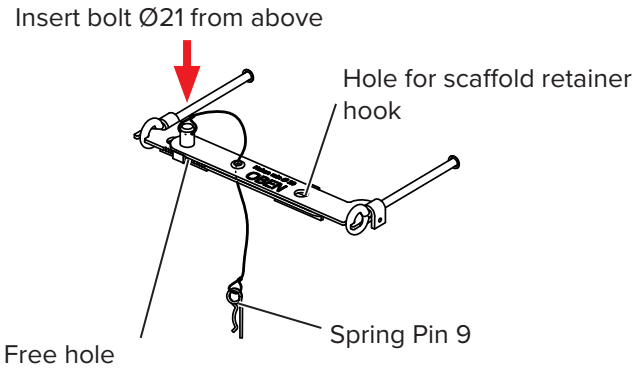
Now close the open Façade Insulation Bridge cpl.

Rotate the closed Façade Insulation Bridge cpl. down and into the horizontal position, whereby the claws completely enclose both façade insulation bolts.

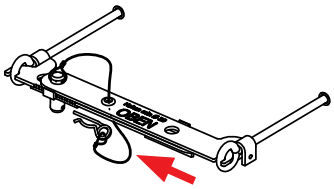


This causes the legs on the Façade Insulation Bridge cpl. to move one over the other, and the opening into which the scaffold retainer hook is to be inserted lines up with the slot. The claws now grasp the respective shaft on the two façade insulation eye bolts.

Next insert the bolt Ø21 from above into the free hole for the scaffold retainer hook.

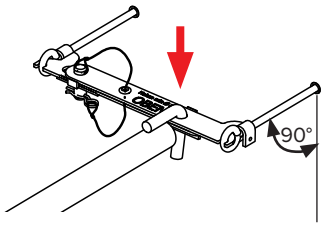


Then secure it from below with a spring pin 9.



Secure from below with the Spring Pin 9

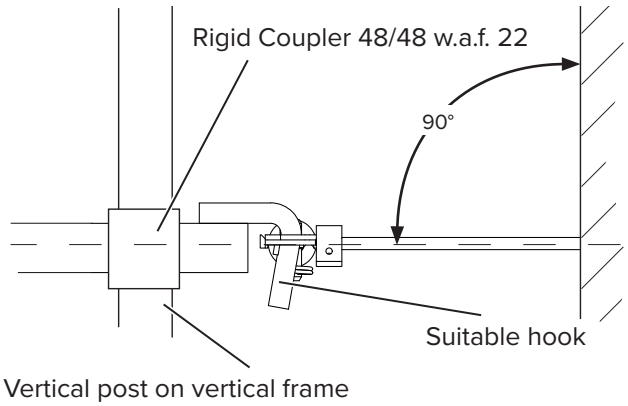
Now insert the scaffold retainer hook into the free hole. This braces the Façade Insulation Bridge cpl. and enables it to bear load.



Hook the scaffold retainer

Unless stated otherwise, all dimensions in mm.

To best transfer the load, the scaffold retainer and the façade insulation eye bolts should be at the same horizontal level (scaffold retainer perpendicular to the façade).



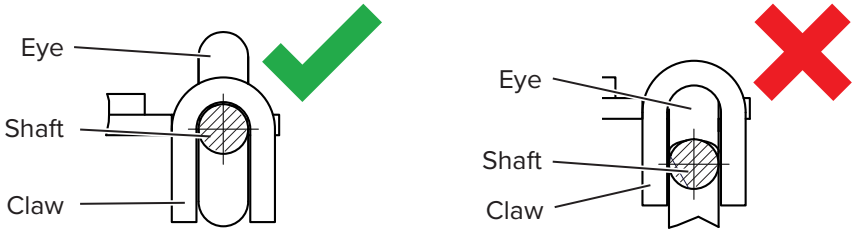
WARNING

Risk of falling due to reduced load-bearing capacity of the ties!

The claw must completely enclose the façade insulation eye bolt (refer to the illustration below).

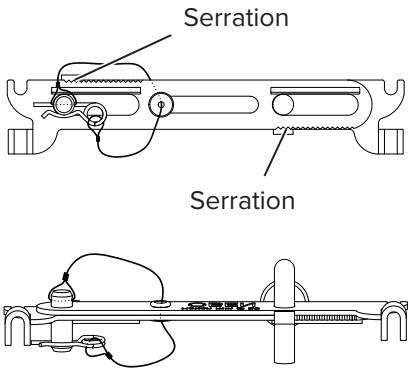
The bolt shaft has to be inserted all the way into the claw!

If the façade insulation bolt is not positioned correctly (refer to the illustration on the right) the load-bearing capacity of the ties is lower!



Ensure correct position of Façade Insulation Bridge cpl.

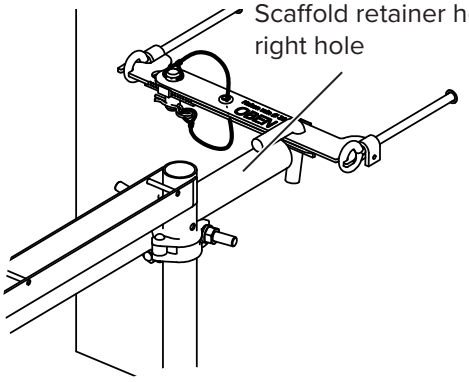
The inclination of the scaffold retainer hook braces the Façade Insulation Bridge cpl. and causes the serration to close. Only Hünnebeck original scaffold retainers must be used.



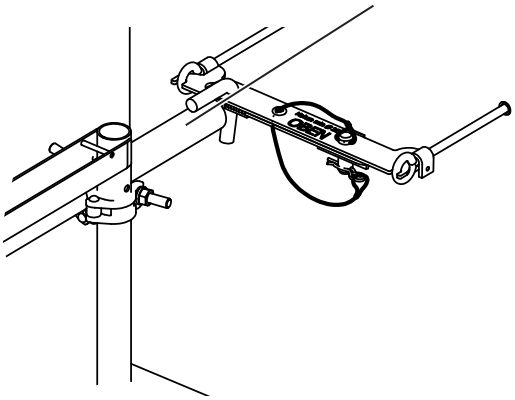
Attaching scaffold retainer to BOSTA 70 vertical frames

The final step is to screw the scaffold retainer onto both posts of the vertical frame, with torque of 50.00 Nm, using the Rigid Couplers 48/48 w.a.f. 22 (code.2514) as specified by DIN EN 74-1. This creates a load-bearing tie that is now ready to accommodate the load.

Scaffold retainer hooked into right hole



Scaffold retainer hooked into left hole



Scaffold retainer of other lengths are available from Hünnebeck upon request.

An alternative to the process described above is to secure the scaffold retainer hook in the left hole of the Façade Insulation Bridge cpl. (code:652293). The same steps and specifications apply as to attachment in the right hole.

Façade insulation plank

This façade insulation plank is an addition to the BOSTA 70 program, ensuring that a façade scaffold is erected to be enable installation of the façade insulation system.

Façade insulation plank		Scaffold deck				
Length [mm]	Weight [kg]	SB 32	AB 32	HKB 32	VHB 32	ART 70
3000	19	LC3				
2500	16					
2000	13					

The BOSTA 70 façade insulation plank can be extended in steps of 32 mm, allowing it to be integrated into the BOSTA 70 scaffold system without significant additional effort.

The BOSTA 70 façade insulation plank made of aluminium is available in bay widths of 2.00 m, 2.50 m, and 3.00 m. The maximum permissible load is 2 kN/m² (LC 3). Since it weighs only 20 kg (3.00 m plank) it is easy to handle.

DANGER

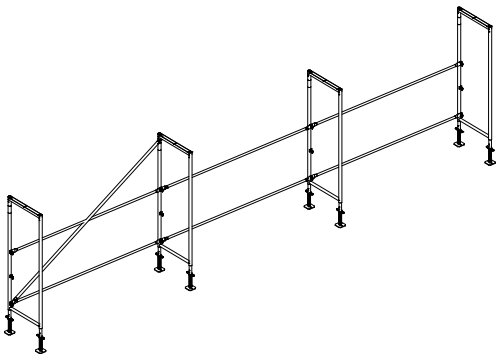
Risk of collapse!

The BOSTA 70 façade insulation planks and the BOSTA 70 Façade Insulation Telescope (code:652230) must never be placed in a position where they could hinder the net to catch a person on the fall protection scaffolds!

The façade insulation plank cannot be used in conjunction with alu ladder passage decks.

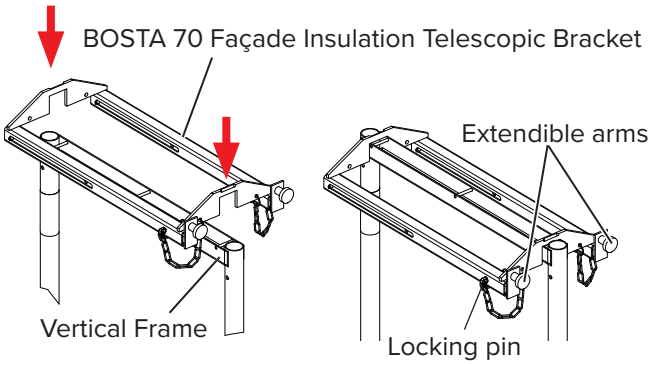
Assembly

Step 1 The first scaffold level is erected as usual.



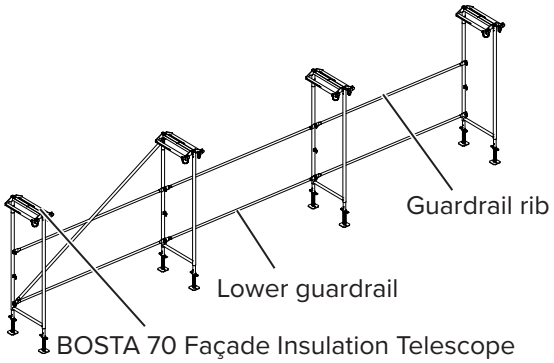
Comply with the instructions in section 7 "Component assembly" on page 40!

Step 2 Before erecting each additional bay, place the BOSTA 70 Façade Insulation Telescopes (code:652230) on the vertical frames. The telescope arms face the building.
BOSTA 70 façade insulation planks will be hooked to the telescope arms later.



The telescope arms must always be locked with the safety pins. If they are not secured, they can shift!

Lowest scaffold level with BOSTA 70 Façade Insulation Telescopic Bracket

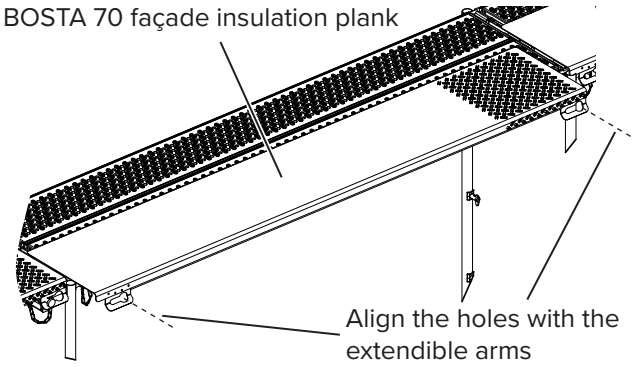


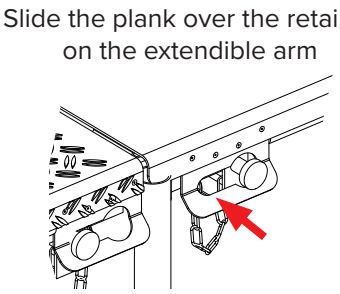
Step 3 Once the BOSTA 70 planks are in place, the guardrail near the ground can be removed.
The lower guardrail must remain in the scaffold.

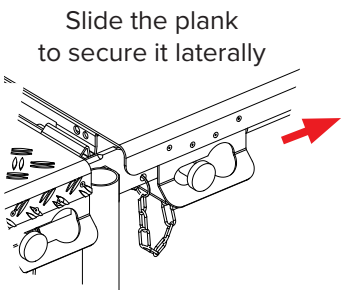
Step 4 Next the BOSTA 70 façade insulation plank is moved from the lower level and placed on the BOSTA 70 scaffold decks.
The hole in the BOSTA 70 façade insulation plank is then lined up with the telescope arm and the plank is slid over the retainer on the telescope arm.
Sliding the arm laterally secures the plank.
The plank is now centred in the scaffold bay and secured in the Façade Insulation Telescope.

Unless stated otherwise, all dimensions in mm.

Step 5 The subsequent levels are erected in the same way.



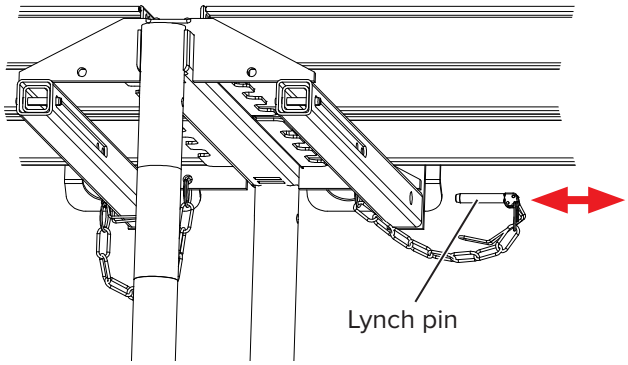


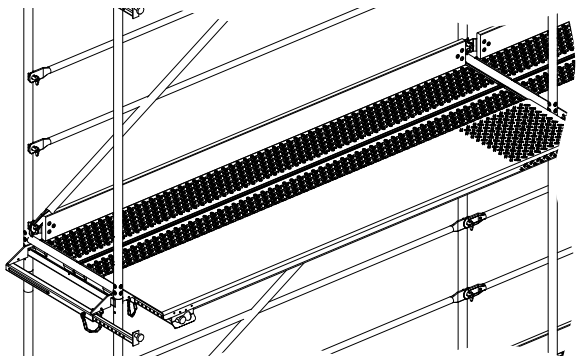


Always comply with the instruction in section 7 "Component assembly" on page 40!

Step 6 Placing the vertical frames on the next level prevents the BOSTA 70 façade insulation planks from shifting laterally.

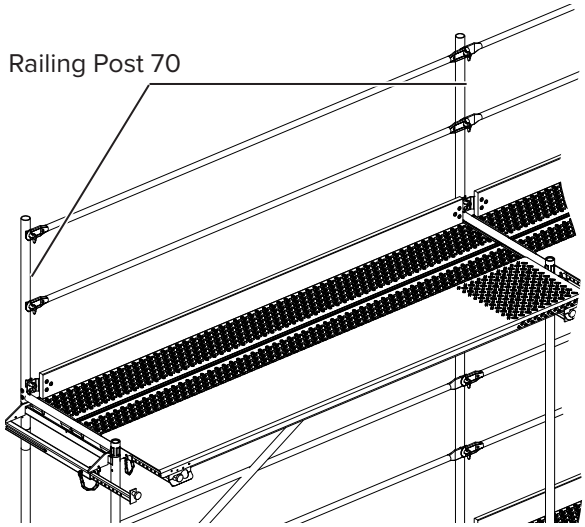
Step 7 The façade insulation bracket is adjusted from below. The lynch pins on both side of the BOSTA 70 Façade Insulation Telescope (code:652230) are removed to extend the plank, and the BOSTA 70 is extended according to the distance to the building façade. Then the lynch pins are inserted again.





BOSTA 70 façade insulation plank extended

Step 8 The top level of the scaffold with the built-in BOSTA 70 planks must always be equipped with Railing Posts 70 (code:452980). The Railing Posts 70 must be secured with Frame Pins Ø8 mm (code:61312) to protect the planks at the top level from uplift.



WARNING

Risk of falling due to planks that are not properly secured!

Do not step onto the façade insulation planks until the plank level is secured to prevent uplift!

14 Use as protective scaffold

When the scaffold is used as a protective scaffold, the vertical distance between the edge of the building and the working platform must not exceed 2.00 m. And the distance b between the edge of the building and the interior side of the edge protection must be at least 0.90 m. When used as a protective scaffold, always comply with the applicable regulations pertaining to the occupational health and safety.

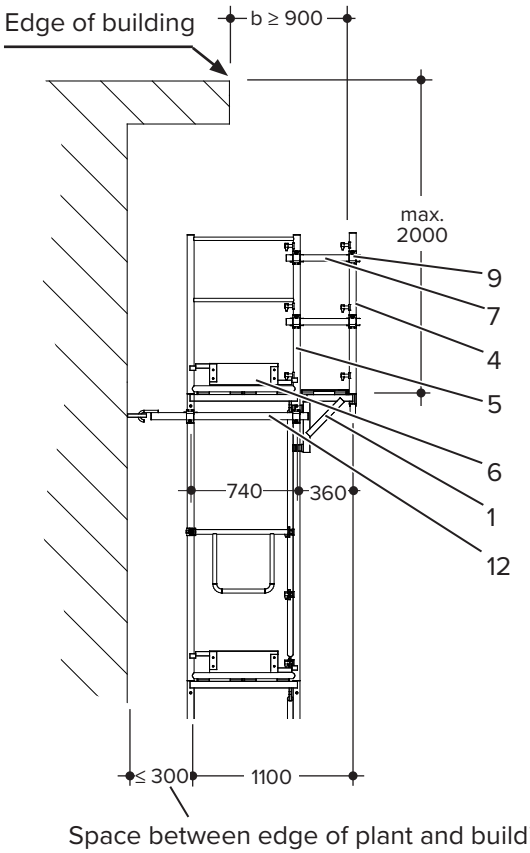
WARNING

Risk of falling due to unsuitable planks!

Façade insulation planks must never be placed in a position where they could hinder the net to catch a person on the fall protection scaffolds!

Use one of the other planks described in this User Guide!

The hazard assessment should include determining whether suitable fall protection can be installed instead of a protective scaffold (refer to AGR A2.1). For example, adjustment frames can be used to attach a scaffold plank at the height of the edge of the building, or interior side edge protection can be installed to prevent falling from the scaffold.

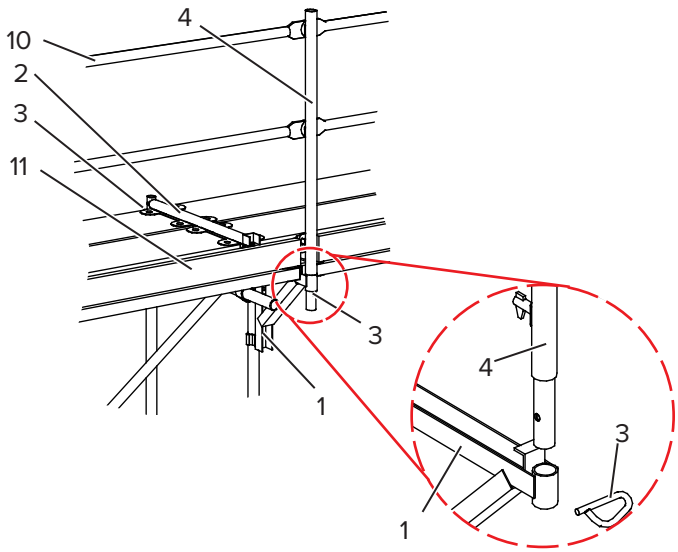


1 Enlargement Bracket 35
2 Bracket 70 Plank Retainer
3 Frame Pin Ø8 mm
4 Single Post 70
5 Twin-Railing Post 70 trans. light
6 Toe Board 74/15
7 Scaffold tube 48.3/50
8 Scaffold tube 48.3/150
9 Rigid Coupler 48/48 w.a.f. 22
10 Guardrail
11 Toe board
12 Scaffold retainer

14.1 With Enlargement Bracket 35 on the exterior

The planks on the top vertical frame are secured with Bracket 70 Plank Retainers (code:442837), 1no. Frame Pin Ø8 mm (code:61312) each, The Enlargement Bracket 35 (code:402599) is screwed onto the vertical frame at the height of the plank, then the plank is put into place. It is then immediately protected from uplift. The longitudinal edge protection is comprised of the Single Posts 70 (code:133120), guardrails and toe boards. The end face of the scaffold is secured with a Twin Railing Post 70 trans. light (code:652880) and a toe board.

Close the gap in the side edge protection with two 0.50 m scaffold tubes, with one coupler each.



1	Enlargement Bracket 35	7	Scaffold tube 50
2	Bracket 70 Plank Retainer	8	Scaffold tube 150
3	Frame Pin Ø8 mm	9	Rigid Coupler 48/48 w.a.f. 22
4	Single Post 70	10	Guardrail
5	Twin-Railing Post 70 trans. light	11	Toe board
6	Toe board	12	Scaffold retainer

Refer to section 12 "Tying" on page 95 for the tying pattern and forces.

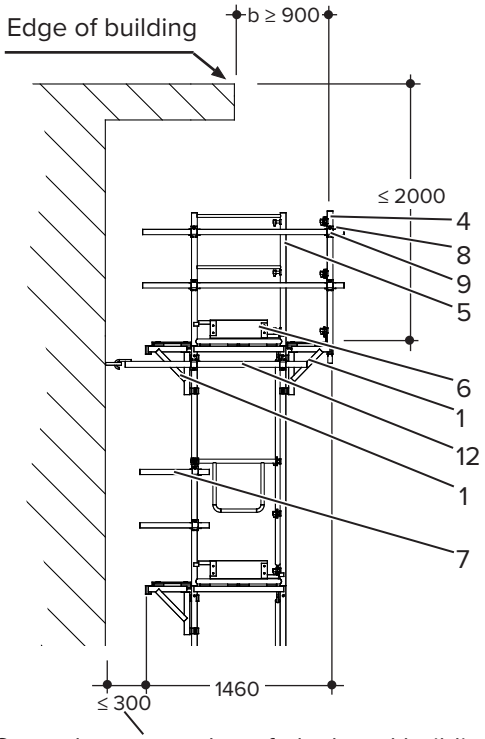
All Railing Posts 70 (code:452980) must be secured with Frame Pins Ø8 (code:61312) (also refer to section 7.13 "Top scaffold level" on page 65)!

14.2 With Enlargement Brackets 35 on the interior and exterior

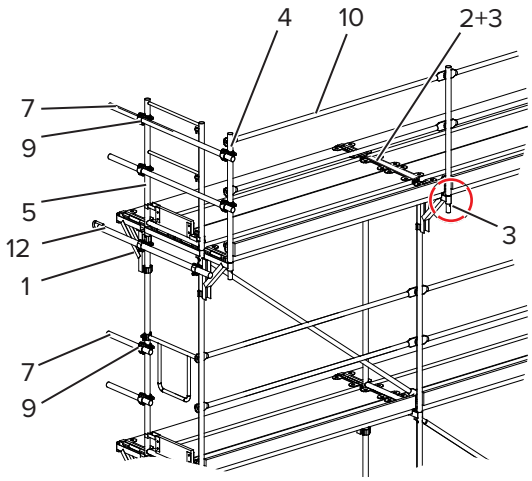
Using Enlargement Brackets 35 (code:402599) on both sides, the top plank level is widened to 1460 mm.

The end face of the scaffold is secured with a Twin Railing Post 70 trans. light (code:652880) and a toe board.

Two 1.50 m scaffold tubes, to be attached with 2no. Rigid Couplers 48/48 w.a.f. 22 each (code:2514), close the gaps on both sides of the Twin Railing Post 70 trans. light (code:652880).



Space between edge of plank and building



1 Enlargement Bracket 35
2 Bracket 70 Plank Retainer
3 Frame Pin Ø8 mm
4 Single Post 70
5 Twin-Railing Post 70 trans. light
6 Toe Board 74/15
7 Scaffold Tube 48.3/50
8 Scaffold Tube 48.3/150
9 Rigid Coupler 48/48 w.a.f. 22
10 Guardrail
11 Toe board
12 Scaffold retainer

Refer to section 12 "Tying" on page 95 for the tying pattern and forces.

All Railing Posts 70 (code:452980) must be secured with Frame Pins Ø8 (code:61312) (also refer to section 7.13 "Top scaffold level" on page 65)!

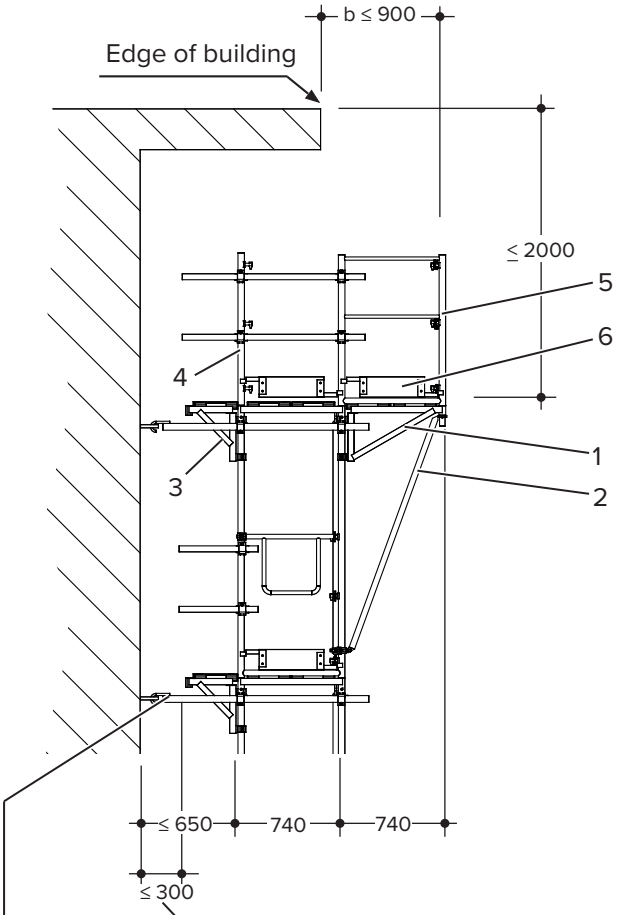
14.3 With Enlargement Bracket 70/200 on the exterior

The Enlargement Bracket 70/200, consisting of the Enlargement Bracket 70 (code:424226) and the Diagonal EB 70 cpl. (code:554959), doubles the width of the top plank level.

With an Enlargement Bracket 35 light (code:652883) on the building side, the total plank width increases to 1840 mm. Use 1no. Frame Ø8 mm (code:61312) and 1no. Railing Post 70 (code:452980) on each Bracket 70 Plank Retainer (code:442837) to secure the plank

The end face of the scaffold is closed using 1no. Twin-Railing Post 70 trans. light (code:652880), 1no. Single Post 70 (code:133120), and 2no. Scaffold Tubes 48.3/150 (code:169023), which are connected using 4no. Rigid Couplers 48/48 w.a.f. 22 (code:2514).

Two Toe Boards 74/15 trans. (code:651991) also have to be installed.



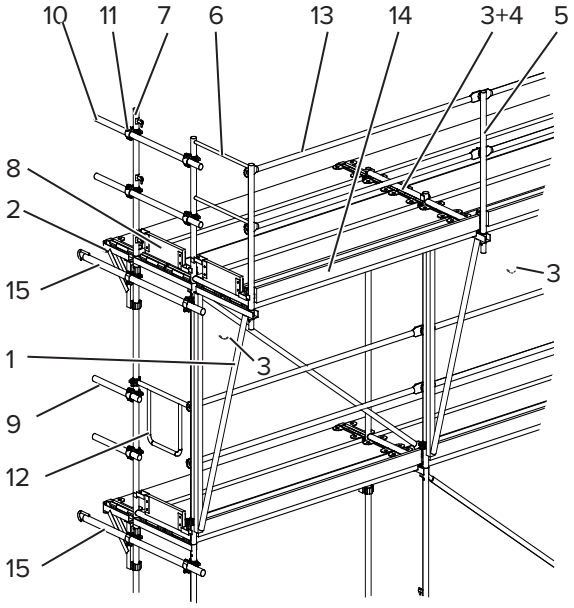
Using Enlargement Brackets 70/200 or Enlargement Brackets 70 along with the Diagonals EB 70 cpl. requires additional ties at each scaffold joint.

1 Enlargement Bracket 70
2 Diagonal EB 70 cpl.
3 Enlargement Bracket 35
4 Twin-Railing Post 70 trans. light
5 Single Post 70
6 Toe Board 74/15

Refer to section 12 "Tying" on page 95 for the tying pattern and forces.

All Railing Posts 70 (code:452980) must be secured with Frame Pins Ø8 (code:61312) (also refer to section 7.13 "Top scaffold level" on page 65)!

Unless stated otherwise, all dimensions in mm.

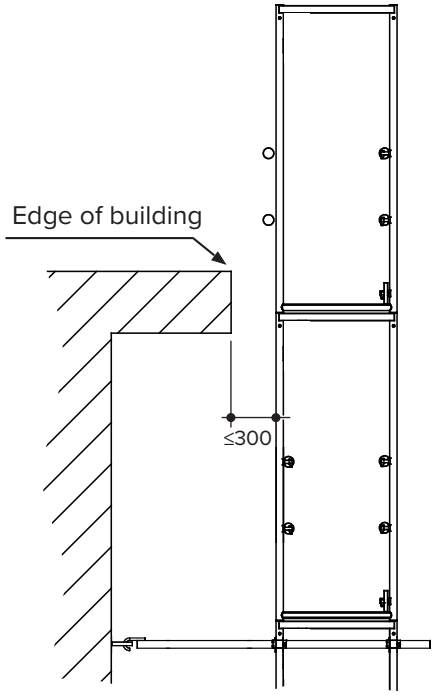


1 Enlargement Bracket 70/200
2 Enlargement Bracket 35 light
3 Bracket 70 Plank Retainer
4 Frame Pin Ø8 mm
5 Railing Post 70
6 Twin-Railing Post 70 trans. light
7 Single Post 70
8 Toe Board 74/15
9 Scaffold tube 48.350
10 Scaffold Tube 48.3/150
11 Rigid Coupler 48/48 w.a.f. 22
12 Double Rail 70 trans
13 Guardrail
14 Toe board
15 Scaffold retainer

The Enlargement Bracket 70 (code:424226) with Diagonal EB 70 cpl. (code:554959) can be used instead of the Enlargement Bracket 70/200.

14.4 Use as fall protection

Scaffold as a structure to prevent falling from the edge of the building.



Refer to section 12 "Tying" on page 95 for the tying pattern and forces.

15 Use as protective roof scaffold

When using the BOSTA 70 scaffold as a protective roof scaffold, the vertical distance between the eaves and the uppermost platform must not exceed 1.50 m. And the distance b between the eaves and the interior side of the edge protection must be at least 0.70 m.

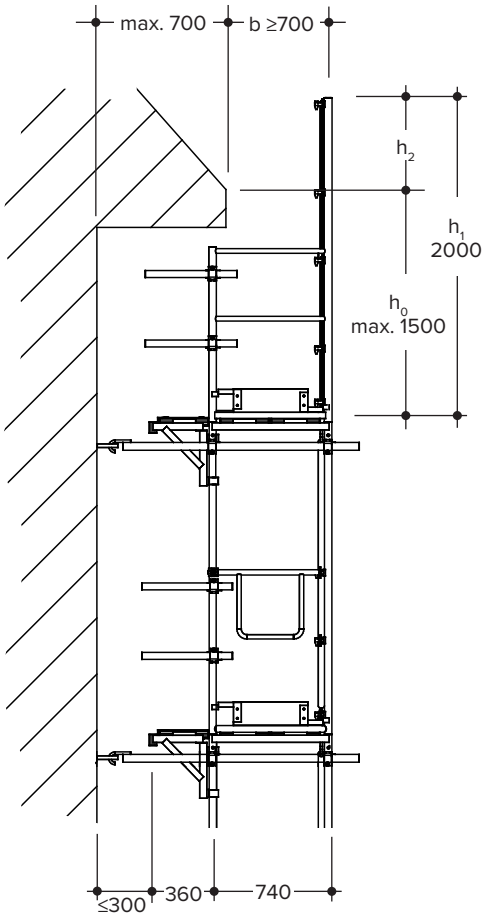
The protective wall has to protrude beyond the eaves by at least h1 = 1.50 m - b (specified in m). When used as a protective roof scaffold, always comply with the applicable regulations pertaining to the occupational health and safety.

WARNING

Risk of falling due to unsuitable planks!

Façade insulation planks must never be used in a position where they could hinder the net to catch a person on the fall protection on a protective roof scaffold!

Use one of the other planks described in this User Guide!



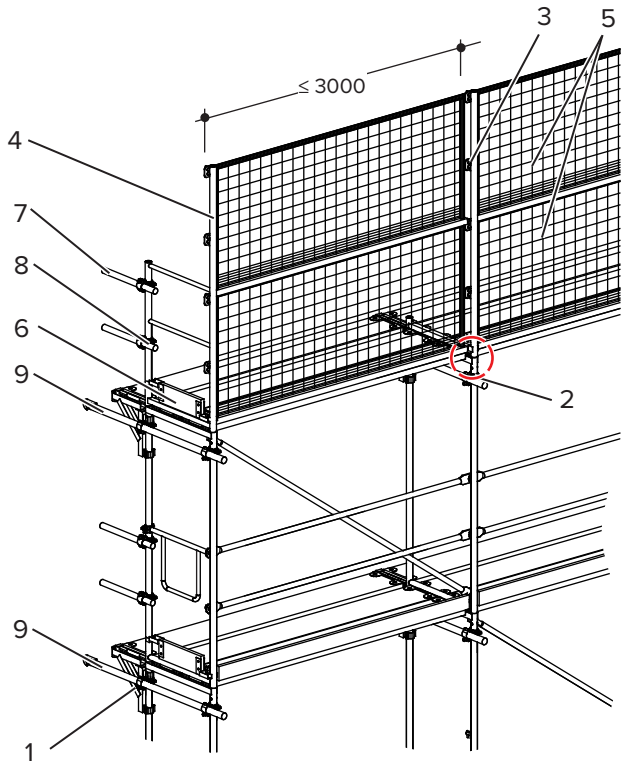
$h_2 = h_1 - h_0 \geq 1.50 - b$

All Roofer's Safety Posts must be secured with Frame Pins Ø8 mm (code:61312).

Unless stated otherwise, all dimensions in mm.

15.1 With Enlargement Bracket 35 on the interior

Because the eaves protrude beyond the edge of the building, the uppermost platform has to be widened in order to maintain the minimum distance of 700 mm between the eaves and the protective wall. With the Enlargement Bracket 35 (code:402599) facing the building, the platform width increases to 1100 mm. The Roofer's Safety Post 70 (code:543204) secures the planks and supports the two 1.0 m-high mesh panels. The end face of the scaffold is secured with 1no. Roofer's Safety Post 70 trans. light (code:652875), 1no. Toe Board 74/15 trans. (code:651991) and 2no. Scaffold Tubes 48.3/50 (code:169001).



1 Enlargement Bracket 35
2 Frame Pin Ø8 mm
3 Roofer's Safety Post 70
4 Roofer's Safety Post 70 trans. light
5 Mesh panel
6 Toe Board 74/15 trans.
7 Scaffold Tube 48.3/50
8 Rigid Coupler 48/48 w.a.f. 22
9 Scaffold retainer

WARNING

Warning!

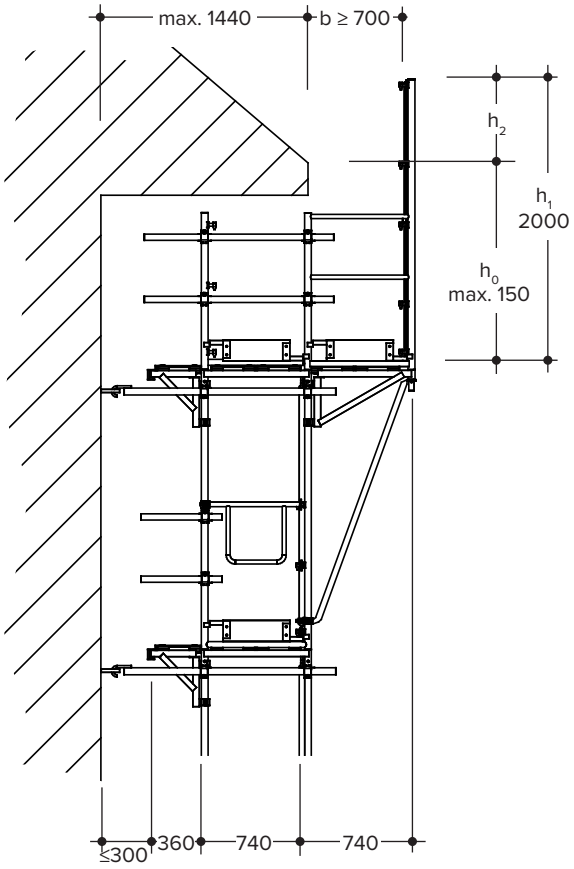
The scaffold must always be tied at the top along the entire width as indicated in section 12 "Tying" on page 95.

Refer to section 12 "Tying" on page 95 for the tying pattern and forces.

15.2 With Enlargement Bracket 35 on the interior and Enlargement Bracket 70/200 or Enlargement Bracket 70 on the exterior

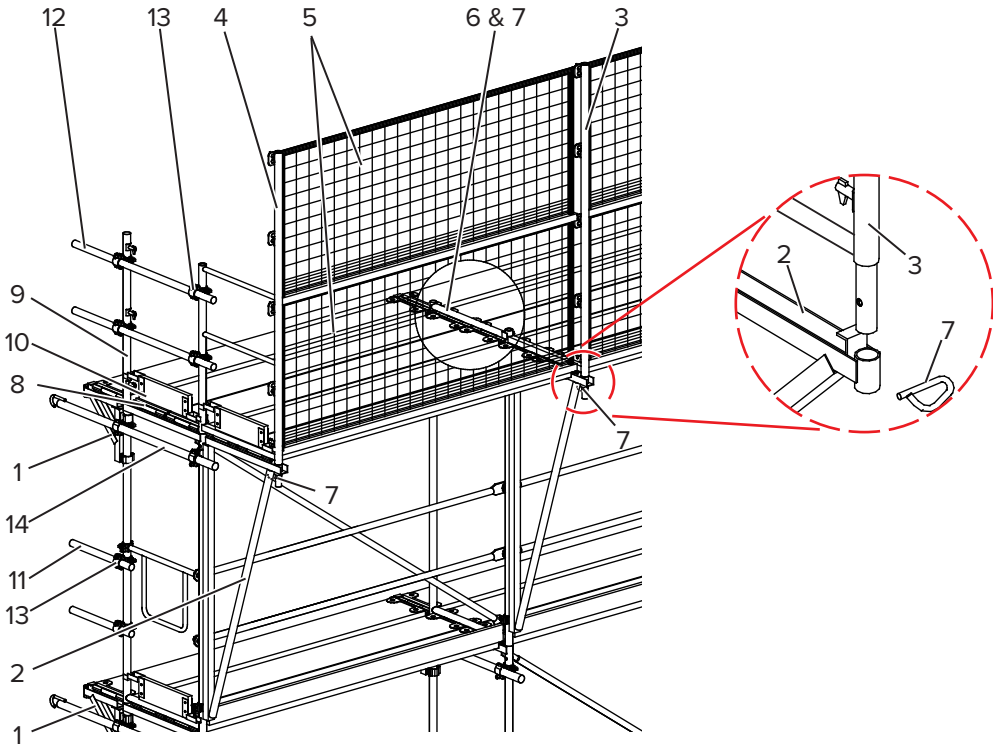
Using the Enlargement Brackets (code:402599) and 70/200, consisting of an Enlargement Bracket 70 (code:424226) and a Diagonal EB 70 cpl. (code:554959), as shown in the illustration increases the plank width at the top level of the scaffold to 1840 mm. Eaves can protrude by up to 1440 mm. The planks on the scaffold are secured with the Bracket 70 Plank Retainers (code:442837) and 1no. Frame Pin Ø8 mm (code:61312) each. In addition to the Roofer's Safety Post 70 trans, light (code:652875), a Single Post 70 (code:133120) and a Plank Retainer 74 cpl. (code:417348) are installed at the end face of the scaffold.

In the roof protection area, tie the scaffold at the insertion and support points of the brackets.



$h_2 = h_1 - h_0 \geq 1.50 - b$

Unless stated otherwise, all dimensions in mm.



1 Enlargement Bracket 35
2 Enlargement Bracket 70/200; alternative: Enlargement Bracket 70 + diagonal
3 Roofer's Safety Post 70
4 Roofer's Safety Post 70 trans. light
5 Mesh panel
6 Bracket 70 Plank Retainer
7 Frame Pin Ø8 mm
8 Plank Retainer 74
9 Single Post 70
10 Toe Board 74/15 trans.
11 Scaffold Tube 48.3/50
12 Scaffold Tube 48.3/150
13 Rigid Coupler 48/48 w.a.f. 22
14 Scaffold retainer

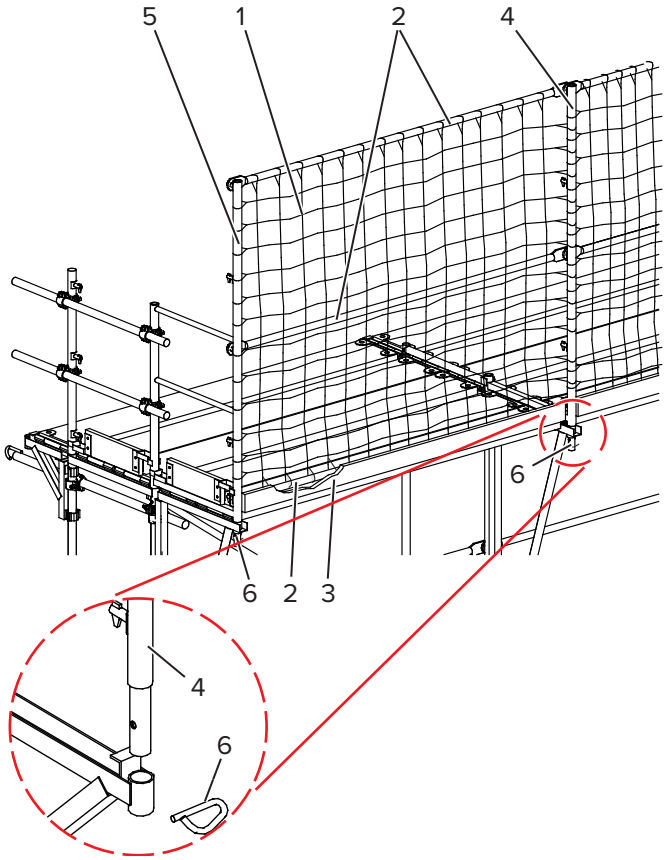
Refer to section 12 "Tying" on page 95 for information on tying forces.

The Enlargement Bracket 70 (code:424226) with Diagonal EB 70 cpl. (code:554959) can be used instead of the Enlargement Bracket 70/200.

15.3 Protective roof scaffold with safety nets

Safety nets can be used instead of mesh panels on protective roof scaffolds. Bay lengths up to 4.00 m can be achieved when safety nets are used.

To secure the safety net, a complete guardrail is attached to the Roofer's Safety Post in each scaffold bay. Install a toe board between the guardrail and the plank to close the gap.



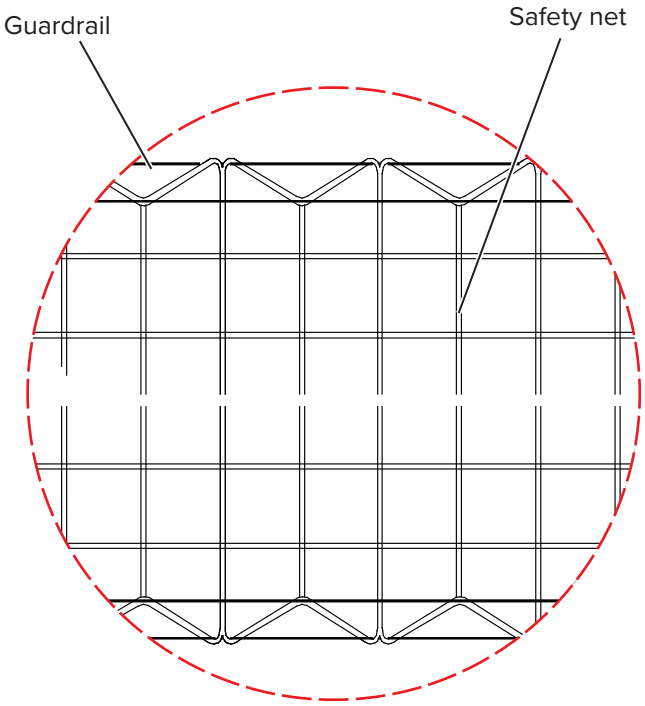
2 Safety net
2 Guardrail
3 Toe board
4 Roofer's Safety Post 70
5 Roofer's Safety Post 70 trans. light
6 Frame Pin Ø8 mm

Safety nets with a maximum mesh size of 100 mm have to fulfil the requirements of DIN EN 1263, Parts 1 and 2, "Safety nets; safety requirements, test methods." Thread the safety net onto the upper and lower guardrail, one loop at a time.

The procedure for erection of the rest of the protective roof scaffold is the same (refer to section 15 "Use as protective roof scaffold" on page 140).

Guardrail

Two scaffold tubes Ø48.3 mm can also be used if the wall is at least 3.2 mm thick.



Refer to section 12 "Tying" on page 95 for information on tying forces.

16 Protective roof

A protective roof can be installed on a BOSTA 70 scaffold at the respective height to provide protection from falling objects.

The protective roof is not a working platform and must be separated from the scaffold by two guardrails.

Step 1 Connect the BOSTA Working Bracket 1.8 m (code:427907) to the top of the vertical frame using a Bolt M8×80 with Nut 5.6 (code:411638) and to the bottom with a Rigid Coupler 48/48 w.a.f. 22 (code:2514).

Step 2 Slide the BOSTA Bracket Post (code:429468) into the BOSTA Working Bracket 1.8 m into and secure it with a Frame Pin Ø12 mm (code:129473).

Step 3 Put the alu frame deck into place and use gap plates to close the gaps.

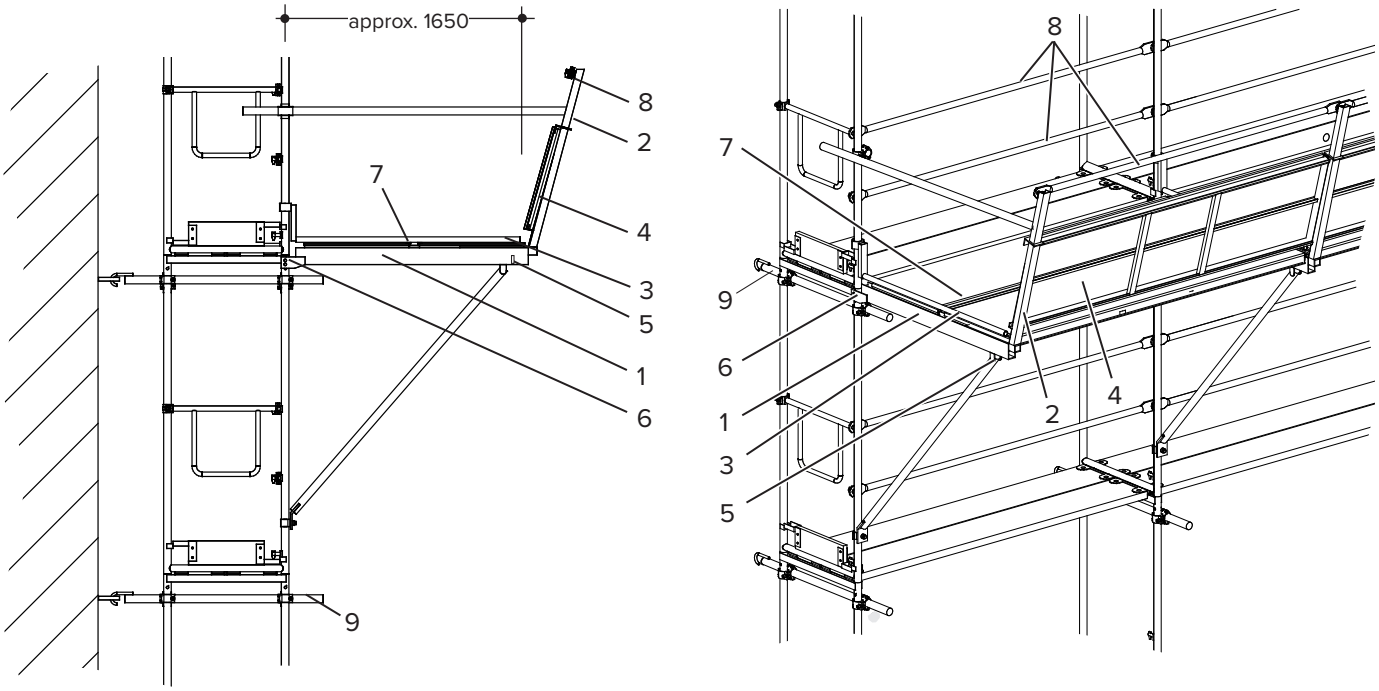
Step 4 Attach a Plank Retainer (code:427664) to prevent the plans from uplift.

Step 5 Tie the scaffold in the protective roof area at the insertion and support points of the BOSTA Working Bracket 1.8 m (code:427907).

WARNING

Risk of falling during erection!

Implement protective measures taking into account the hazard assessment!



1 BOSTA Working Bracket 1.8 m
2 BOSTA Bracket Post
3 Plank retainer
4 Alu Frame Deck
5 Frame Pin Ø12 mm
6 Hex head bolt M 8x80
7 Gap cover
8 Guardrail
9 Scaffold retainer

Refer to section 12 "Tying" on page 95 for information on tying forces.

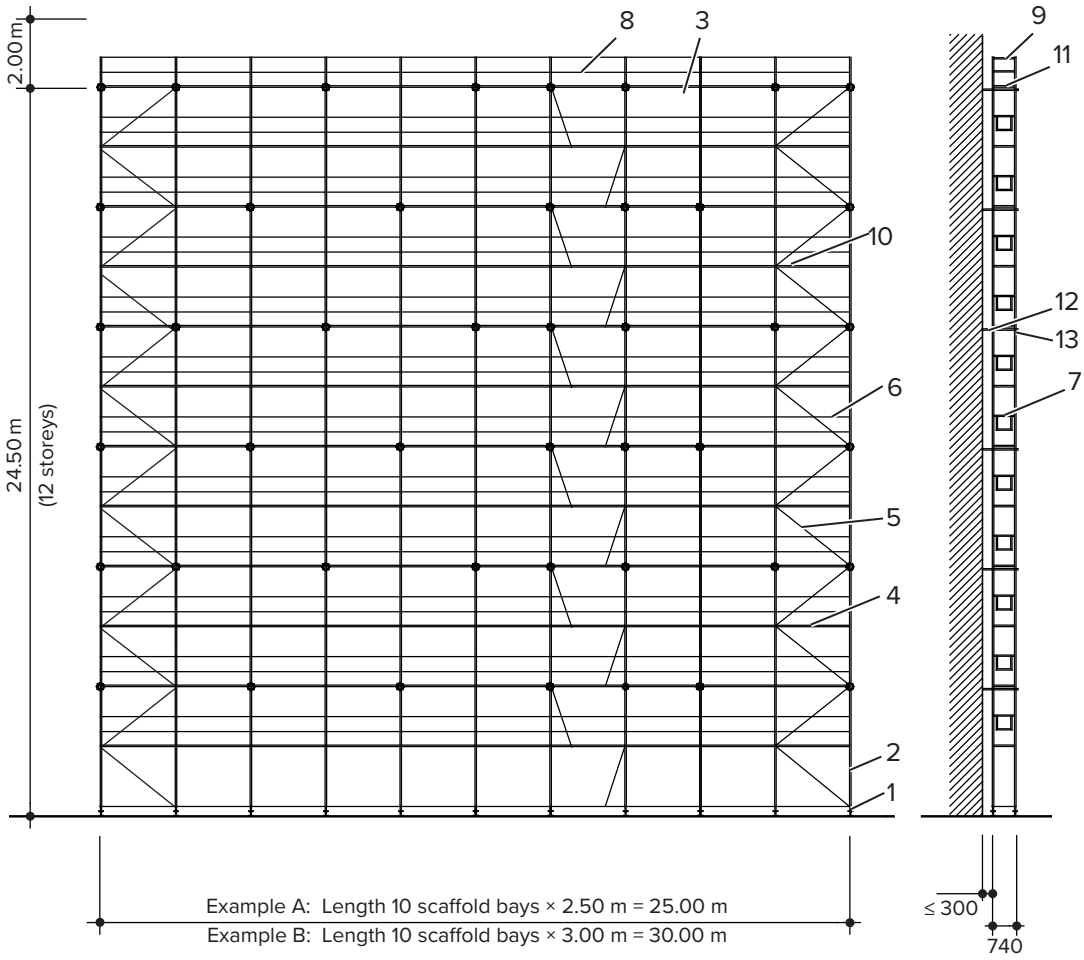
Unless stated otherwise, all dimensions in mm.

17 Determining material required

Two examples of how to determine scaffold material required.

Example A: Length 25.00 m × height 26.50 m = working area 662.50 m²

Example B: Length 30.00 m × height 26.50 m = working area 795.00 m²



Pos.	Units	Part
1	22	Base jack
2	132	Vertical Frame 200/70, light
3	108 or 216	Alu Frame Deck 250/70 or TP, SP, HBP 250/32
4	12	250/70 Alu Passage Deck with Ladder 250/70
5	24	Diagonal 200
6	250	Guardrail 250
8	11	Railing Post 70
10	120	Toe Board 250
11	24	BOSTA 70 AGS End Guardrail G2
12	45	Scaffold Retainer 110
13	90	Rigid Coupler 48/48

Pos.	Units	Part
1	22	Base jack
2	132	Vertical Frame 200/70, light
3	108 or 216	Alu Frame Deck 300/70 or TP, SP, HBP 300/32
4	12	Alu Passage Deck with Ladder 300/70
5	24	Diagonal 203
6	250	Guardrail 300
8	11	Railing Post 70
10	120	Toe Board 300
11	24	BOSTA 70 AGS End Guardrail G2
12	45	Scaffold Retainer 110
13	90	Rigid Coupler 48/48 w.a.f. 22

Unless stated otherwise, all dimensions in mm.

Scaffold staircase in only one direction																		
62.5	4	1	62	1	1	60	32	1	1	2	31	31	30	31	32	16	144	4050.0
60.5	4	1	60	1	1	58	31	1	1	2	30	30	29	30	30	15	135	3901.4
58.5	4	1	58	1	1	56	30	1	1	2	29	29	28	29	30	15	135	3792.2
56.5	4	1	56	1	1	54	29	1	1	2	28	28	27	28	28	14	126	3643.6
54.5	4	1	54	1	1	52	28	1	1	2	27	27	26	27	28	14	126	3534.3
52.5	4	1	52	1	1	50	27	1	1	2	26	26	25	26	26	13	117	3385.7
50.5	4	1	50	1	1	48	26	1	1	2	25	25	24	25	26	13	117	3276.4
48.5	4	1	48	1	1	46	25	1	1	2	24	24	23	24	24	12	108	3127.8
46.5	4	1	46	1	1	44	24	1	1	2	23	23	22	23	24	12	108	3018.5
44.5	4	1	44	1	1	42	23	1	1	2	22	22	21	22	22	11	99	2869.9
42.5	4	1	42	1	1	40	22	1	1	2	21	21	20	21	22	11	99	2760.7
40.5	4	1	40	1	1	38	21	1	1	2	20	20	19	20	20	10	90	2612.0
38.5	4	1	38	1	1	36	20	1	1	2	19	19	18	19	20	10	90	2502.8
36.5	4	1	36	1	1	34	19	1	1	2	18	18	17	18	18	9	81	2354.2
34.5	4	1	34	1	1	32	18	1	1	2	17	17	16	17	18	9	81	2244.9
32.5	4	1	32	1	1	30	17	1	1	2	16	16	15	16	16	8	72	2096.3
30.5	4	1	30	1	1	28	16	1	1	2	15	15	14	15	16	8	72	1987.0
28.5	4	1	28	1	1	26	15	1	1	2	14	14	13	14	14	7	63	1838.4
26.5	4	1	26	1	1	24	14	1	1	2	13	13	12	13	14	7	63	1729.1
24.5	4	1	24	1	1	22	13	1	1	2	12	12	11	12	12	6	54	1580.5
22.5	4	1	22	1	1	20	12	1	1	2	11	11	10	11	12	6	54	1471.3
20.5	4	1	20	1	1	18	11	1	1	2	10	10	9	10	10	5	45	1322.7
18.5	4	1	18	1	1	16	10	1	1	2	9	9	8	9	10	5	45	1213.4
16.5	4	1	16	1	1	14	9	1	1	2	8	8	7	8	8	4	36	1064.8
14.5	4	1	14	1	1	12	8	1	1	2	7	7	6	7	8	4	36	955.5
12.5	4	1	12	1	1	10	7	1	1	2	6	6	5	6	6	3	27	806.9
10.5	4	1	10	1	1	8	6	1	1	2	5	5	4	5	6	3	27	697.6
8.5	4	1	8	1	1	6	5	1	1	2	4	4	3	4	4	2	18	549.0
6.5	4	1	6	1	1	4	4	1	1	2	3	3	2	3	4	2	18	439.8
4.5	4	1	4	1	1	2	3	1	1	2	2	2	1	2	2	1	9	291.1
2.5	4	1	2	1	1	1	2	1	1	2	1	1	-	1	2	1	9	191.6
Installation height [m] / Part	Base Jack 50/3.3	Stairway Access	Vertical Frame 200/70, light	Twin-Railing Post 70 trans. light	BOSTA 70 Intermediate Railing Bracket	BOSTA 70 AGS End Guardrail G2	AGS Post Holder	Double Railing 70 trans.	Guardrail 250	Guardrail 190	Alu Staircase G2 250/200	Alu Staircase G2 Outer Handrail 250/200	Bottom Gap Plate	Top Gap Plate	Scaffold Retainer 250	Scaffold Retainer 350	Rigid Coupler 48/48 w.a.f. 22	Weight [kg]
Code	144131	553656	652044	652880	652830	653490	652975	534419	002113	547658	652780	652860	653990	653995	467041	467063	002514	

Unless stated otherwise, all dimensions in mm.

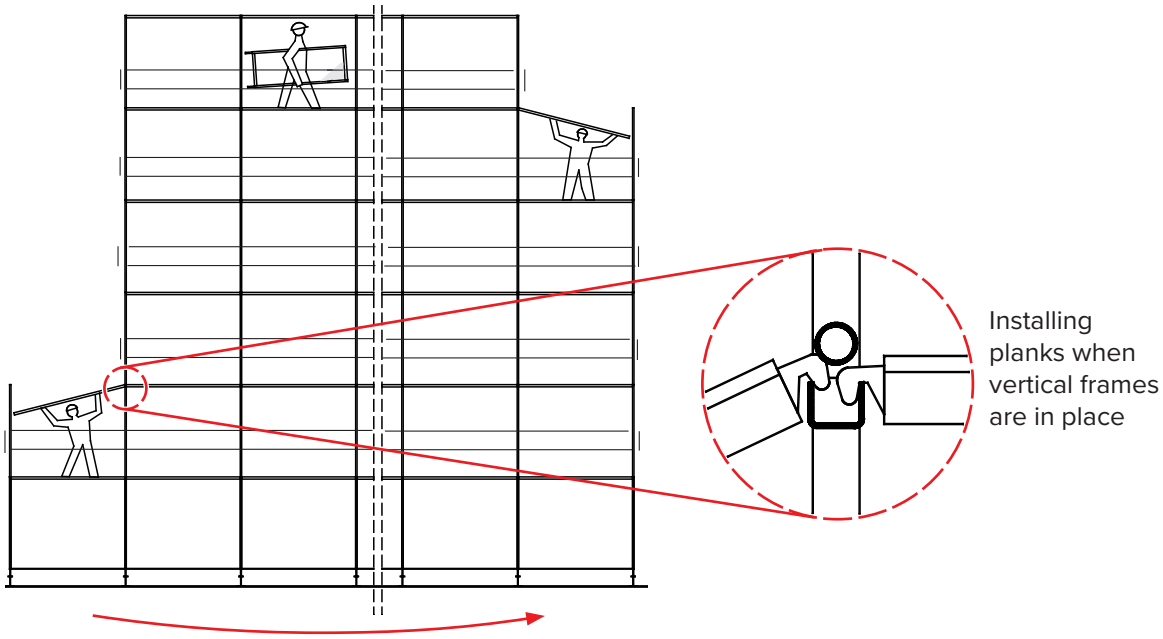
18 Dismantling

Before dismantling the scaffold, check that previous tasks have not contaminated the scaffold. Before beginning dismantling, remove any pollution or contamination that could hinder dismantling the scaffold. Have a technical expert inspect any contamination that cannot be identified.

When transporting scaffold components, always comply with the specifications in section 8 "Moving scaffold components" on page 70!

18.1 Erecting and dismantling scaffold bays (advancing)

The rounded plank supports enable the end bays to be removed vertically and then erected again on the other side. This allows the scaffold to advance as work progresses, thus requiring less scaffold material.



Installing planks when vertical frames are in place

19 Appendix

19.1 Hazard assessment and monitoring of effectiveness for respective tasks

HÜNNEBECK BY BRAND SAFWAY	**Hazard assessment and monitoring of effectiveness for respective tasks** **Page 1/8** pursuant to §§ 5, 6 ArbSchG (German working conditions act) and § 3 BetrSichV (German technical rules on operational safety) for erection, modification and dismantling as well as transport of working and protective scaffolds

Company:	.....	CEO:	.....	Email:	.....
Address:	.....	Tel.:	.....	Construction project:	.....
	.....	Fax:	.....	Serviceable life:	.....

Safety-related supervision: .....

Safety expert:	.....	Contact:	.....
Tel.:	.....	Tel.:	.....
Mobile:	.....	Mobile:	.....
Email:	.....	Email:	.....

General notes:

Every employee must be aware that, until the respective task is completed, there is always a risk of falling from heights when erecting, modifying, or dismantling scaffolds.

Scaffolds must be erected, modified, and dismantled only by persons with the required skills

and who are healthy.

The responsible supervisor must be informed of any health restrictions before the employee begins work.

The contents of this hazard assessment serve as the basis for project safety planning. If in the course of planning it is determined that project-specific hazards were not identified, the project supervisor must produce a written, additional, project-specific hazard assessment.

The hazard assessment must include all of the relevant documentation such as operating instructions, assembly instructions and, if applicable, object-related hazard assessments. It is essential to comply with the information contained in these documents.

The hazard assessment must examine the relevant hazards that can result from working on the scaffold as well as from transporting scaffold components. Always comply with the specified safety measures to prevent any potential accidents and health risks from occurring.

The supervisors on site are responsible for implementation of and compliance with safety measures.

Applying this hazard assessment, the supervisor responsible for the respective site/location must verify that the protective measures are suitable for the operational and local conditions. If not, essential steps must be specified and implemented to assure the safety of everyone working in the area.

Remarks and additional notes can be found beginning on page 8 of this document.

Hazard assessment went into effect and was publicised:

	.....
	Signature of creator/contractor
.....	.....
City and date	Signature of person responsible for the measures

Last inspected and updated:

	.....
	Signature of creator/contractor
.....	.....
City and date	Signature of person responsible for the measures

Used abbreviations: SM = site manager, rSV = responsible supervisor, Emp = employee

HÜNNEBECK BY BRANDSAFWAY

Hazard assessment and monitoring of effectiveness for respective tasks Page 2/8

pursuant to §§ 5, 6 ArbSchG (German working conditions act)
and § 3 BetrSichV (German technical rules on operational safety) for erection, modification and dismantling as well as transport of working and protective scaffolds

1 Before beginning work on scaffold

Situations that can be hazardous or problematic	Potential hazard(s)	Protective measure(s)	Defects due to SM	Defects due to rSV	Defects due to Emp	Inspection, measure(s) implemented and effective?
Planning and preparation	Caused by poor organisation, or equipment in the working area	☐ In agreement with employee, supervisor, occupational safety specialist, safety and health coordinator ☐ Permits	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
	☐ Overhead power lines	☐ Shutdown ☐ Cordon	☐	☐	☐	
	☐ Pipework	☐ Cordon	☐	☐	☐	
	☐ Shafts	☐ Cover/cordon	☐	☐	☐	
	☐ Canals	☐ Cover/cordon	☐	☐	☐	
	☐ Containers / tight spaces	☐ Respiratory protection, safety monitor	☐	☐	☐	
	☐ Potentially explosive equipment	☐ Measured pursuant to permit	☐	☐	☐	
	☐ Mechanical equipment	☐ Cordon ☐	☐	☐	☐	
	☐ Cranes and conveyors e.g. swivel range	☐ Cordon ☐ Safety monitor ☐	☐	☐	☐	
	☐ Road/rail traffic	☐ Cordon, detour, permit	☐	☐	☐	
	☐	☐ ..... ☐	☐	☐	☐	
Inclement weather	Ice, dampness, wind, etc. when working on scaffolds	☐ Protective clothing	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Clear ice and snow from planks	☐	☐	☐	
		☐ Stop work on scaffold in the event of strong wind, storm, thunderstorm	☐	☐	☐	
		☐ Artificial lighting when daylight is insufficient	☐	☐	☐	
		☐ Provision of common areas and sanitary facilities	☐	☐	☐	
	Due to UV radiation	☐ Wear suitable clothing	☐	☐	☐	
		☐ Provision of skin protection products	☐	☐	☐	
		☐ Provision of adequate liquids	☐	☐	☐	
		☐ ..... ☐	☐	☐	☐	
Hazardous substances	When dealing with hazardous substance, e.g. drilling into asbestos cement panels, using adhesive ties	☐ Instruction in use/operation	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Standardised procedure, pursuant to applicable regulation	☐	☐	☐	
		☐ Certificate of competence	☐	☐	☐	
		☐ Instruction	☐	☐	☐	
		☐ Indication	☐	☐	☐	
		☐ Medical checkup	☐	☐	☐	
Noise	Noise pollution during transport and assembly of scaffold components as well as from environment and equipment	☐ Hearing protection	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Use of noise-reduced machinery	☐	☐	☐	
		☐ Encapsulate / shield from noise	☐	☐	☐	
		☐ Medical checkup	☐	☐	☐	
		☐ ..... ☐	☐	☐	☐	
Location/environment	Simultaneous performance of multiple trades, mutual hazard, e.g. compiled, implemented	☐ Coordination with other trades	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ ..... ☐	☐	☐	☐	
Handling electrical equipment and components	Hazard posed by touching live parts of overhead lines, defective machines, faulty wiring	☐ Have electrical equipment installed/maintained by electricians	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Monitoring, inspection intervals	☐	☐	☐	
		☐ Use appropriate power sources, lighting and installation material	☐	☐	☐	
		☐ Stay far enough away from overhead lines	☐	☐	☐	

HÜNNEBECK BY BRAND SAFWAY

Hazard assessment and monitoring of effectiveness for respective tasks Page 3/8
pursuant to §§ 5, 6 ArbSchG (German working conditions act)
and § 3 BetrSichV (German technical rules on operational safety) for erection, modification and dismantling as well as transport of working and protective scaffolds

2 Material transport / loading

Situations that can be hazardous or problematic	Potential hazard(s)	Protective measure(s)	Defects due to SM	rSV	Emp	Inspection, measure(s) implemented and effective?
Physical strain	Due to frequently lifting or carrying heavy scaffold parts > 25 kg, and to not lifting loads correctly	☐ Provide a hoist or scaffold lift	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Use weight-optimised scaffold components	☐	☐	☐	
		☐ Instruct employee on how to properly handle weight	☐	☐	☐	
		☐ ..... ☐	☐	☐	☐	
Loading and transport	Due to parts that move uncontrollably; slipping or falling objects	☐ Loading plan	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Secured load (strapping points, straps)	☐	☐	☐	
		☐ Tightly fitting props	☐	☐	☐	
		☐ Loose parts in lattice box	☐	☐	☐	
		☐ Instruction of employees	☐	☐	☐	
		☐ Lifting accessories	☐	☐	☐	
		☐ Testing lifting gear	☐	☐	☐	
		☐ Instruction in use/operation	☐	☐	☐	
		☐ Properly trained drivers	☐	☐	☐	
		☐ ..... ☐	☐	☐	☐	
Using mobile cranes	Due to incorrect attachment points and lifting gear, or personnel without proper instruction	☐ Ensure that crane operator and signaller can communicate properly with one another	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Specified attachment points	☐	☐	☐	
		☐ Certified lifting equipment, attachment points, labelling	☐	☐	☐	
		☐ Instructed personnel	☐	☐	☐	
		☐ ..... ☐	☐	☐	☐	

HÜNNEBECK BY BRANDSAFWAY

Hazard assessment and monitoring of effectiveness for respective tasks Page 4/8

pursuant to §§ 5, 6 ArbSchG (German working conditions act)
and § 3 BetrSichV (German technical rules on operational safety) for erection, modification and dismantling as well as transport of working and protective scaffolds

3 Material transport / working on scaffold

Situations that can be hazardous or problematic	Potential hazard(s)	Protective measure(s)	Defects due to SM	Defects due to rSV	Defects due to Emp	Inspection, measure(s) implemented and effective?
Transport routes and environment	Hazard posed by stumbling, slipping, falling, due to e.g. poor condition and stability of platforms and walkways	☐ Remove obstacles	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Remove debris/dirt	☐	☐	☐	
		☐ Check dimensions/condition	☐	☐	☐	
		☐ Take into consideration weather conditions	☐	☐	☐	
		☐ Use PPE	☐	☐	☐	
	Falling into openings	☐ Cordon off (no barrier tape)	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Safety nets under openings, use correct suspension points, suspension ropes, spacing	☐	☐	☐	
		☐ Install immobile covers, boards, panels, etc.	☐	☐	☐	
	Due to inaccessible components, areas, roofs	☐ Load-distributing planks	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Safe transfer of loads to load-bearing substructure	☐	☐	☐	
		☐ Secure to prevent shifting and uplift	☐	☐	☐	
	Due to incorrect use of ladders	☐ Visual inspection of rails, rungs	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Check clearance angle	☐	☐	☐	
		☐ Do not climb higher than third-to-top step/rung	☐	☐	☐	
		☐ Use to ascend no higher than 5.0 m	☐	☐	☐	
		☐ Use to work briefly at 2.00 m to 5.0 m	☐	☐	☐	
		☐ Close trap in hatches	☐	☐	☐	
	Due to slipping from or onto roofs	☐ Use to work briefly at 2.00 m to 5.0 m	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Close trap in hatches	☐	☐	☐	
	Due to faulty planks	☐ Planks compatible with system - Alu frame decks - Timber planks - Steel planks, alu planks	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
Transporting	Due to parts that move uncontrollably; slipping, falling or toppling objects	☐ Cordon off / label	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Protective roofs, safety nets	☐	☐	☐	
		☐ Toe boards	☐	☐	☐	
		☐ Hard hats, gloves	☐	☐	☐	
		☐ Proper material storage	☐	☐	☐	
	Due to sudden gusts of wind to crane loads, e.g. when attaching weather-proof roof	☐ Guiding ropes of sufficient length	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Personnel strong enough to immobilise loads with guiding ropes	☐	☐	☐	

HÜNNEBECK BY BRANDSAFWAY

Hazard assessment and monitoring of effectiveness for respective tasks Page 5/8
pursuant to §§ 5, 6 ArbSchG (German working conditions act)
and § 3 BetrSichV (German technical rules on operational safety) for erection, modification and dismantling as well as transport of working and protective scaffolds

4 Working on scaffold

Situations that can be hazardous or problematic	Potential hazard(s)	Protective measure(s)	Defects due to SM	Defects due to rSV	Defects due to Emp	Inspection, measure(s) implemented and effective?
Working in elevated positions, Structural design	Due to falling during erection, modification and dismantling of scaffolds	☐ Erect/modify/dismantle only as specified in assembly plan or User Guide	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Vertical material transport with hoist or manual pulley; secure acceptance bay with ☐ Guardrails ☐ Personal fall protection [1] ☐ Organisational measures	☐	☐	☐	
		☐ Vertical manual transport (chain of persons) ☐ Guardrail and knee rail ☐ Personal fall protection [1] ☐ Organisational measures	☐	☐	☐	
		☐ Ascension and top scaffold level ☐ Guardrail ☐ Guardrail used during erection ☐ Personal fall protection [1] ☐ Organisational measures	☐	☐	☐	
		☐ Horizontal material transport, secured with: ☐ Guardrail ☐ Guardrail used during erection ☐ Personal fall protection [1] ☐ Organisational measures	☐	☐	☐	
		☐ Erection of top scaffold level ☐ Guardrail ☐ Guardrail used during assembly ☐ Personal fall protection [1] ☐ Organisational measures	☐	☐	☐	
	Due to falling to the interior, e.g. large wall spacing, openings in structure, window sections	☐ Distance from wall < 300 mm	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Guardrail / knee rail	☐	☐	☐	
		☐ Brackets				
		☐ Personal fall protection [1]				
	Due to falling when attaching safety nets	☐ Mobile scaffold	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Aerial working platform	☐	☐	☐	
		☐ Personal fall protection [1]	☐	☐	☐	
		☐ Assembly instructions	☐	☐	☐	
		☐ ..... ☐	☐	☐	☐	
		[1] When using personal fall protection: Comply with specified attachment points and instructions for PPE.				

Unless stated otherwise, all dimensions in mm.

HÜNNEBECK BY BRAND SAFWAY

Hazard assessment and monitoring of effectiveness for respective tasks Page 6/8

pursuant to §§ 5, 6 ArbSchG (German working conditions act) and § 3 BetrSichV (German technical rules on operational safety) for erection, modification and dismantling as well as transport of working and protective scaffolds

4 Working on scaffold

Situations that can be hazardous or problematic	Potential hazard(s)	Protective measure(s)	Defects due to SM	Defects due to rSV	Defects due to Emp	Inspection, measure(s) implemented and effective?
Structural design	Due to incorrect erection, damaged scaffold components, components removed prematurely, components installed incorrectly (e.g. customised ties)	☐ Visual inspection of scaffold components	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Load-bearing ground/floor	☐	☐	☐	
		☐ Use base plates / jacks	☐	☐	☐	
		☐ Horizontal assembly	☐	☐	☐	
		☐ Specify tying pattern	☐	☐	☐	
		☐ Check ties and tying points	☐	☐	☐	
		☐ Use approved, suitable dowels	☐	☐	☐	
		☐ Comply with instructions re. special ties	☐	☐	☐	
		☐ Length of scaffold retainer	☐	☐	☐	
		☐ Do not throw scaffold components	☐	☐	☐	
		☐ Store scaffold components properly	☐	☐	☐	
		☐ Labelling of scaffold	☐	☐	☐	
		☐ Do not throw scaffold components	☐	☐	☐	
	Due to incomplete scaffold, scaffold sections	☐ "Access prohibited" signs when scaffold is not yet complete	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Demarcation	☐	☐	☐	
		☐ ..... ☐	☐	☐	☐	

HÜNNEBECK BY BRAND SAFWAY

Hazard assessment and monitoring of effectiveness for respective tasks Page 7/8

pursuant to §§ 5, 6 ArbSchG (German working conditions act) and § 3 BetrSichV (German technical rules on operational safety) for erection, modification and dismantling as well as transport of working and protective scaffolds

5 Equipment and machinery

Situations that can be hazardous or problematic	Potential hazard(s)	Protective measure(s)	Defects due to SM	rSV	Emp	Inspection, measure(s) implemented and effective?
Mobile working platforms	When using small scaffolds / mobile working platforms	☐ User Guide on hand	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Instruction in use/operation	☐	☐	☐	
		☐ Max. erection height	☐	☐	☐	
		☐ No persons on platform when moving it	☐	☐	☐	
		☐ Interior ascent	☐	☐	☐	
		☐ Lock castors	☐	☐	☐	
		☐ Do not attach lifting gear	☐	☐	☐	
		☐ Inspection and labelling	☐	☐	☐	
		☐ ..... ☐	☐	☐	☐	
Moving parts without safeguards	Risk of injury from manual machines	☐ Equipment only with CE label / seal of approval	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Instruct employee	☐	☐	☐	
		☐ Aerial working platform	☐	☐	☐	
		☐ Regular inspection	☐	☐	☐	
		☐ Operating instructions	☐	☐	☐	
		☐ ..... ☐	☐	☐	☐	
	As a result of scattering parts, e.g. fragments from power cutting, sawing, drilling	☐ Goggles to protect from mechanical, optical and toxic effects	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ ..... ☐	☐	☐	☐	
Hoists and lifting gear	When assembling and operating hoists, scaffold lifts, lifting gear	☐ User Guide	☐	☐	☐	☐ Yes ☐ No ☐ Refer to notes No. ..... Page .....
		☐ Expert maintenance/inspection	☐	☐	☐	
		☐ Safe loading and motion range	☐	☐	☐	
		☐ Attachment points in compliance with DIN	☐	☐	☐	
		☐ ..... ☐	☐	☐	☐	

HÜNNEBECK BY BRANDSAFWAY

Hazard assessment and monitoring of effectiveness for respective tasks Page 8/8

pursuant to §§ 5, 6 ArbSchG (German working conditions act)
and § 3 BetrSichV (German technical rules on operational safety) for erection, modification and dismantling as well as transport of working and protective scaffolds

6 Notes and references on checking effectiveness of implemented measures

No.	Protective measure	Expand or modify measures	Implemented by			Implemented before

19.2 Test report

HÜNNEBECK BY BRANDSAFWAY

Test report for working and protective scaffolds
pursuant to §§ 5, 10 and 11 BetrSichV (German technical rules on operational safety)

Scaffold manufacturer: ..... Client: .....
Telephone number: ..... Telephone number: .....
Construction project: ..... Period of use: .....

Type of scaffold
☐ Working scaffold ☐ Protective scaffold ☐ Protective roof scaffold ☐ Protective roof
☐ Pedestrian passage ☐ Mobile scaffold ☐ Mobile working platform ☐ Suspended scaffold
☐ Weather-proof roof ☐ Special scaffold

Design
☐ Façade scaffold
☐ Birdcage scaffold
☐ Frame
☐ Module
☐ Mast brackets
☐ Steel tube coupler
☐ Other

Load class
☐ LC 1 (0.75 kN/m²)
☐ LC 2 (1.50 kN/m²)
☐ LC 3 (2.00 kN/m²)
☐ LC 4 (3.00 kN/m²)
☐ LC 5 (4.50 kN/m²)
☐ LC 6 (6.00 kN/m²)

Width class
☐ W06 (0.6 < 0.9)
☐ W09 (0.9 < 1.2)
☐ W..... (.....)
☐ Bracket ..... (.....)

Covering
☐ With nets
☐ With tarps
☐ Other

Design
☐ Standard design no. Z-.....
☐ Proper certification for specific case provided

Traffic safety
☐ Permit
☐ Warning signs
☐ No-parking zone

Hazard assessment
☐ Not available
☐ Available

Additional protective measures (1)
☐ Side edge protection (interior)
☐ Cover

Additional protective measures (2)
☐ Safety net
☐ PPE to protect from falling from heights
☐ Specified attachment point for PPE
☐ Measures to be able to rescue persons secured with PPE
☐ Other

Additional assembly aids
☐ Auxiliary scaffold
☐ Aerial working platform
☐ Scaffold lift
☐ Crane
☐ Other

Inspection of scaffold components
☐ Appears undamaged
☐ Original components pursuant to permit and User Guide

Structural integrity
☐ Load-bearing capacity of ground/floor
☐ Spindle extension length
☐ Longitudinal ledger at height of base point
☐ Diagonals
☐ Lattice girders
☐ Special design pursuant to Construction documents
☐ Castors

Decks
☐ Scaffold planks
☐ System planks

Tying points
☐ Tying pattern
☐ Tying record available
☐ Keep in mind that force is greater with covering

Occupational health and operational safety
☐ Edge protection
☐ Distance from wall
☐ Ladders, access ways
☐ Corners
☐ Protective wall in roof protection scaffold
☐ Traffic safety, lighting

Approval
☐ Scaffold **not** approved:
☐ Sign denying access in place
☐ Scaffold approved:
☐ Label affixed
☐ User Guide handed over

Transfer
☐ Notes: .....
.....
.....

☐ Inspection of working and protective scaffold completed (manufacturer)

City and date: .....

Signature of scaffolder: ..... Foreman: .....

☐ Working and protective scaffold accepted with test certificate (scaffold user)

City and date: ..... Signature of client: .....

City and date: ..... Qualified person: .....

Unless stated otherwise, all dimensions in mm.

19.3 Transfer of contractor's obligations (German)

Bestätigung der Übertragung von Unternehmerpflichten
(§9 Abs. 2 Nr. 2 OWIg, §15 Abs. 1 Nr. 1 SGB VII, §3 Abs. 1 und 2 ArbSchG)

Herrn / Frau[1] .....

werden für den Betrieb / die Abteilung[1] .....

.....

der Firma .....

.....

(Name und Anschrift der Firma)

die dem Unternehmen hinsichtlich des Arbeitsschutzes und der Verhütung von Arbeitsunfällen, Berufskrankheiten und arbeitsbedingten Gesundheitsgefahren obliegenden Pflichten übertragen, in eigener Verantwortung

- Einrichtungen zu schaffen und zu erhalten[1]
- Anordnungen und sonstige Maßnahmen zu treffen[1]
- eine wirksame Erste Hilfe sicherzustellen[1]
- arbeitsmedizinische Untersuchungen oder sonstige arbeitsmedizinische Maßnahmen zu veranlassen,[1]

soweit der Betrag von ..... € nicht überschritten wird.

Dazu gehören insbesondere:

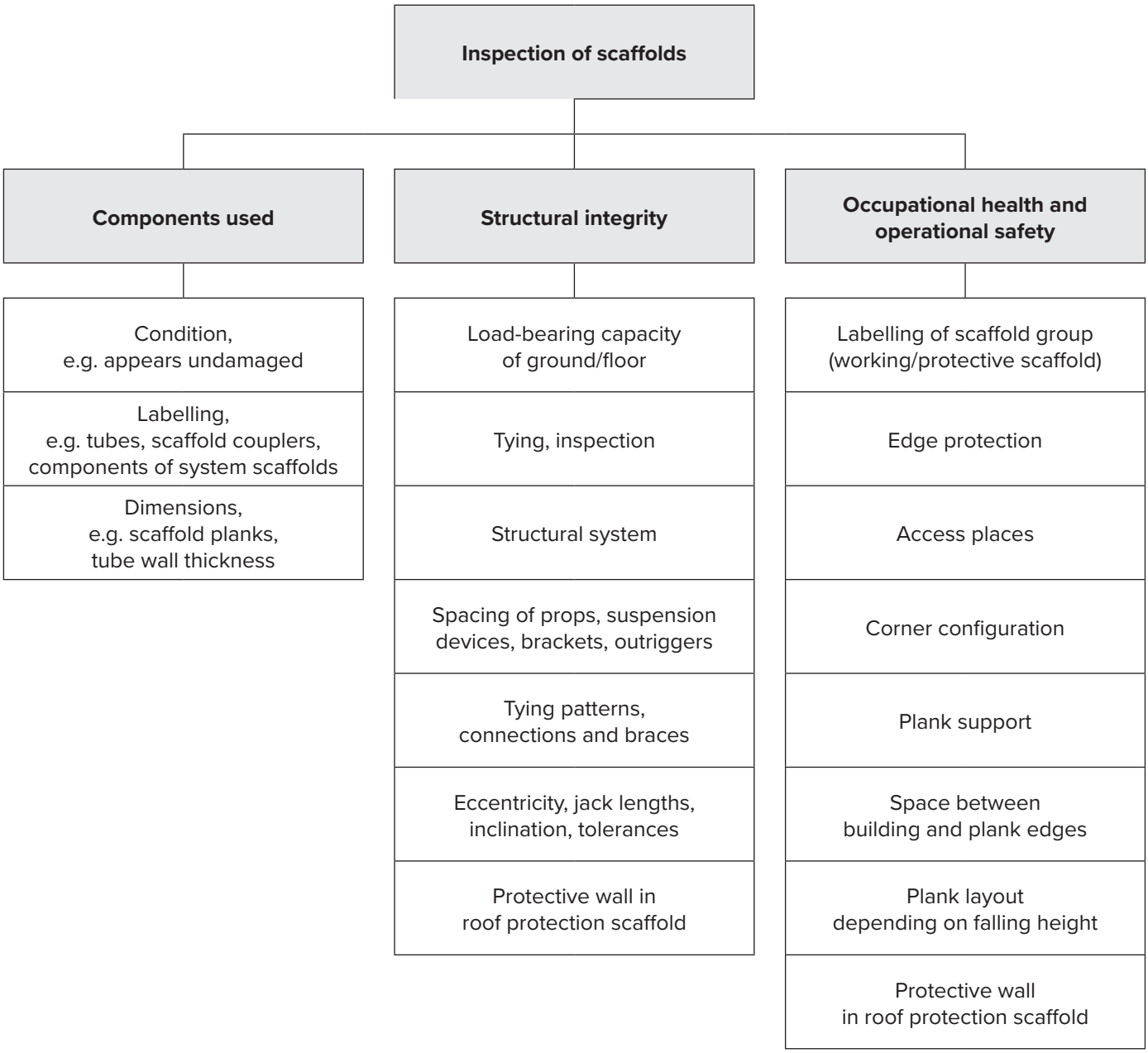
.....

.....

.....	.....
Ort	Datum
.....	.....
Unterschrift des Unternehmers	Unterschrift des Verpflichteten

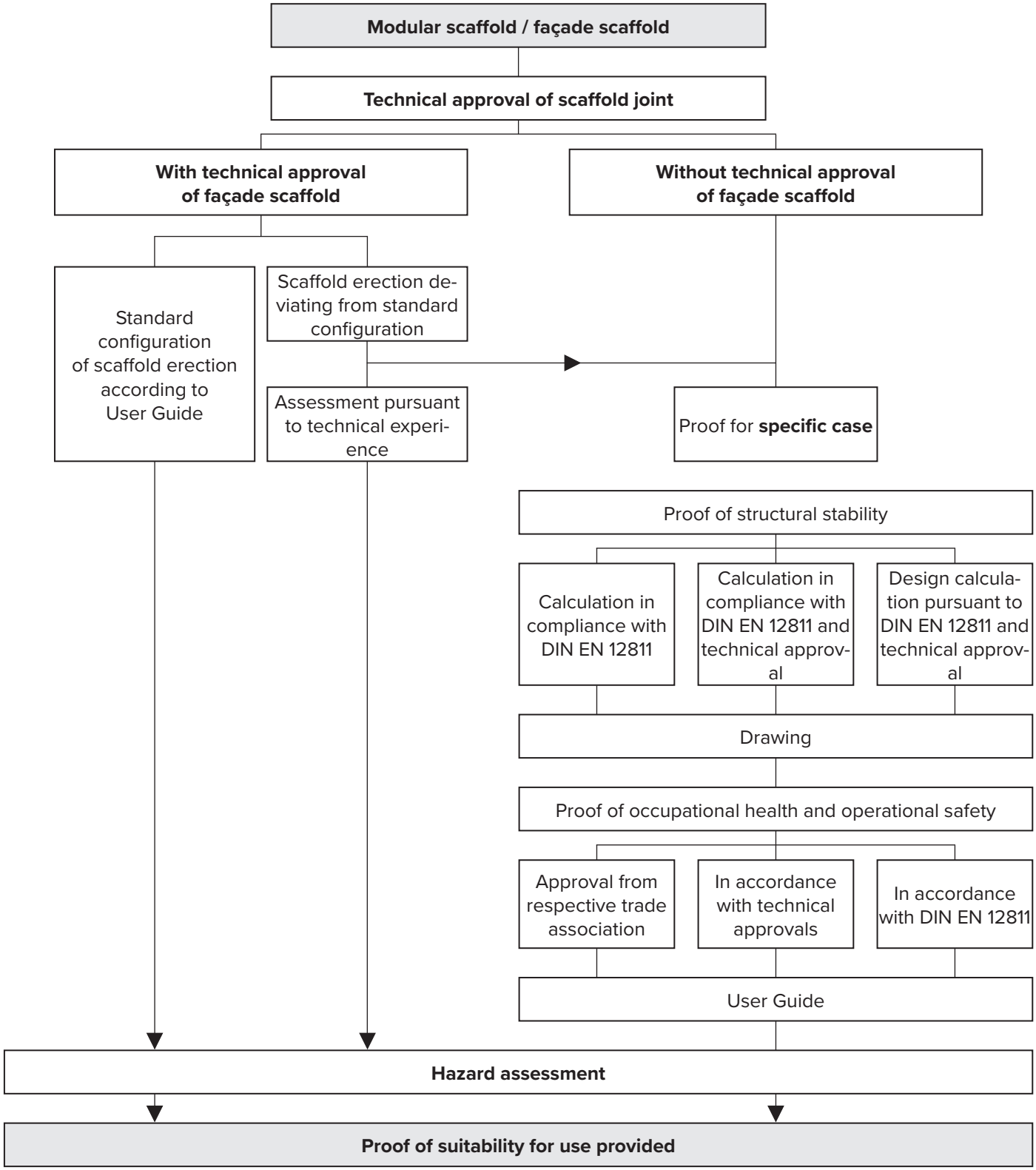
[1] Nichtzutreffendes streichen

19.4 Inspection diagram



Unless stated otherwise, all dimensions in mm.

19.5 Proof of fitness for use



19.6 Tying report

Tying report																										
Construction project:												Component:														
Dowel type:												Bolt/screw type:														
Tie surface:												Test equipment:														
Total no. of ties:												Tested ties:														
x → Row of posts, starting from left												Test load in kN														
Row of posts, starting from bottom ↑		1	2	3	4	5	6	7	8	9	10	...														
	...																									
	10																									
	9																									
	8																									
	7																									
	6																									
	5																									
	4																									
	3																									
	2																									
	1																									
Test load kN 1.2 × load of tie		A																								
		B																								
		C																								
		D																								

City, date

Signature of inspector

Label for not yet complete scaffolds

Off limits

WARNING

Risk of falling from height!

Scaffold sections not ready for use must be cordoned off and indicated with "Access prohibited" signs!

Unless stated otherwise, all dimensions in mm.

19.7 Release log

Scaffold DIN EN 12810- .... D - SW ..../.... - H1 - .... - ....

Load class | Bay-width | Bay-length | Covering (A/B) | Access (LA/ST)

General information

Construction project: .....

Manufacturer: .....

Client: .....

SiGeKo: .....

Scaffold specifications

DIN EN 12811 part 1: Working scaffold

☐ Façade scaffold ☐ Birdcage scaffold

☐ Net ☐ Tarp

DIN 4420 part 1: Protective scaffold

☐ Protective scaffold ☐ Protective roof scaffold ☐ Protective roof

☐ Standard design German technical approval (Zulassung): Z-.....-.....

User Guide, edition: .....

☐ Proof for specific case

Load class

☐ 1 – 0.75 kN/m² ☐ 2 – 1.50 kN/m² ☐ 3 – 2.00 kN/m²

☐ 4 – 3.00 kN/m² ☐ 5 – 4.50 kN/m² ☐ 6 – 6.00 kN/m²

Warning: The sum of the evenly distributed access loads in each scaffold bay!

Inspection by qualified person

For the scaffold manufacturer:

.....

Name / date / signature

For the scaffold user:

.....

(1) Name / date / signature

.....

(2) Name / date / signature

.....

(3) Name / date / signature

.....

(4) Name / date / signature

.....

(5) Name / date / signature

.....

(6) Name / date / signature

19.8 Instructions for use

The following text has to be given to the user of the scaffold.

The instructions compiled here are intended to make the scaffolder aware of how to handle scaffolds. This list includes only the most important instructions and does not claim to be complete.

It should also not be considered as a substitute for professional dispute regarding occupational health and safety while working on scaffolding.

- Inspect the scaffold for any damage before entering it.
- Enter the scaffold only through proper access ways (interior ladders, staircases).
- Never use a damaged scaffold.
- Using a hoist to lift and unload material onto scaffolds LC 3 is not permitted.
- Regardless of the load class of the standard design, the general rule applies that only one working platform within a scaffold bay (referring to the area between two posts and the overall scaffold height) can be subjected to the total working weight.
- The user must not change the scaffold structure after it has been completed.
- Never jump down onto the next deck or drop objects onto the planks.
- Planks must be placed close to one another. They should neither teeter nor give way.
- If materials are stored on the planks, the minimum clearance for walking around the material is 200 mm.
- Three-part side edge protection has to be installed on all decks.
- Neither materials nor tools must ever be placed in a position where they could hinder the net to catch a person on any fall protection scaffolds.
- Handle scaffold materials with care when using scaffolds.

20 Chronology

Changes since edition 2021-01	Page	Date
MSG G2 system expanded.	various	2021-05
Safety and warning notes revised.	various	2021-05
Alu plank G2 and alu deck G2 added to quick reference guide.	14 ff.	2022-12
BOSTA 70 IEP Rail G2 added.	32, 123ff.	2022-12
Alu Staircase 250 removed.	34, 80	2022-12
Former AGS components replaced with new ones (MSG Railing Post G3, BOSTA 70 AGS End Guardrail G2, AGS Vario guardrails, AGS Post G3 Lift-off Retainer).	19 ff., 49 ff.	2022-12
BOSTA 100 Intermediate Railing Bracket (Recess Bracket) updated and added.	35, 67 ff., 76, 91 ff.	2022-12
Top and bottom gap plates updated in quick reference guide.	35	2022-12
Overview table of suitable planks and their load classification updated.	99	2022-12
Alu staircase G2 added.	83 ff.	2022-12
Tying for standard models updated (scaffold not covered, with net, with tarp pursuant to annex C of AbZ (German technical approval), November 2022).	100 ff.	2022-12
Twin-Railing Post 70 trans removed.	12	2022-12
Vertical Frame 200/70 removed.	12	2022-12
Passage Frames 100, 150 removed.	23	2022-12
Roofer's Safety Post 70 trans. removed.	23	2022-12
Parts list for scaffold staircase in only one direction updated.	148	2022-12
Bridge girders 500 and 700, enlargement bracket 70/200 removed.	23, 28	2023-05
Tying forces of scaffold staircases updated.	82	2023-05
Standard tying, Adjustment Stands 70, bridging sections of protective scaffolds and protective roof scaffolds updated pursuant to AbZ, annex C.	95 ff., 116, 117 ff., 139, 140 ff.	2023-05
General text and layout adjustments.	various	2024-07

Notes

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