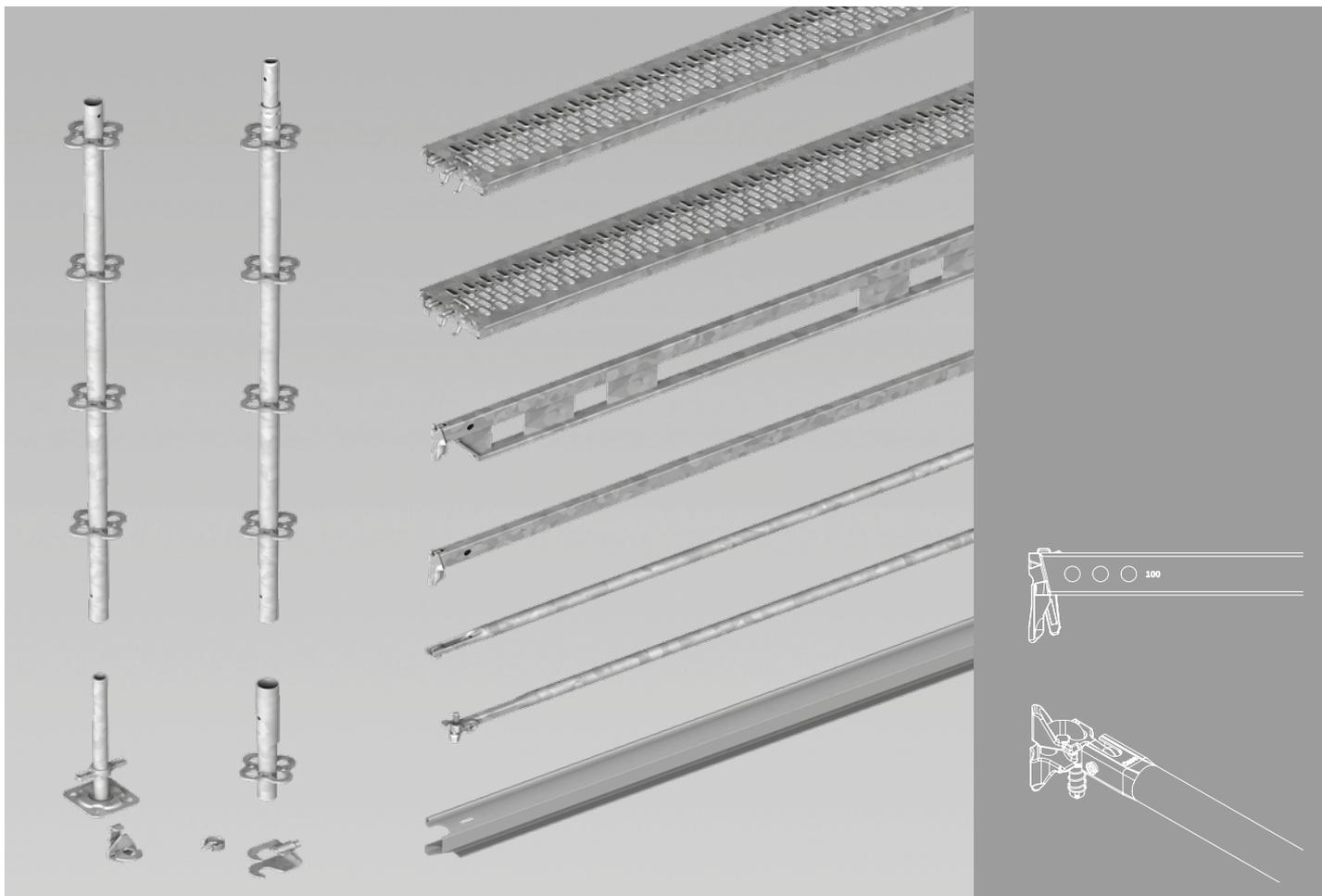


PERI UP Flex

Core Components

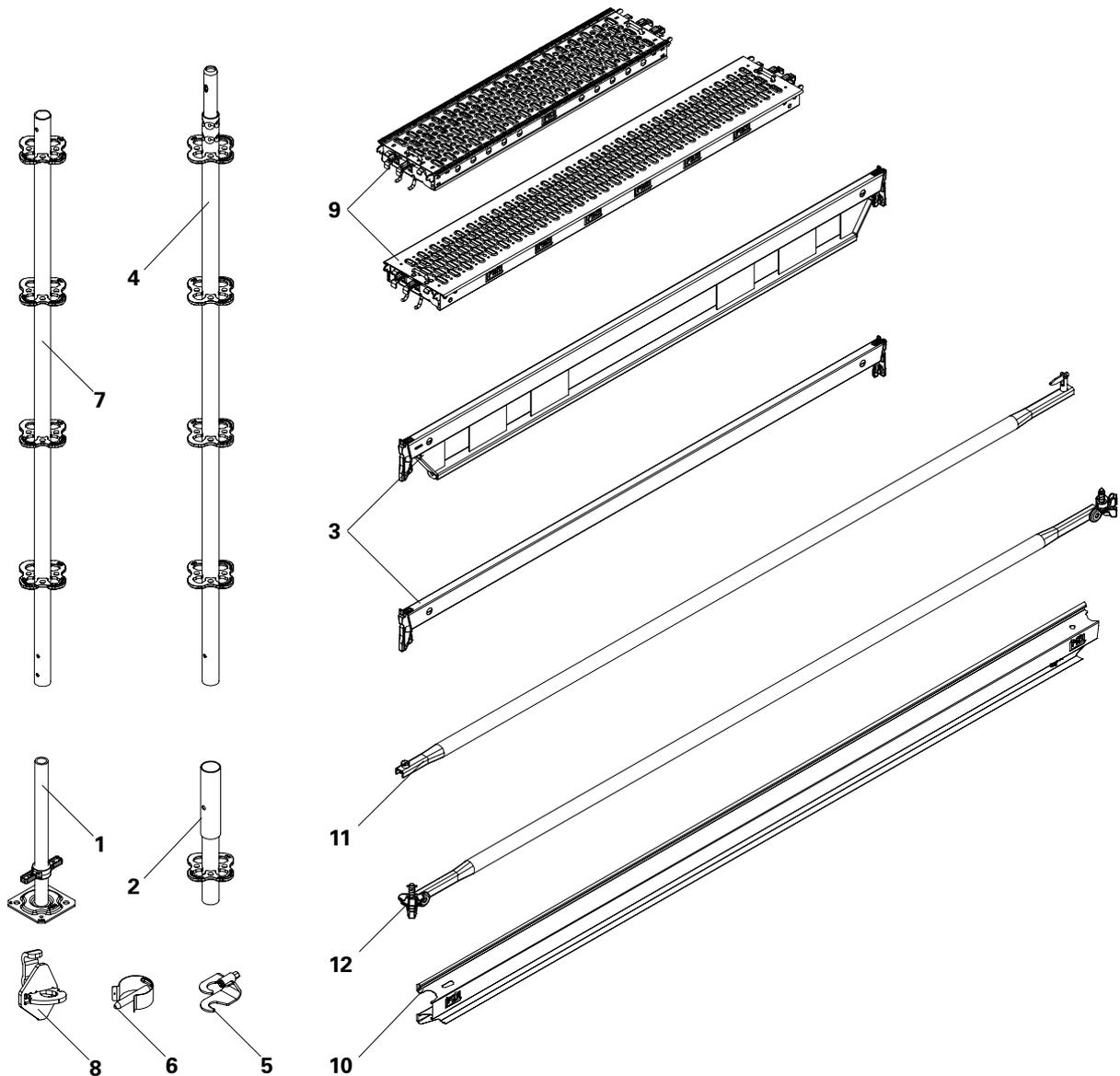
Assembly Instructions – Issue 12/2019



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Overview

Core Components



- 1 Base Spindle UJS
- 2 Base Standard UVB 24 and UVB 25
- 3 Horizontal Ledger UH; UH Plus and UHV
- 4 Standard UVR and UVR-2
- 5 Spindle Locking UJS
- 6 Locking Pin Ø 48/57
- 7 Top Standard UHV
- 8 Ledger-to-Ledger Coupler UHA
- 9 Industrial Deck UDI and Steel Deck UDG and UDG-2
- 10 Toeboard UPY
- 11 Ledger Brace UBL
- 12 Node Brace UBK



Item numbers beginning with the numbers 3 and 4 are only available as rental or used items.

Key

Pictogram | Definition



Safety instructions



Note



Load-bearing point



Visual check



Tip

Dimensions

Dimensions are usually given in mm. Other measurement units, e.g. cm, are shown in the illustrations.

Conventions

- Instructions are numbered with:
1., 2., 3.
- The result of an instruction is shown by: →
- Position numbers are clearly provided for the individual components and are given in the drawing, e.g. **1**, in the text in brackets, for example **(1)**.
- Multiple position numbers, i.e. alternative components, are represented with a slash, e.g. **1/2**.

Arrows

- Arrow representing an action

Notes on illustrations

The assembly steps presented in these Assembly Instructions are shown in the form of examples with only one component size. They are valid for all component sizes contained in the standard configuration.

To facilitate understanding, detailed illustrations are sometimes incomplete. The safety installations which have possibly not been shown in these detailed illustrations must nevertheless be available.

Target groups

Scaffolding contractors/building contractors

These Assembly Instructions (AI) are intended for contractors who use the scaffolding either for

- assembling, modifying and dismantling operations, or
- use it, e.g. for concreting, or
- allow it to be used for other work operations, e.g. carpentry or electrical work.

Construction site coordinator

The Safety and Health Protection Coordinator*

- is appointed by the client,
- must identify potential hazards during the planning phase,
- determines measures that provide protection against risks,
- creates a safety and health protection plan,
- coordinates the protective measures for the contractor and site personnel so that they do not endanger each other,
- monitors compliance with the protective measures.

Qualified and competent personnel

Due to the specialist knowledge gained from professional training, work experience and recent professional activity, the competent person qualified to carry out inspections has a reliable understanding of safety-related issues and can carry out inspections correctly. Depending on the complexity of the inspection to be undertaken, e.g. scope of testing, type of testing or the use of certain measuring devices, a range of specialist knowledge is necessary.

Qualified personnel

The scaffolding may only be assembled, modified or dismantled by personnel who are suitably qualified to do so. Qualified personnel must have completed a course of training** in the work to be performed, covering the following points at least:

- Explanation of the plan for the assembly, modification or dismantling of the scaffolding in an understandable form and language.
- Description of the measures for safely assembling, modifying or dismantling the scaffolding.

- Naming of the preventive measures to be taken to avoid the risk of persons and objects falling.
- Designation of the safety precautions in the event of changing weather conditions that could adversely affect the safety of the scaffolding, as well as the personnel concerned.
- Details regarding permissible loads.
- Description of all other risks and dangers associated with assembly, modification or dismantling operations.



- In other countries, ensure that the relevant national guidelines and regulations in the respective current version are complied with!
- If no country-specific regulations are available, it is recommended to proceed according to German guidelines and regulations.

* Valid in Germany: Regulations for Occupational Health and Safety on Construction Sites 30 (RAB 30)

** Instructions are given by the contractor himself or a competent person selected by him.

Additional technical documentation

- Approvals
 - Approval Z-8.22-863 PERI UP Flex Modular System
- Design Tables
 - PERI UP Flex Tables 2016
- Instructions for Use:
 - Original Instructions for Use for Pallets and Stacking Devices
- Brochures:
 - PERI UP Flex Working Platforms
 - PERI UP Access Technology for Construction Sites, Industry and Public Areas
- Instructions for Assembly and Use
 - PERI UP Rosette Flex, Working Scaffold 100 with Deck UDI
 - PERI UP Flex, Reinforcement Scaffold with Deck UDI
 - PERI UP Flex Staircase 75
 - PERI UP Flex Staircase 100 and 125
 - PERI UP Flex Weather Protection Roof LGS
 - PERI UP Flex Shoring Tower
 - PERI UP Flex Shoring Tower MDS K
 - PERI UP Flex Heavy-Duty Prop HD
 - PERI UP Flex Suspended Scaffold
 - PERI UP Flex Trench Bridge
 - PERI UP Flex Working Platform LGS 150

Intended use

Product description

PERI products have been designed for exclusive use in the industrial and commercial sectors only by suitably trained personnel.

These Assembly Instructions are based on the Approval Z-8.22-863 for the PERI UP Flex scaffolding system. They describe the assembly of the core components of the PERI UP Flex module scaffolding regardless of how the components are used.

The purpose of these Assembly Instructions is to provide a basic description of the assembly of the PERI UP Flex scaffolding components outside of a standard configuration which is described in the Instructions for Assembly and Use.

The Assembly Instructions may only be used in combination with the associated application verification.

The application verification describes the special requirements of the application.

It contains:

- the permissible loads,
- static proof,
- drawings,
- a parts list.

Instructions for use must be created by the contractor personally.

PERI offers the following assistance:

- Instructions for Assembly and Use for PERI UP Flex,
- PERI UP Flex Design Tables 2016,
- already created documents, e.g. trench bridge application verification,
- support for project-specific requirements.

The assembly instructions together with the application verification are equivalent to the Instructions for Assembly and Use.

Criteria

The assembly is based on the PERI UP Flex scaffolding system with supplementary components.

The permissible loads must be determined and documented in a project-specific manner. This is explained in the application verification.

Transfer of the vertical and horizontal forces from the dead, live, wind and reinforcement loads into the load-bearing structure or building is to be verified separately in each individual case.

Instructions for use

Use in a way not intended, deviating from the standard configuration or the intended use according to the Instructions for Assembly and Use, represents a misapplication with a potential safety risk, e.g. risk of falling.

Only PERI original components may be used. The use of other products and spare parts is not allowed.

Changes to PERI components are not permitted.

Cleaning and maintenance instructions

Clean the panels after each use to maintain the value and usability of the PERI products over the long term.

Some repair work may also be inevitable due to the tough working conditions. The following points should help to keep cleaning and maintenance costs as low as possible.

Never use steel brushes or hard metal scrapers to clean powder-coated or galvanised components.

Mechanical components, e.g. spindles, must be cleaned of dirt or concrete residue before and after use, and then greased with a suitable lubricant.

Provide suitable support for the components during cleaning so that no unintentional change in their position is possible.

Do not clean components suspended on crane lifting gear.

Any repairs to PERI products are to be carried out by PERI qualified personnel only.

Cross-system



Safety instructions apply to all phases of the system.

General

The contractor must ensure that the Instructions for Assembly and Use supplied by PERI are available at all times and understood by the site personnel.

These Instructions for Assembly and Use can be used as the basis for creating a risk assessment. The risk assessment is compiled by the contractor. However, these Instructions for Assembly and Use do not replace the risk assessment!

Refer to and comply with the safety instructions and permissible loads.

For the application and inspection of PERI products, the current safety regulations and guidelines valid in the respective countries must be observed.

Materials and working areas are to be inspected before each use and assembly, for:

- damage,
- stability and
- functional correctness.

Damaged components must be exchanged immediately on site and may no longer be used.

Safety components are to be removed only when they are no longer required.

When on slab formwork, scaffolds and working platforms:

- do not jump,
- do not run,
- do not drop anything from or onto it.

Components provided by the contractor must comply with the characteristics stipulated in these Instructions for Assembly and Use and all applicable laws and standards. Unless otherwise indicated, the following applies in particular:

- Timber components: Strength Class C24 for Solid Wood according to EN 338.
- Scaffold tubes: galvanised steel tubing with minimum dimensions $\text{Ø } 48.3 \times 3.2$ mm according to EN 12811-1:2003 4.2.1.2.
- Scaffold tube couplings according to EN 74-1 and EN 74-2.

Deviations from the standard configuration are only permitted after a further risk assessment has been carried out by the contractor.

Appropriate measures for working and operational safety, as well as stability, are defined on the basis of this risk assessment.

Corresponding proof of stability can be provided by PERI on request, if the risk assessment and resulting measures to be implemented are made available.

Before and after exceptional occurrences that may have an adverse effect on the safety of the scaffolding system, the contractor must immediately

- produce another risk assessment and make use of its results to take suitable steps to guarantee the stability of the scaffolding system,
- arrange for an extraordinary inspection to be carried out by a competent person qualified to do so. The aim of this inspection is to identify and rectify any damage in good time in order to guarantee safe use of the scaffolding system.

Exceptional events could be:

- accidents,
- long periods of non-use,
- natural events, e.g. heavy rainfall, icing, heavy snowfall, storms or earthquakes.

Assembly, modification and dismantling work

Assembly, modification or dismantling of scaffolding systems may only be carried out by qualified persons under the supervision of a competent person. The qualified personnel must have received appropriate training for the work to be carried out with regard to specific risks and dangers.

On the basis of the risk assessment and the Instructions for Assembly and Use, the contractor must create installation instructions to ensure safe assembly, modification and dismantling of the scaffolding system.



The contractor must ensure that the personal protective equipment required for the assembly, modification or dismantling of the scaffolding system, e.g.

- safety helmet,
- safety shoes,
- safety gloves,
- safety goggles,

is available and used as intended.



If personal protective equipment against falling from a height (PPE) is required or specified in local regulations, the contractor must determine appropriate attachment points on the basis of the risk assessment. The PPE against falling to be used is determined by the contractor.

The contractor must

- provide safe working areas for site personnel, which are to be reached through the provision of safe access ways. Areas of risk must be cordoned off and clearly marked.
- ensure stability during all stages of construction, in particular during assembly, modification and dismantling operations.
- ensure and provide evidence that all loads that occur are transferred safely.

Use

Every contractor who uses or allows the scaffolding systems to be used, is responsible for ensuring that the equipment is in good condition.

If the scaffolding system is used successively or at the same time by several contractors, the health and safety coordinator must point out any possible mutual hazards and all work must then be coordinated.

System-specific

The load-distributing support used, such as planking, must match the respective base. If several layers are required, planks are to be arranged crosswise.

Close access hatches immediately after use.

Couplers with screw closures must be tightened with 50 Nm. This corresponds to a force of 20 kg using a lever arm length of 25 cm.

Secure the wedges using a 500 g hammer.

Anchoring

Anchoring forces, position of the anchoring and reaction forces are provided in the associated application verification.

The enclosure of the scaffolding or mounting of additional surfaces exposed to the wind changes the stability and must be rechecked. If necessary, additional measures must be implemented.

Anchors must be installed progressively with the erection of the scaffolding.

The anchoring forces must be transferred into sufficiently load-bearing anchorage via wall ties and fixing materials e.g. the building.

Inspecting the anchoring

The anchoring and its components must be inspected by a qualified person nominated by the scaffolding contractor.

Load tests must be carried out at the place of use.

Load tests are to be carried out using suitable test equipment.

The test load must be 1.2 times greater than the required anchoring force F_{\perp} .

For concrete anchoring bases, the scope of testing must comprise at least 10% of all dowels used, and for other building materials at least 30% of all dowels used, but 5 load tests at least.

Storage and transportation

Store and transport components ensuring that no unintentional change in their position is possible. Detach lifting accessories and slings from the lowered components only if they are in a stable position and no unintentional change is possible.

Do not drop the components.

Use PERI lifting accessories and slings and only those load-bearing points provided on the component.

During the moving procedure:

- ensure that components are picked up and set down in such a way that unintentional toppling, falling apart, sliding, falling down or rolling is avoided.
- no persons are allowed to remain under the suspended load.

Always guide pre-assembled scaffolding bays, scaffolding units or scaffolding sections with ropes when moving them by crane.

The access areas on the construction site must be free of obstacles and tripping hazards, as well as being slip-resistant.

For transportation, the surface must have sufficient load-bearing capacity.

Use original PERI storage and transport systems, e.g. pallet cages, pallets or stacking devices.

Inspection, handover and use

The erected scaffolding must be inspected by the scaffolding contractor in order to determine that assembly has been carried out correctly. If the contractor is convinced that the scaffolding has been correctly erected, it can then be handed over to the user. It is advisable to carry out the handover with the user and, for example, to document this in a written report.

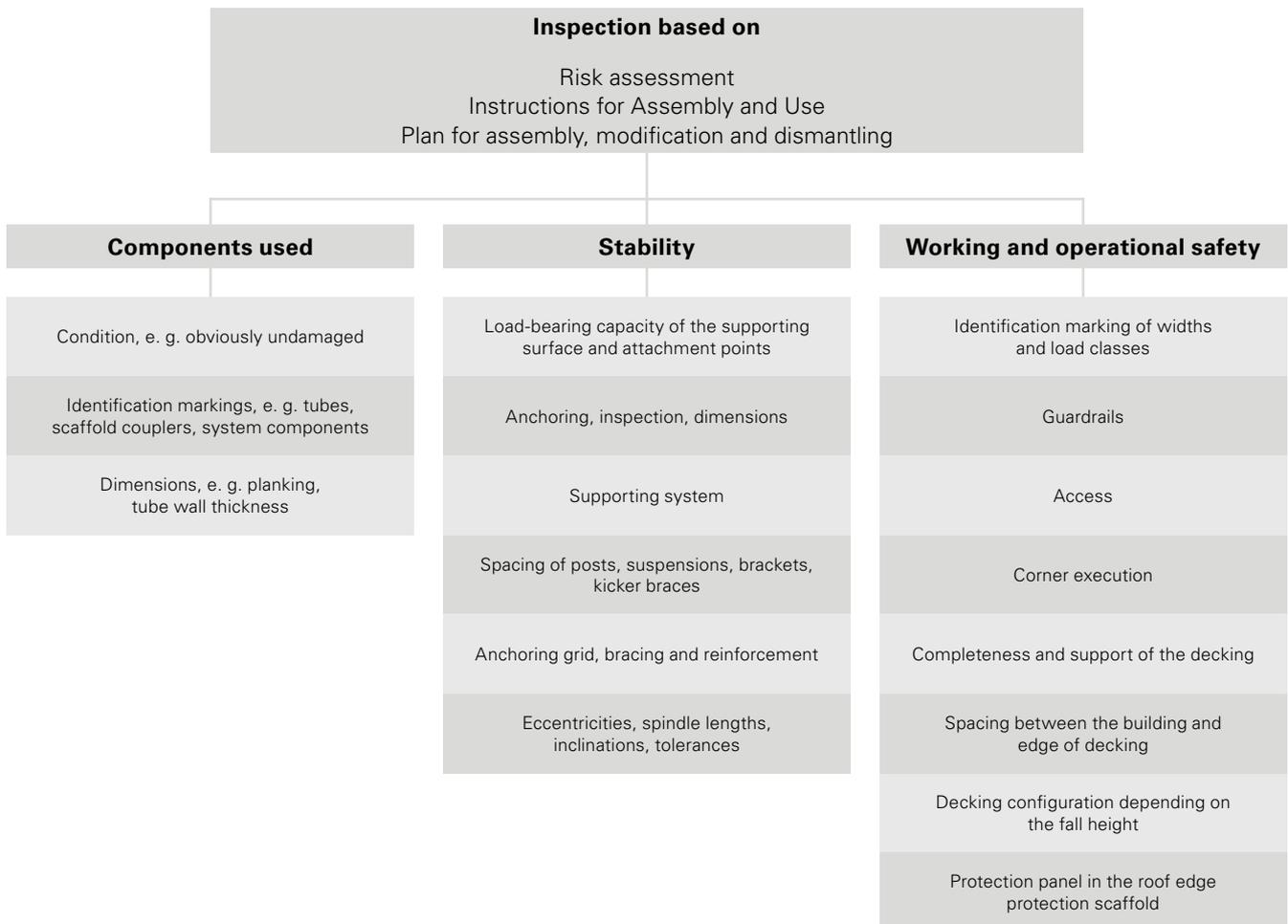


During the handover, the scaffold contractor must advise the user of any possible risks involved with non-intended use and his obligation to provide adequate prevention against risk and danger!

- Put up safety and warning signs at the scaffold access points.
- Handover of a usage plan.



The contractor who uses scaffolding, must ensure that the scaffolding is in good condition and not arbitrarily altered in any way. In this respect, the qualified specialists must be instructed that if changes have obviously been made during use, these must be reported to the respective qualified and competent person.



Source: based on TRBS 2121 Part 1

Comparison of components

As part of ongoing product optimisation, the following components have been replaced by 2nd generation components.

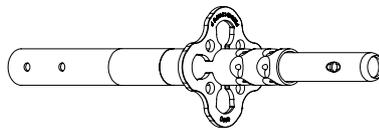
The following comparison tables describe the visible features of 1st and 2nd generation.



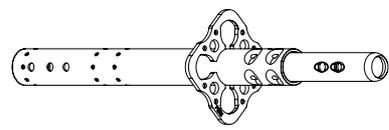
1st and 2nd generation components can be combined.

- The previous components
 - Standard UVR,
 - Steel Deck UDG
 are no longer available as new components.
- The optimised components
 - Standard UVR-2,
 - Steel Deck UDG-2
 are available under new article numbers.

Standard UVR

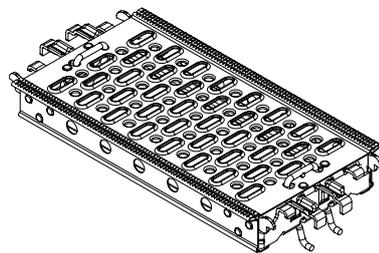


Standard UVR-2

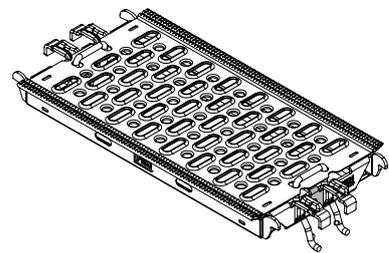


Tube	RO 48.3 mm x 3.2 mm	RO 48.3 mm x 2.7 mm , embossed points result in slight play on the joint.
Spigot tube connection	2 rows, with 5 pinch points each	2 rows, with 4 pinch points each
Rosette	160 mm x 130 mm x 8 mm	152 mm x 120 mm x 6 mm
Hole for suspended scaffold for fixing with screws and bolts M10	1 hole perm. F = 20 kN when fixed 1x	2 holes perm. F = 15 kN when fixed 1x perm. F = 30 kN when fixed 2x
Marking	none	striped band at the top and bottom
Compatibility	Can be mixed based on geometric and static* compatibility. * Only applies when combined with UH Plus and UHV Plus horizontal ledgers. * The load tables shown in the Instructions for Assembly and Use for the Flex Heavy-Duty Prop HD and Shoring Tower Plus systems do not apply to use of the Standard UVR-2. Check the statics beforehand!	

Steel Deck UDG



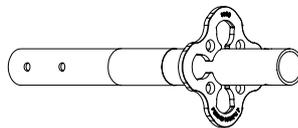
Steel Deck UDG-2



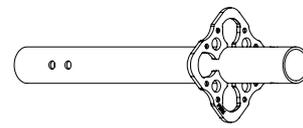
Deck assembly	riveted and welded	welded
Profile height	65 mm, uniform	L 50 – 150: 45 mm L 200 – 250: 60 mm L 300: 70 mm
Marking	without	yellow clip on the front side
Compatibility	Can be mixed based on geometric and static* compatibility. Take *Load Class (perm. p) into account.	

- The previous components
 - Top Standard UVH
 - Horizontal Ledger UH Plus
 are replaced by the optimised version and are no longer available in their previous form.
- The optimised components are available under their previous article number.

Top Standard UVH

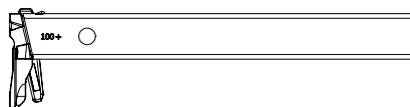


Top Standard UVH (2nd generation)

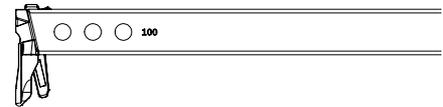


Tube	RO 48.3 mm x 3.2 mm	RO 48.3 mm x 3.2 mm
Rosette	160 mm x 130 mm x 8 mm	152 mm x 120 mm x 6 mm
Hole for suspended scaffold for fixing with screws and bolts M10	1 hole perm. F = 20 kN when fixed 1x	2 holes perm. F = 15 kN when fixed 1x perm. F = 30 kN when fixed 2x
Compatibility	Can be mixed based on geometric and static compatibility.	

Horizontal Ledger UH Plus



Horizontal Ledger UH Plus (2nd generation)



UBL assembly points	2 x 1, for assembly of a Ledger Brace UBL	2 x 3, for assembly of up to three Ledger Braces UBL When installing only one ledger brace preferably use the middle assembly point. UBL ledger braces can be mounted at very flat installation angles using the middle assembly point only. Check the geometry beforehand!
Compatibility	Can be mixed based on geometric and static compatibility	

Attachment points for PPE



- Each specified attachment point is intended for safeguarding only one person!

General information

- The use of personal protective equipment to prevent falling from a height is regulated in the project-related risk assessment that has been prepared by the contractor (user).
- When using personal protective equipment to prevent falling from a height, all valid standards and safety regulations are to be taken into consideration by the contractor.
- Each scaffold assembly is to be secured against tipping by the user.
- The application is valid for assembly, modification and dismantling operations.

Requirements

- The scaffold assembly underneath the final assembly level is complete. This means, all ledgers and diagonal bracing have been installed and the decking is in place as the topmost assembly level.
- The joints of the topmost standards must lie underneath the last assembly level.

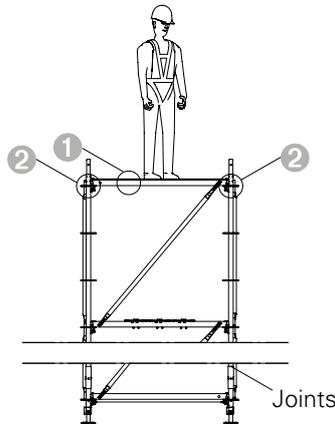


Fig. A1.01

Attachment points

The standard ends in the last assembly level:

- each horizontal ledger in the assembly level ①,
- each rosette in the assembly level ②.

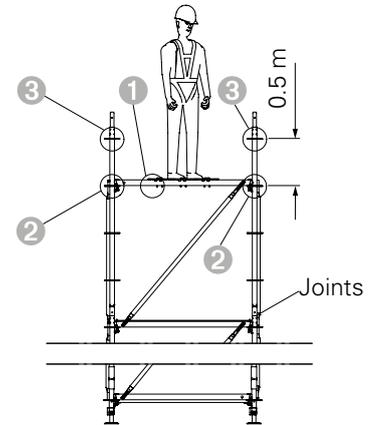


Fig. A1.02

Attachment points

The standard ends 0.5 m above the last assembly level:

- each horizontal ledger in the assembly level ①,
- each rosette up to max. 0.5 m above the last assembly level ②, ③.

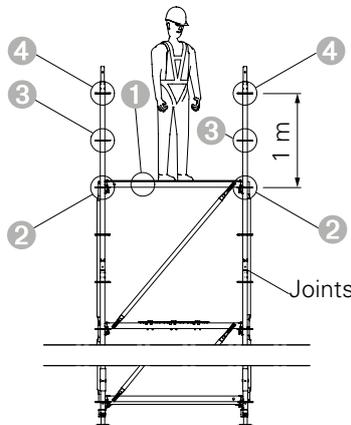


Fig. A1.03

Attachment points

The standard ends 1.0 m above the last assembly level:

- each horizontal ledger in the assembly level ①,
- each rosette up to max. 1.0 m above the last assembly level ② ③ ④.

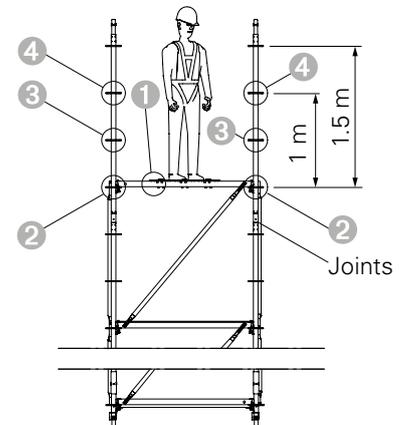


Fig. A1.04

Attachment points

The standard ends 1.5 m above the last assembly level:

- each horizontal ledger in the assembly level ①,
- each rosette up to max. 1.0 m above the last assembly level ② ③ ④.

Measures to prevent tipping



Tipping risk!

Proof of stability is required!

- Anchoring of the scaffold assembly to a suitable structure, e.g. building, abutment, column.
- Connecting the scaffold assembly by means of Horizontal Ledgers UH; alternatively, with scaffold tubes and couplers. (Fig. A1.05)
- Connecting the scaffold assembly with other system components to form stable units. (Fig. A1.06)



Ratio of scaffold height to the smallest erection width: less than 3:1.

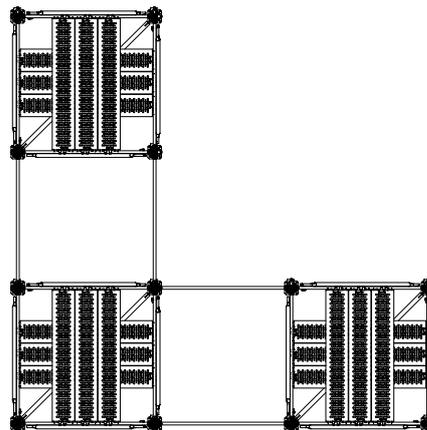
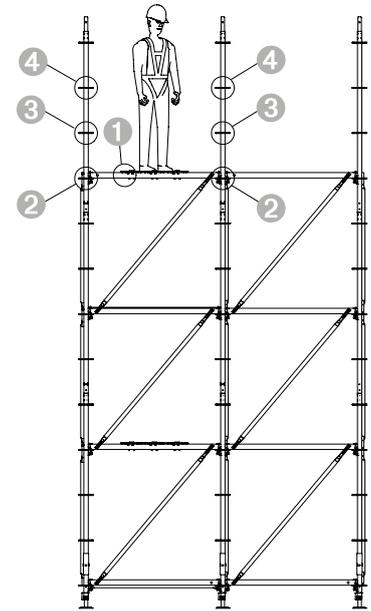
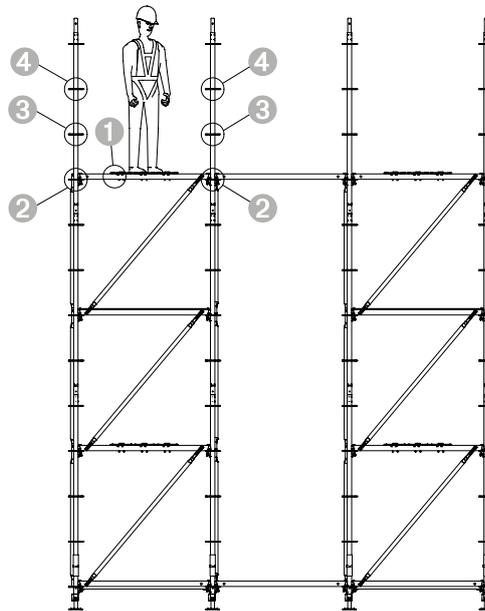


Fig. A1.05

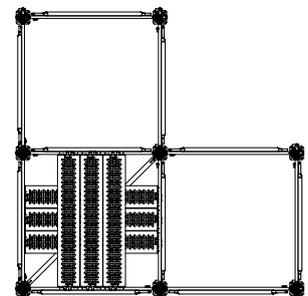


Fig. A1.06

Base frame



Check load-bearing capacity!

The scaffold assembly must only be erected on sufficiently load-bearing surfaces with load distribution plates!



The assembly dimensions for **(A)** and **(B)** are variable. These are determined in the instructions for use.

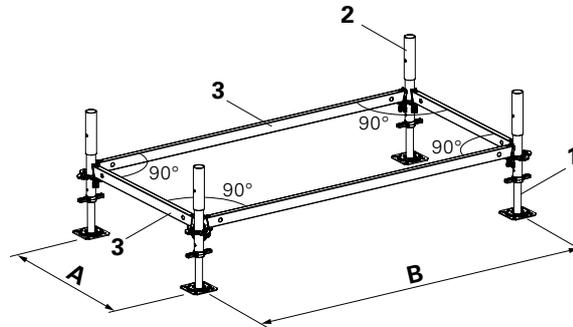


Fig. A2.01

Required components

- 1 Base Spindles UJB
- 2 Base Standards UVB 24
- 3 Horizontal Ledger UH and/or UHV

Installation

1. Adjust the spindling length of the base spindle in accordance with:
 - the application verification with assembly and installation plans or
 - the Instructions for Assembly and Use. (Fig. A2.01a)
2. Position Base Standard UVB 24 on the base spindle. (Fig. A2.01a)
3. Insert Horizontal Ledgers (3) into the rosettes of the standards and align with a levelling device. (Fig. A2.01)

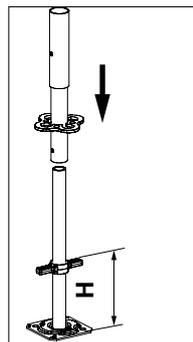


Fig. A2.01a

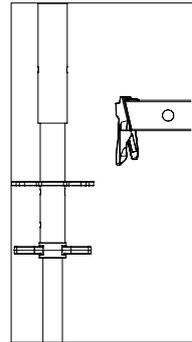


Fig. A2.01b



All ledgers must be at 90° to one another. (Fig. A2.01)

4. Adjust the Base Frame to the required level by turning the Quick Jack Nuts (**1a/1b/1c**) on the Base Spindles.
(Fig. A2.02/A2.03/A2.04)
5. Drive in the wedges of the Horizontal Ledgers (**3**) using a 500 g hammer.
(Fig. A2.01c)



Observe the maximum spindling length!

- Base Spindle UJB 38-50/30 with red Quick Jack Nut (1a) = max. 30 cm.
(Fig. A2.02),
- Base Spindle UJB 38-80/55 with yellow Quick Jack Nut (1b) = max. 55 cm. (Fig. A2.03)
- Instead of the Base Spindle UJB 38-50/30 (1a), the Base Spindle TR 38-70/50 (1c) with a maximum spindling length of 47 cm can also be used. (Fig. A2.04)

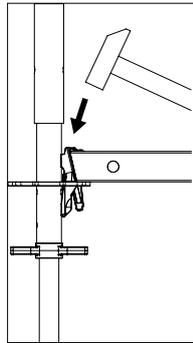


Fig. A2.01c

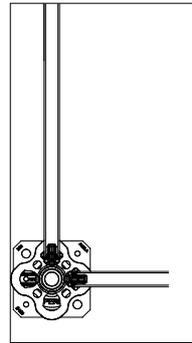


Fig. A2.01d

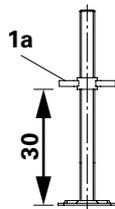


Fig. A2.02

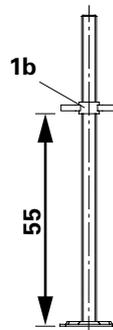


Fig. A2.03

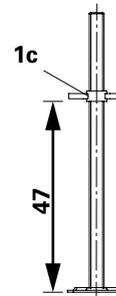


Fig. A2.04

Standards UVR

Advantages:

- Joints 1 m above the decking level.
- Ledgers can immediately be installed as guardrails.
- Assembly with guardrail in advance possible.

Free-standing scaffold assemblies

Start assembly with 4 Standards UVR 300 (4b).

Non-free-standing scaffold assemblies

e.g. scaffold assemblies attached to a wall:

- Wall side of the scaffold assembly without guardrails with 2 Standards UVR 200 (4a).
- Outer side with 2 Standards UVR 300 (4b). (Fig. A2.05)

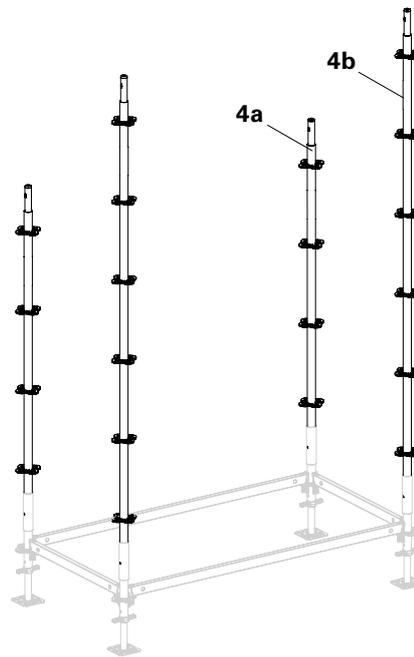


Fig. A2.05

Required components

-
- 1** Base Spindles UJB
 - 2** Base Standards UVB 24
 - 3** Horizontal Ledger UH and/or UHV
 - 4a** Standards UVR 200
 - 4b** Standards UVR 300
-

Installation

1. Insert Standard UVR (4a/4b) on the Base Standard UVB 24 (2). (Fig. A2.06a)
2. Align the insert holes with each other. (Fig. A2.06a)

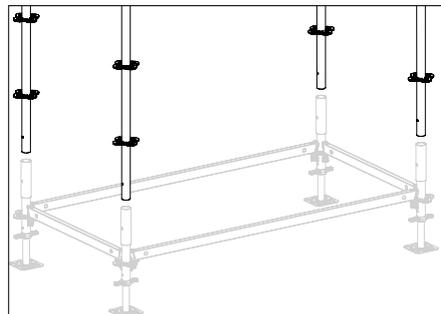


Fig. A2.06

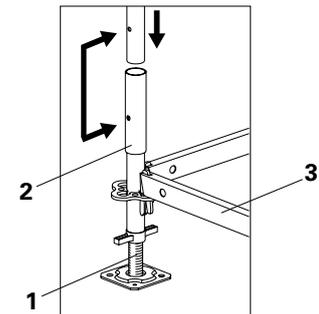


Fig. A2.06a

Moving by crane

During movement by crane, tension-resistant connections act on all components.



Warning

Loose components can fall and hit people during transport by crane. This can lead to serious injuries or even death.

- ⇒ Remove all loose parts, tools etc.
- ⇒ Before commencing moving operations with the crane, check all connections!
- ⇒ Guide scaffold assembly with ropes during moving operations!

Required components

-
- 1 Base Spindles UJB
 - 2 Base Standards UVB 24
 - 4 Standard UVR
 - 5 Spindle Locking UJS
 - 6 Locking Pin Ø 48/57 or
 - 13 Screw M10x80.8.8 with nut
-

Assembly of the bolted connections

1. Insert Standard UVR (4) into the Base Standard UVB 24 (2). (Fig. A2.07)
2. Align the insert holes with each other. (Fig. A2.07)
3. Tightly connect Standard UVR (4) and Base Standard UVB 24 (2) using Bolts M10x80.8.8 and Nuts (13). (Fig. A2.07a/A2.07b)

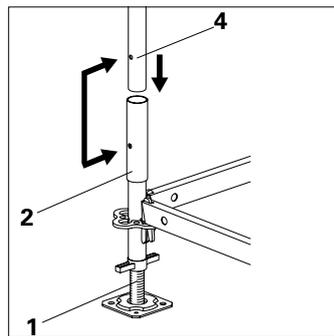


Fig. A2.07

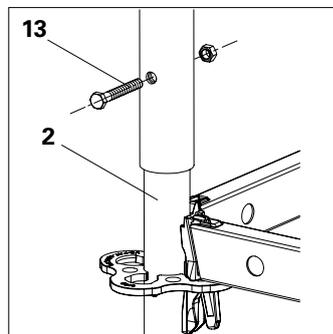


Fig. A2.07a

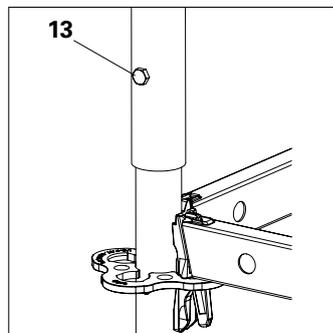


Fig. A2.07b

Assembly of locking pin:

1. Tightly connect Standard and Base Standard UVB 24 (**2**) using Locking Pins \varnothing 48/57 (**6**). (Fig. A2.07c/A2.07d)

Assembly of spindle locking

1. Mount Spindle Locking UJS (**5**) and fix in position by turning the bolt (**5a**). (Fig. A2.07e)



The Quick Jack Nut (**1a**) must be inside the Spindle Locking UJS. (Fig. A2.09e)

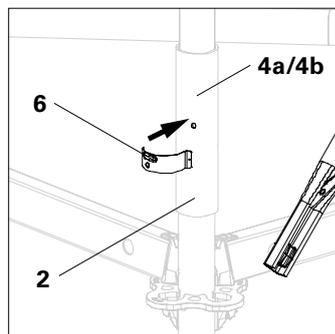


Fig. A2.07c

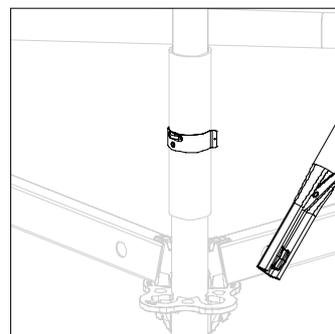


Fig. A2.07d

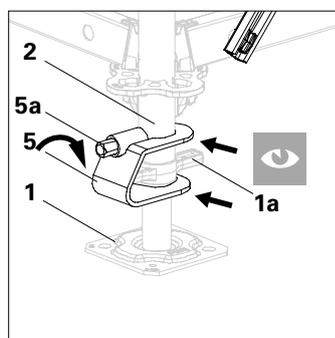


Fig. A2.07e

Top Standards UHV

Required components

- 4 Standard UVR
- 7 Top Standards UHV

Installation

1. Insert Top Standard (7) into Standard UVR (4).
2. Align the insert holes with each other. (Fig. A2.8)

Moving the Top Standards UHV by crane.

During movement, for example with a crane, tensile forces act on the scaffold assembly. Tensile forces are absorbed by Bolts M10x80-8.8 and Nuts (13) or alternatively with Locking Pins Ø 48/57 (6).

Required components

- 4 Standard UVR
- 7 Top Standards UHV
- 6 Locking Pin Ø 48/57 or
- 13 Screw M10x80-8.8 with Nut

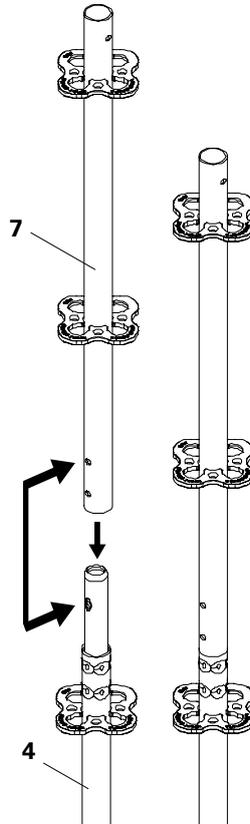


Fig. A2.8

Assembly of the bolted connection

1. Insert Top Standard (7) into Standard UVR (4). (Fig. A2.8)
2. Align the insert holes with each other. (Fig. A2.8)
3. Tightly connect Standards UVR (4a/4b) and Base Standards UVB (2) using Bolts M10x80-8.8 and Nut (13). (Fig. A2.8a/A2.8b)

Alternatively:

4. Tightly connect Standards and Base Standards using Locking Pins Ø 48/57 (6). (Fig. A2.9a/A2.9b)

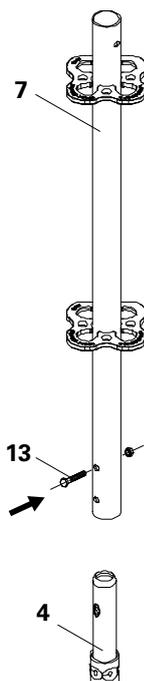


Fig. A2.8a



Fig. A2.8b

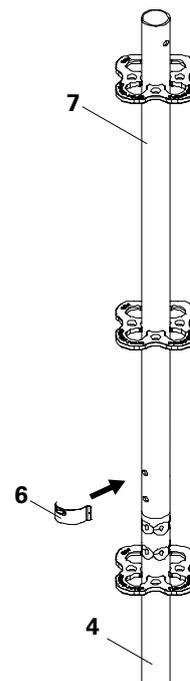


Fig. A2.9a



Fig. A2.9b

Ledger-to-Ledger Coupler UHA

The Ledger-to-Ledger Coupler UHA is mounted in order to install a Horizontal Ledger UH between two available ledgers at the same height.

This is applied in order to:

- install an access opening,
- provide an additional support for decking,
- change the direction of the decks.



Check the load-bearing capacity of the horizontal ledgers!



The Ledger-to-Ledger Coupler UHA can be attached to Horizontal Ledger UH as well as the reinforced Horizontal Ledgers UHV.

(Fig. A2.10, A2.10a, A2.11, A2.11a)

Required components

- 3** Horizontal Ledger UH or Horizontal Ledger UHV
- 8** Ledger-to-Ledger Coupler UHA

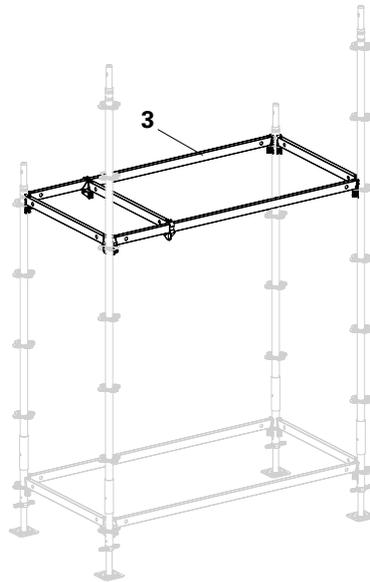


Fig. A2.10

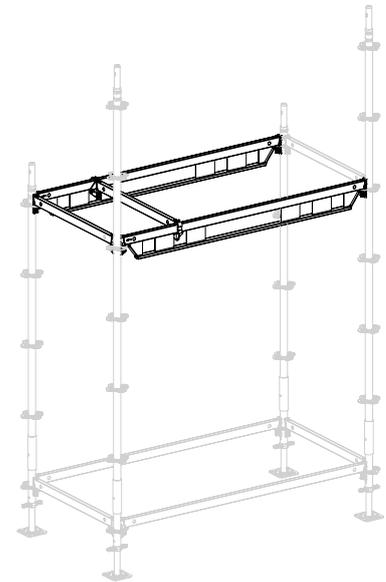


Fig. A2.11

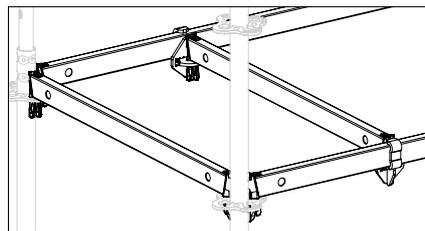


Fig. A2.10a

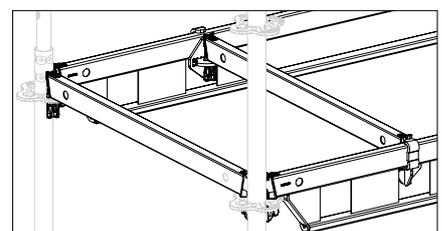


Fig. A2.11a

Installation

1. Place the Suspension Point UHA (**8a**) of the Ledger-to-Ledger Coupler UHA (**8**) on the Horizontal Ledger (**3**) and hold it with one hand. (Fig. A2.12a)
2. Push the Pressure Plate UHA (**8b**) in the direction of the Horizontal Ledger UH (**3**). (Fig. A2.12b – A2.12d)
3. Insert locking finger (**8c**) into the hole. (Fig. A2.12e + A2.12f)
4. Attach Horizontal Ledger (**3a**) from above to the Ledger-to-Ledger Coupler UHA (**8**). (Fig. A2.11g)
5. Drive in the wedges of the Horizontal Ledger using a 500 g hammer. (Abb.A2.11h)

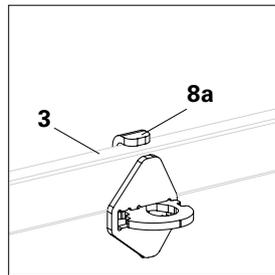


Fig. A2.12a

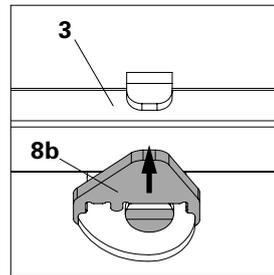


Fig. A2.12b

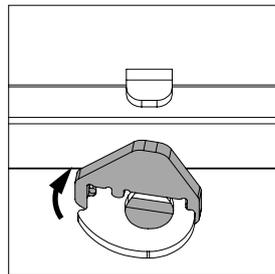


Fig. A2.12c

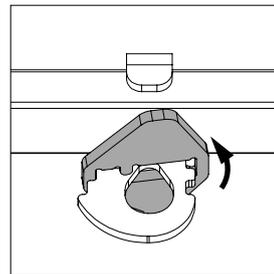


Fig. A2.12d

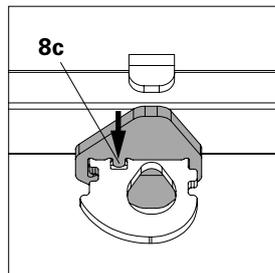


Fig. A2.12e

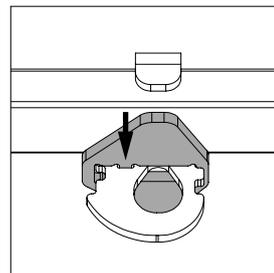


Fig. A2.12f

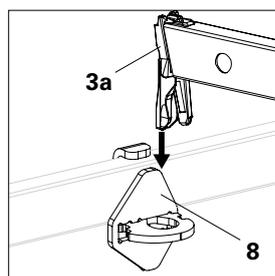


Fig. A2.12g

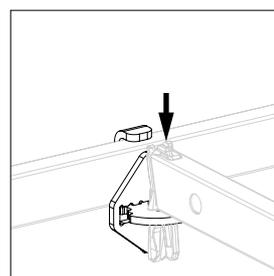


Fig. A2.12h

Decking



Check load-bearing capacity!

Before installing the decking, check the load-bearing capacity for the intended use defined in the application verification.



The Industrial Deck UDI is shown as the assembly example. Identical installation for additional decking as well as the scaffold access points.

Required components

- 3** Horizontal Ledger UH+ or Horizontal Ledger UHV
- 9a** Industrial Decks UDI or Steel Decks UDG or Steel Decks UDG-2

Installation

1. Attach Industrial Deck UDI (**9a**) on one side. (Fig. A2.13a)
2. On the other side, lower the deck onto Horizontal Ledger UH.
3. Open securing hook and secure when deck has been completely lowered. (Fig. A.2.13b/A2.13c)

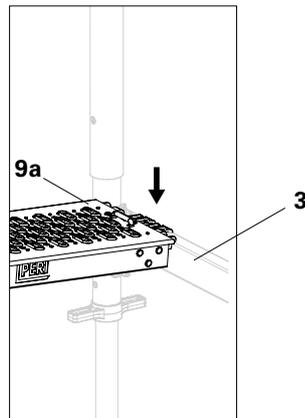


Fig. A2.13a

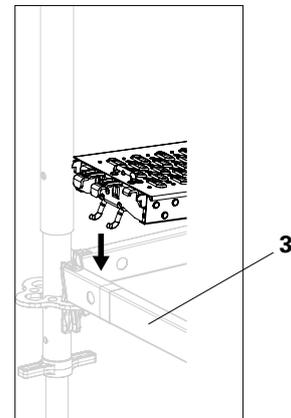


Fig. A2.13b

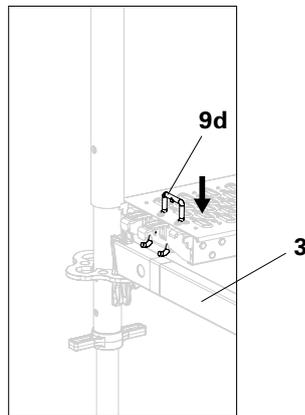


Fig. A2.13c

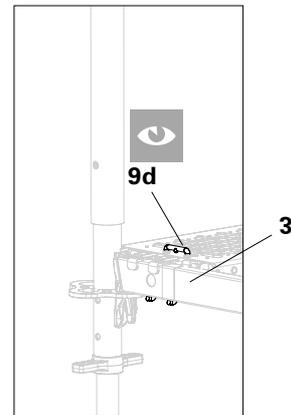


Fig. A2.13d



Securing hook (**9d**) must be flush with the deck. (Fig. A.2.13d)

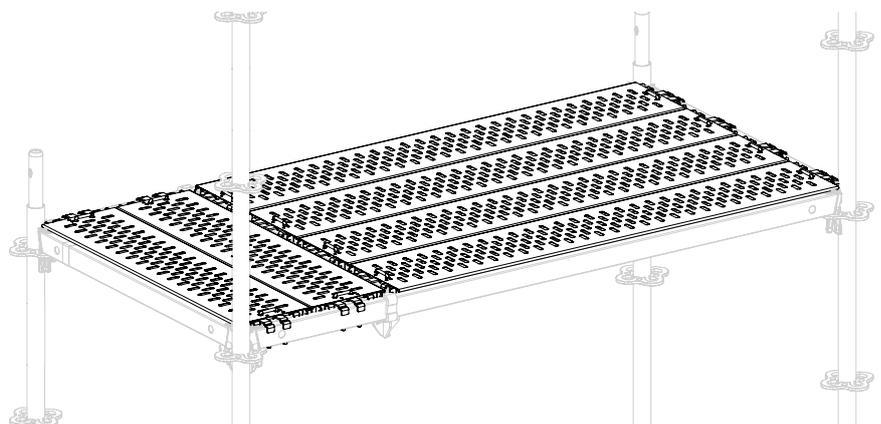


Fig. A2.13

Access to scaffolding



Warning

There is a risk of falling due to open access openings.

⇒ Arrange the access openings alternately!



Caution!

Access openings can trap body parts when they close independently.

⇒ The self-closing access opening should be firmly held during use!
⇒ Look out for people who will use the access opening after you!



Note

Ensure that the access opening does not exceed an angle of approx. 95° when opened.

This can lead to injuries.



- When scaffold bays are wider, the working width must be laterally limited to the dimensions of the intended scaffold access. (e.g. in the case of upper access bays in the lowest and uppermost position.)
- Internal access using Ladder Access is possible up to Load Class 3 (LC3).
- Close access openings immediately after use!

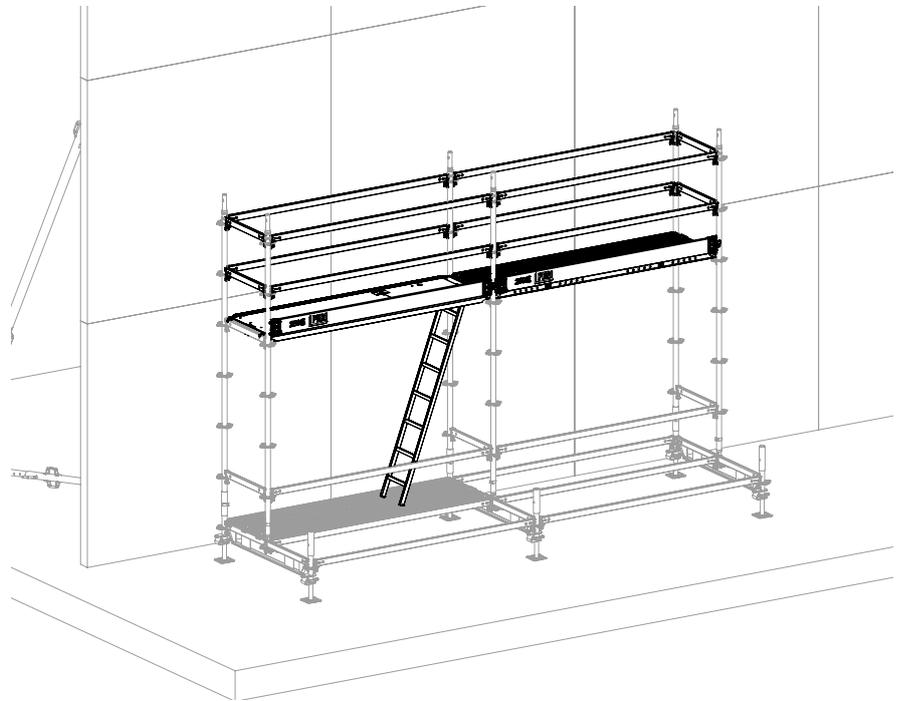


Fig. A2.14

Required components

- 3** Horizontal Ledger UH+ or
Horizontal Ledger UHV
- 9b** Ladder Access UAW 75 L
Ladder Access UAA 75 L
- 9c** Access Deck UAW 75
Access Deck UAA 75

Assembly of the Ladder Access

1. Assemble the Ladder Access in the same way as the decking.
2. Secure the ladder on the lowest rung and unlatch latch **(9.1)**.
3. Set the ladder down on the scaffold level underneath. Guide the ladder, do not allow it to drop.

Assembly of Access Deck

1. Assemble the Access Deck in the same way as the decking.
2. Open access hatch and temporarily secure against falling.
3. Lift the ladder into the access opening and hang from above over the circular tube **(9.2)**. (Fig. A2.14c)
4. Remove lock on access hatch and close hatch.

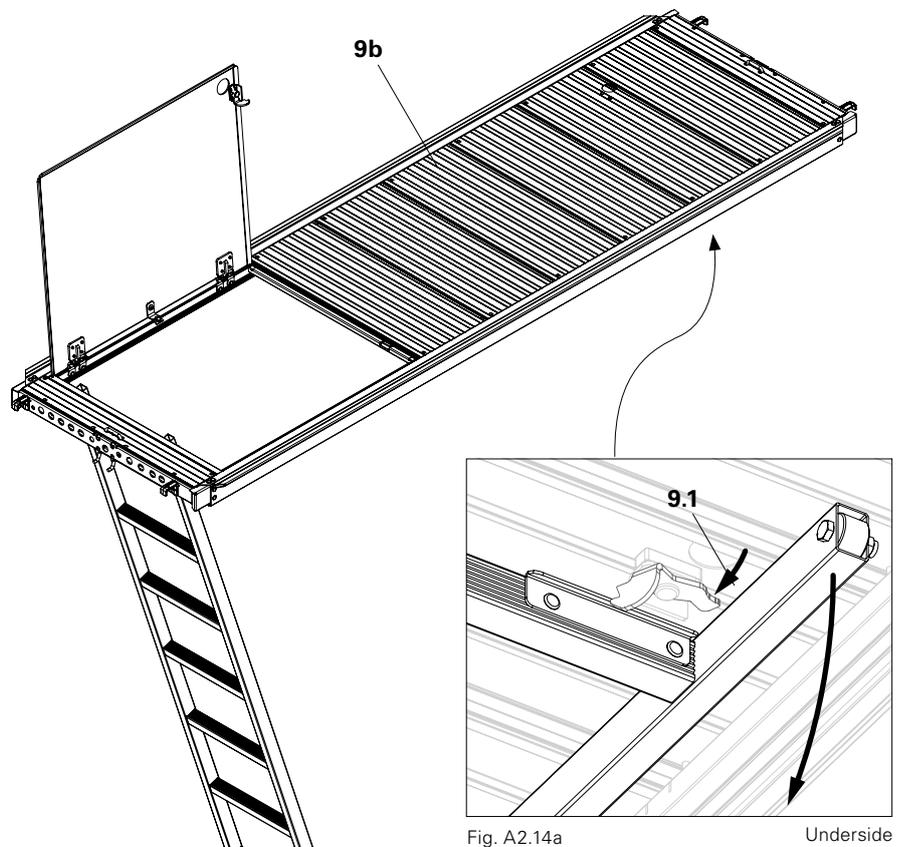


Fig. A2.14a

Underside

Fig. A2.14

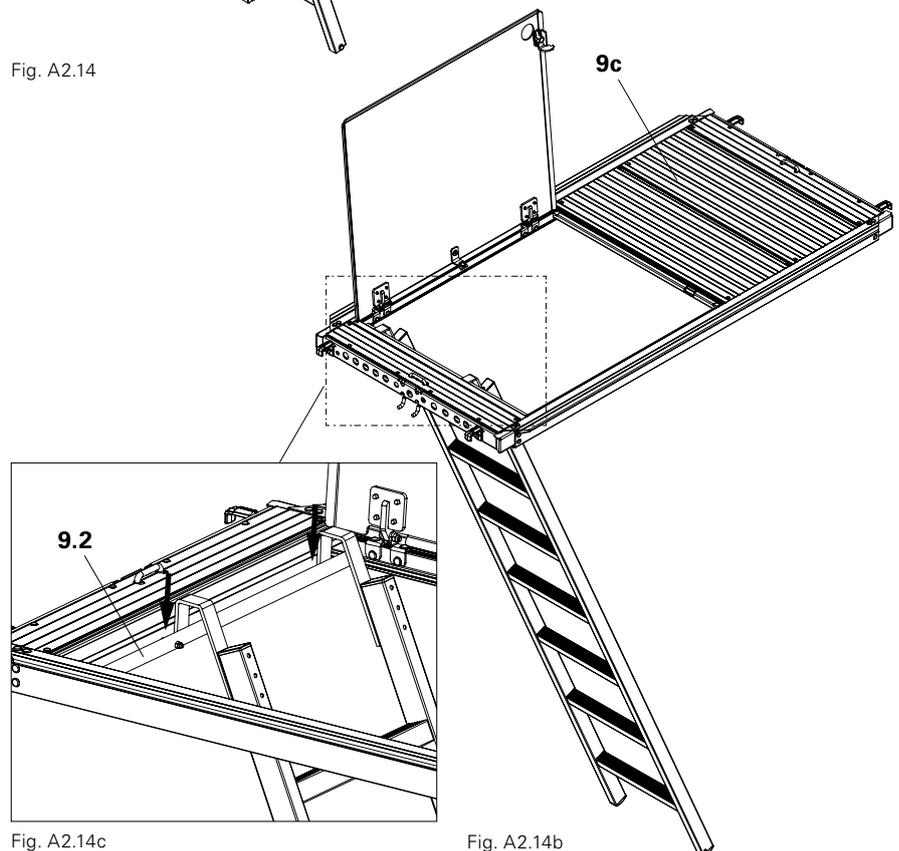


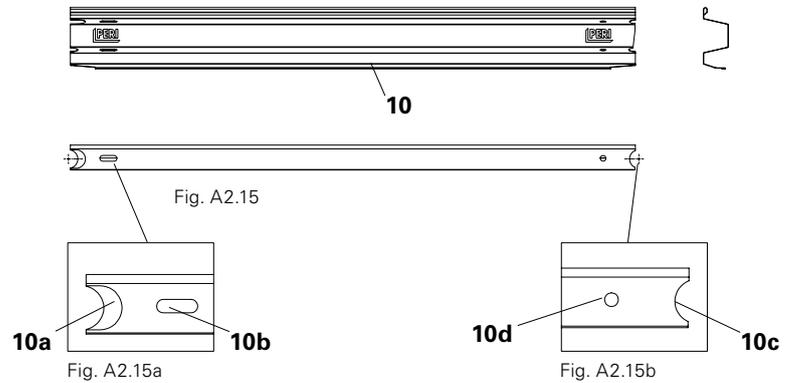
Fig. A2.14c

Fig. A2.14b

Toeboard UPY



- When inserting the Toeboard UPY, ensure that the PERI lettering is not upside down. (Fig. A2.15)
- Observe the different ends of the Toeboard UPY:
 - One side with recess (10a) and elongated hole (10b). (Fig. A2.15a)
 - Other side with semi-circle (10c) and drilled hole (10d). (Fig. A.2.15b)
- The assembly of the Toeboard UPY-C follows the same procedure.



Required components

- 4a** Standard UVR (inner)
- 4b** Standard UVR (corner)
- 4c** Standard UVR (outer)
- 10** Toeboard UPY

Assembly in the scaffold bay

1. Place Toeboard UPY (**10**) with recess (**10a**) obliquely on the Standard UVR (**4a**). (Fig. A2.16a)
 2. Pivot the Toeboard UPY (**10**) in the direction of the second Standard UVR (**4b**). (Fig. A2.18a)
 3. Semi-circle (**10c**) must be positioned at the level of the Standard UVR (**4b**), then lower. (Fig. A2.16b)
- Toeboard UPY is now positioned.

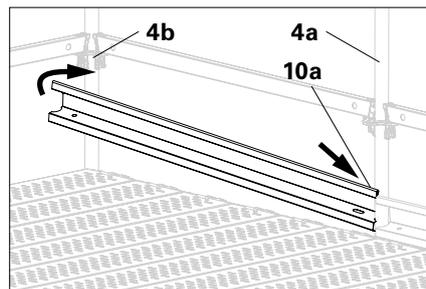


Fig. A2.16a

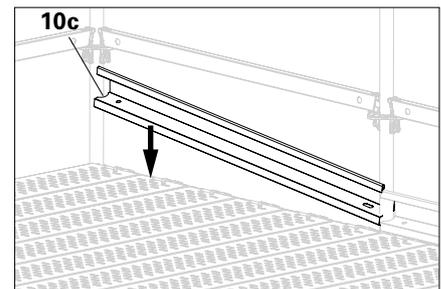


Fig. A2.16b



When installing the Toeboards UPY at corners, ensure that the elongated holes (**10b**) or drilled holes (**10d**) are always aligned with each other. (Fig. A2.17a/A2.17b)

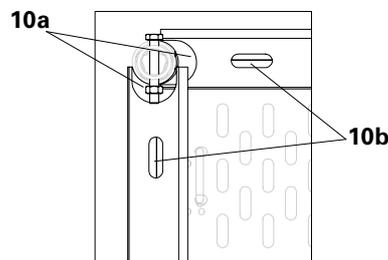


Fig. A2.17a

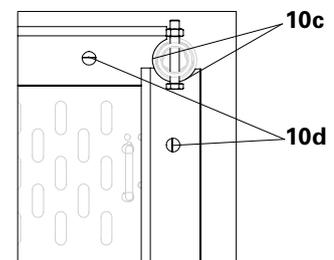


Fig. A2.17b



When installing and dismantling both Toeboards UPY over corners, ensure that no unsecured components can fall to the ground.

Assembly at corners

1. Place Toeboard UPY (**10.1**) with recess (**10a**) obliquely on the Standard UVR (**4c**). (Fig. A2.18a)
2. Pivot the Toeboard UPY (**10.1**) in the direction of the second Standard UVR (**4b**). (Fig. A2.18a)
3. Semi-circle (**10c**) must be positioned on the axis of the Standard UVR (**4b**). (Fig. A2.18a)
4. Lift the second Toeboard UPY (**10**) on one side. (Fig. A2.18a)
5. Lower both Toeboards UPY at the same time. (Fig. A2.18b)
→ Toeboards are now positioned.

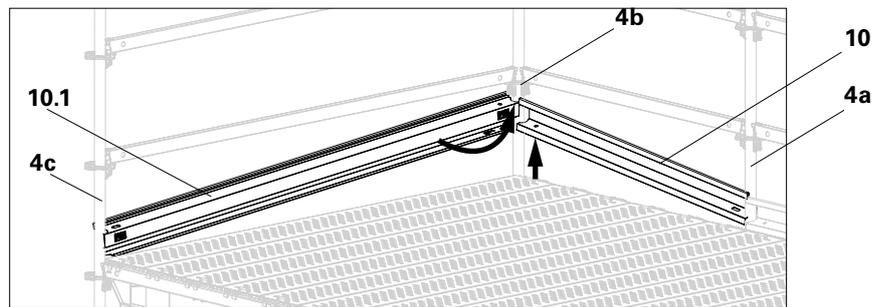


Fig. A2.18a

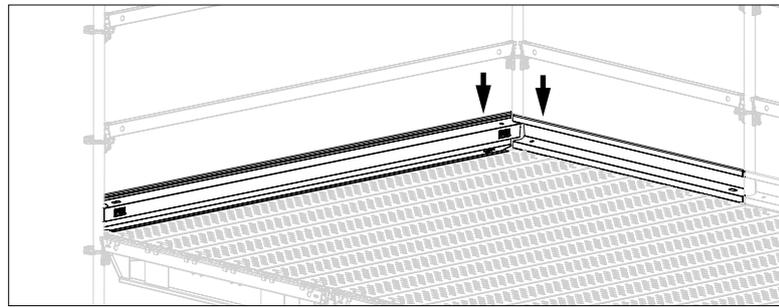


Fig. A2.18b

Ledger Brace UBL



Check load-bearing capacity!

Before installing the Ledger Braces UBL, check the load-bearing capacity for the intended use defined in the application verification.

Required components

- 3a** Horizontal Ledger UH (bottom)
- 3b** Horizontal Ledger UH (top)
- 11** Ledger Brace UBL

Installation

1. Insert mounting finger (**11a**) of the Ledger Brace UBL (**11**) diagonally into the hole of the bottom Horizontal Ledger UH (**3a**). (Fig. A2.19a/A2.19b)
2. Pivot gravity pin (**11b**). (Fig. A2.19c)
3. Insert into the hole of the top horizontal ledger (**3b**). (Fig. A2.19d)
4. Turn gravity pin to secure.
→ Ledger Brace UBL (**11**) is now positioned. (Fig. A2.19e)



All gravity pins (**11**) of the scaffold assembly must be in a transverse position after installing the Ledger Braces UBL. (Fig. A2.19e)

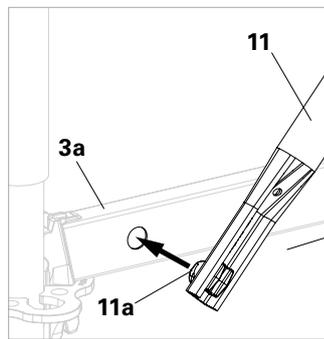


Fig. A2.19a

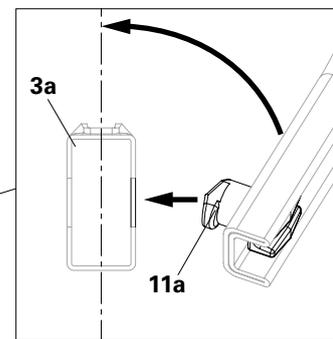


Fig. A2.19b

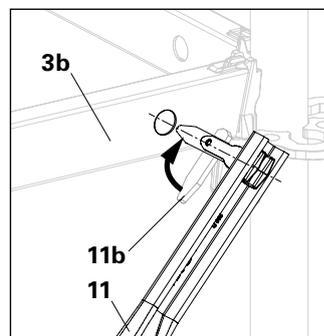


Fig. A2.19c

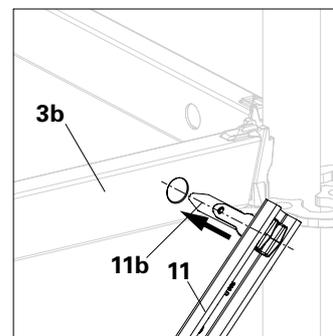


Fig. A2.19d

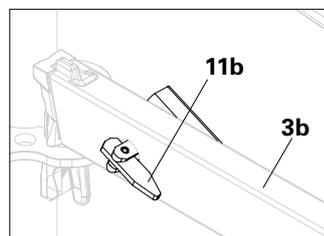


Fig. A2.19e

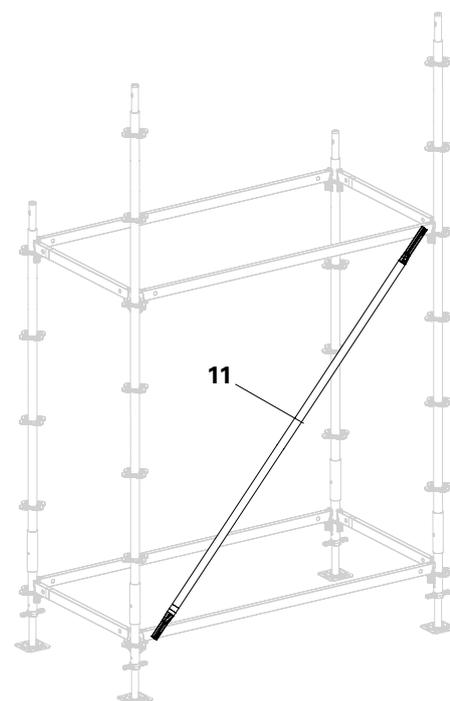


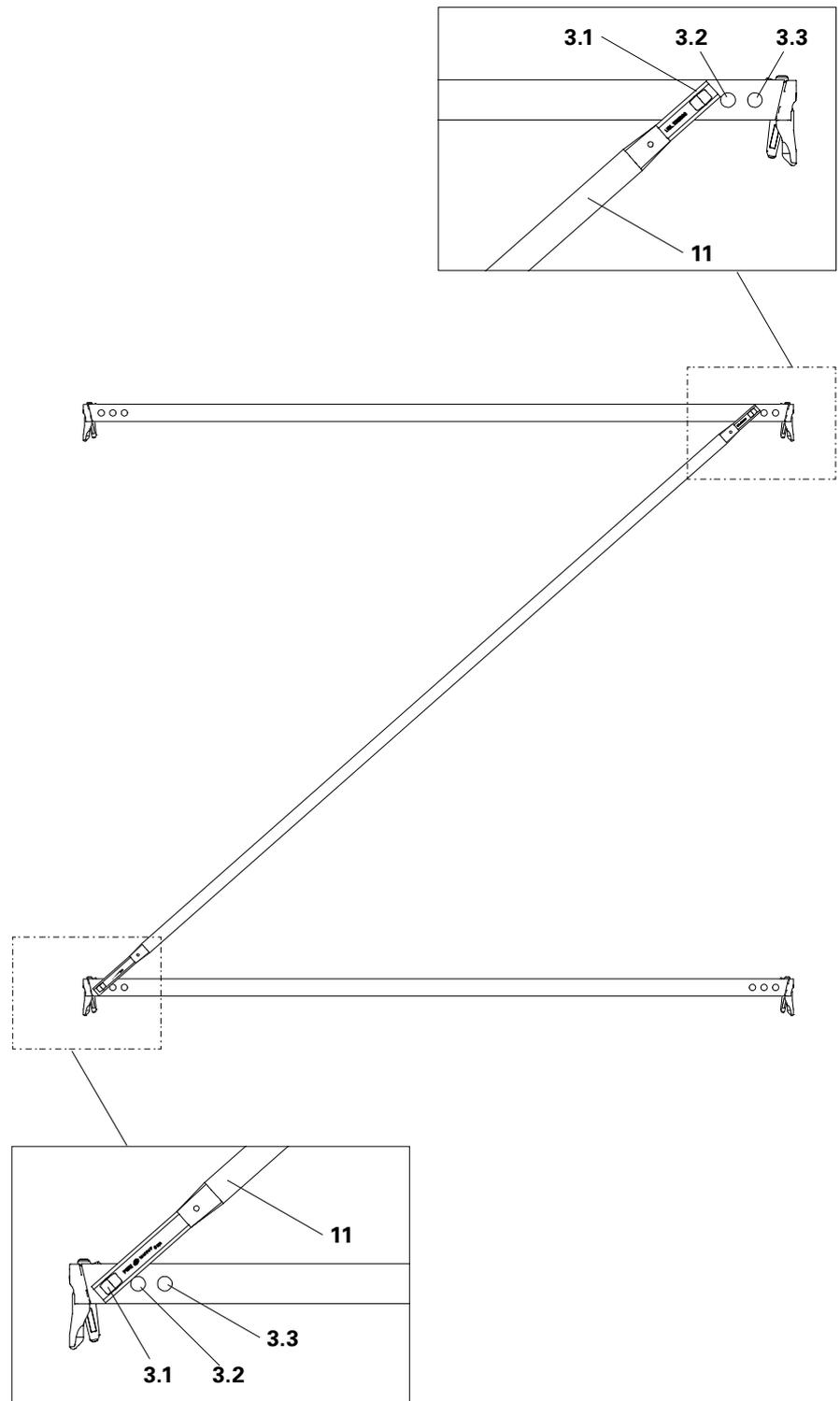
Fig. A2.19

Ledger Brace UBL on Horizontal Ledger UH Plus 2nd generation

The assembly position of the Ledger Braces UBL (**11**) can be freely selected at three assembly points (**3.1 / 3.2 / 3.3**) on the Horizontal Ledger UH Plus. Always select the same assembly position on the upper and lower horizontal ledger. (3.1 / 3.1, 3.2 / 3.2, 3.3 / 3.3).

Up to three ledger braces can be assembled at the same time.

- When installing a diagonal strut, it is best to use assembly point 3.2.
- When installing 2 ledger braces, use assembly points 3.1 and 3.3.
- When installing 3 ledger braces install the third ledger brace on the inside at assembly point 3.2 in order to save space.



Node Braces UBK



Caution

Node Braces UBK can fall over at installation. People can be struck and injured!

⇒ Mount at the top first when installing Node Braces UBK!



Check load-bearing capacity!

Before installing the Node Braces UBK, check the load-bearing capacity for the intended use defined in the application verification.

Required components

- 2** Base Standard UVB 24
- 4** Standard UVR
- 12** Horizontal Ledger UBK

Installation

1. Push the head of the diagonal bracing (**12a**) with bolts (**12b**) pulled upwards on the top rosette (**4e**). (Fig. A2.20a)
2. Push bolt (**12b**) into the hole (**4d**) until it fully engages.
→ Node Brace UBK (**12**) is positioned at the top. (Fig. A2.20b)
3. Push the head of the diagonal bracing (**12c**) with bolt (**12d**) pulled upwards on the hole (**2f**) of the bottom rosette of the Base Standard (**2**). (Fig. A2.20c)

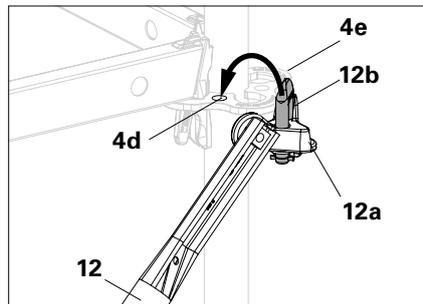


Fig. A2.20a

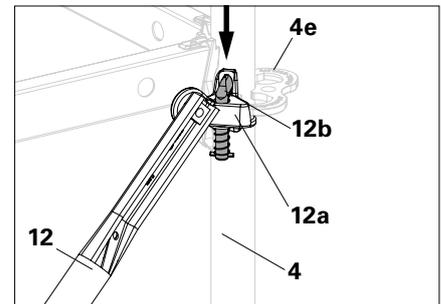


Fig. A2.20b

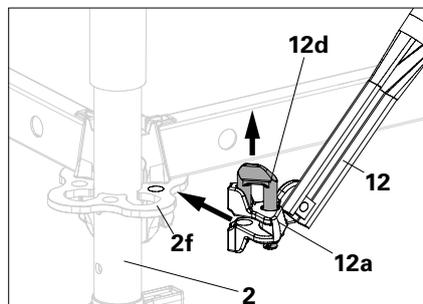


Fig. A2.20c

A2 Assembly

4. Push the bolt into the hole (**2f**) of the bottom rosette until it fully engages.
→ Node Brace UBK (**12**) is now positioned. (Fig. A2.20d)



After the Node Brace UBK (**12**) has been installed, all bolts (**12b/12d**) must be fully engaged and rest on the head of the diagonal (**12a/12c**). (Fig. A2.20e)

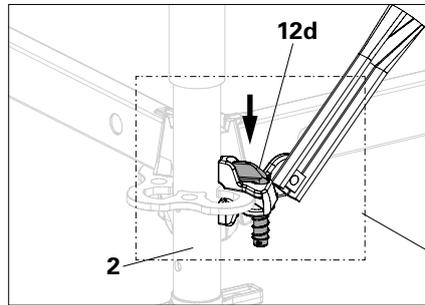


Fig. A2.20d

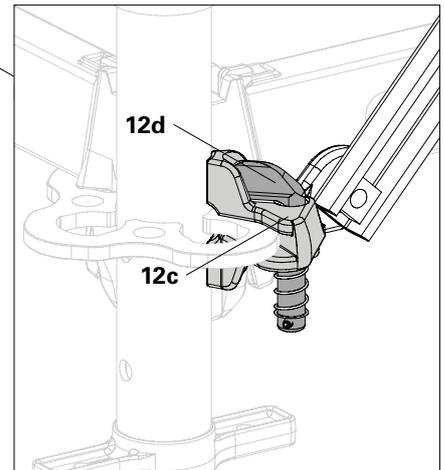


Fig. A2.20e

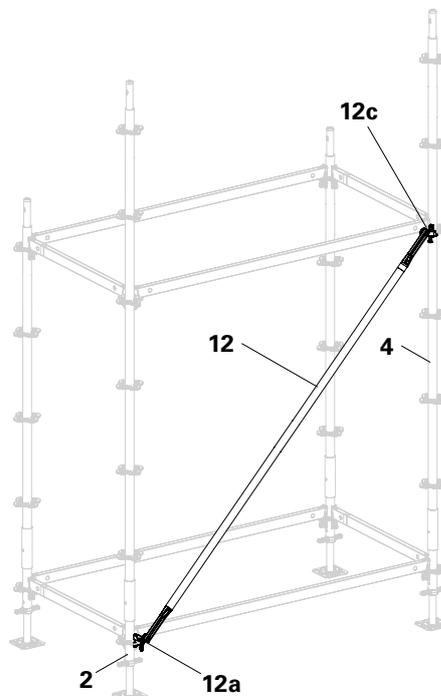


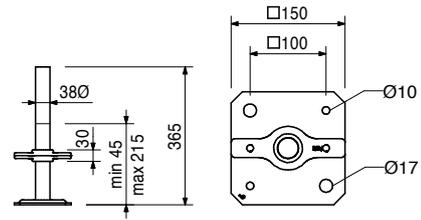
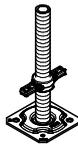
Fig. A2.20

Item no. Weight kg

116762 2.830 **Adj. Base Plate UJB 38-36/17**

Note

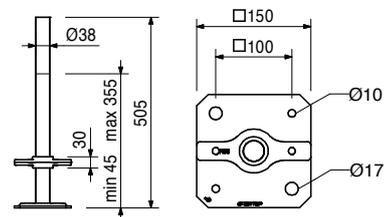
With captive Quick Jack Nut.



100411 3.390 **Adj. Base Plate UJB 38-50/30**

Note

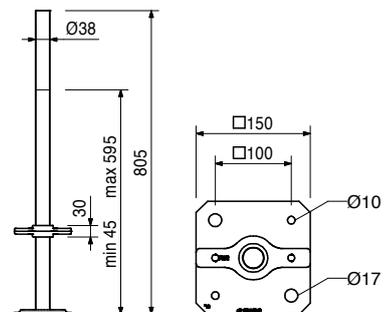
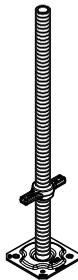
With captive red Quick Jack Nut.



100242 4.570 **Adj. Base Plate UJB 38-80/55**

Note

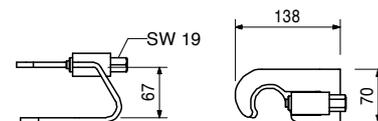
With captive yellow Quick Jack Nut.



100863 1.020 **Spindle Locking UJS**
 Secures the Adjustable Base Plates and Section Spindles \varnothing 38 mm in the leg while moving.

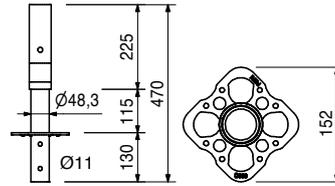
Technical Data

Permissible load 1.5 kN.

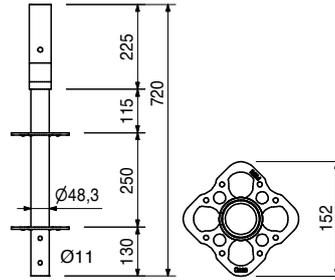


Item no. Weight kg

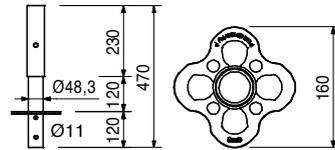
133499 2.270 **Base Standard UVB 25**



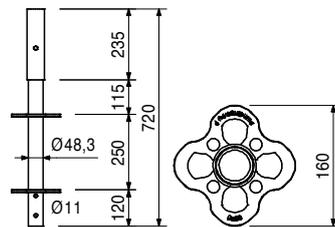
135187 3.590 **Base Standard UVB 50**



400014 2.470 **Base Standard UVB 24**
For assembly directly on the base spindle.

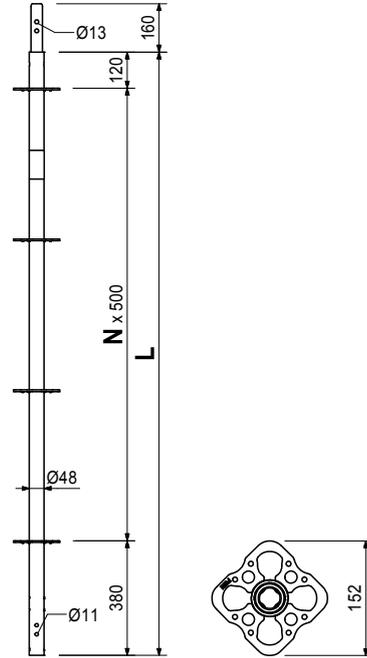
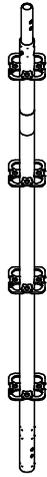


417194 3.980 **Base Standard UVB 49**
For assembly directly on the base spindle.
Reduces necessary spindle extension lengths through distance between rosettes of 25 cm.

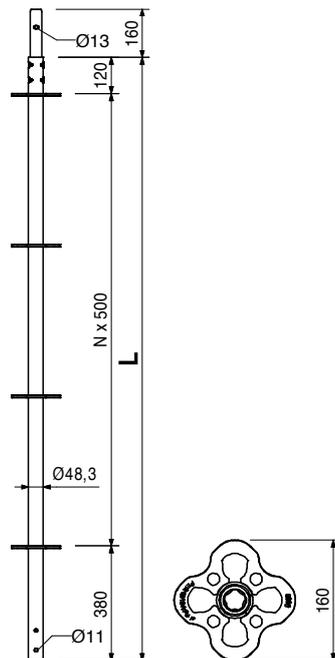
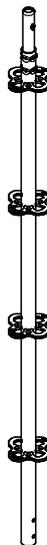


Item no. Weight kg

Item no.	Weight kg	Standards UVR-2	L
132219	2.480	Standard UVR-2 50	500
132224	4.340	Standard UVR-2 100	1000
132229	6.180	Standard UVR-2 150	1500
132234	8.030	Standard UVR-2 200	2000
132239	11.700	Standard UVR-2 300	3000



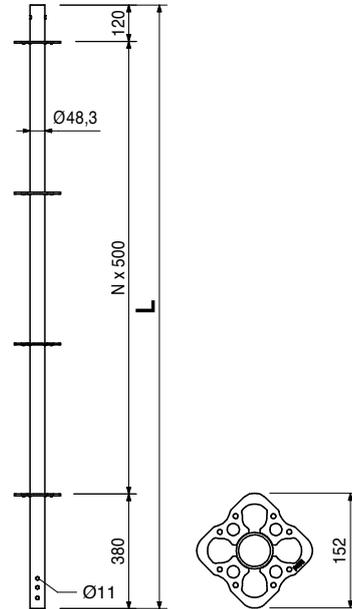
Item no.	Weight kg	Standards UVR	L
402859	3.080	Standard UVR 50	500
401306	5.380	Standard UVR 100	1000
402860	7.690	Standard UVR 150	1500
400009	10.000	Standard UVR 200	2000
400012	14.700	Standard UVR 300	3000
400013	19.200	Standard UVR 400	4000



Item no. Weight kg

Item no.	Weight kg		L
101309	2.090	Top Standard UVH	500
100000	4.210	Top Standard UVH 50	1000
100003	6.310	Top Standard UVH 100	1500
100005	8.420	Top Standard UVH 150	2000
100007	10.500	Top Standard UVH 200	2500
		Top Standard UVH 250	

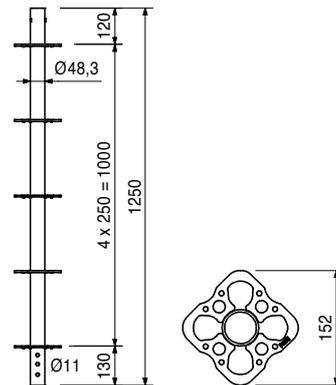
Without spigot for supporting head spindles.



117195 6.060

Top Standard UVH 125

Without spigot for supporting head spindles.
Reduces necessary spindle extension lengths through distance between rosettes of 25 cm.



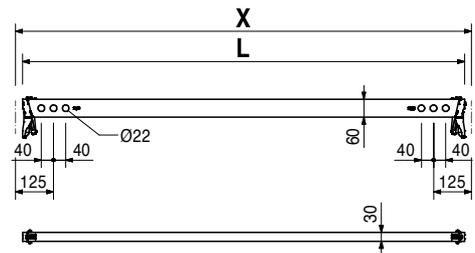
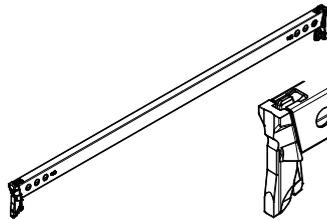
Item no. Weight kg

Item no.	Weight kg	Component Name
114613	1.410	Ledgers UH Plus
		Ledger UH 25 Plus
114595	2.030	Ledger UH 50 Plus
114629	2.690	Ledger UH 75 Plus
114632	3.740	Ledger UH 100 Plus
114638	4.510	Ledger UH 125 Plus
114641	4.680	Ledger UH 150 Plus
117032	5.340	Ledger UH 175 Plus
114645	6.000	Ledger UH 200 Plus
116356	6.660	Ledger UH 225 Plus
114648	7.320	Ledger UH 250 Plus
114651	8.650	Ledger UH 300 Plus

L	X
204	250
454	500
704	750
954	1000
1204	1250
1454	1500
1704	1750
1954	2000
2204	2250
2454	2500
2954	3000

Note

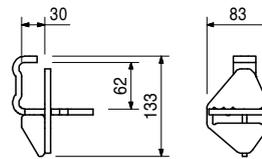
Longitudinally-stamped for easier identification.



101731 0.841

Ledger to Ledger Coupler UHA

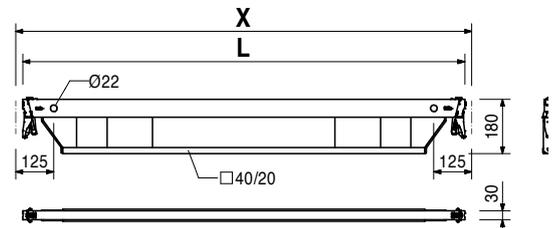
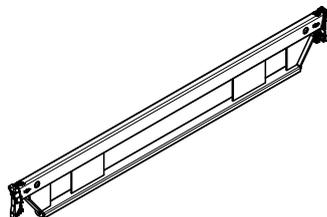
For connecting ledger to ledger at right-angles.



114681	10.900	Ledgers UHV Plus
		Ledger UHV 150 Plus
114687	14.700	Ledger UHV 200 Plus
114691	17.900	Ledger UHV 250 Plus
114695	21.600	Ledger UHV 300 Plus

L	X
1454	1500
1954	2000
2454	2500
2954	3000

For high loads, e.g. material storage.



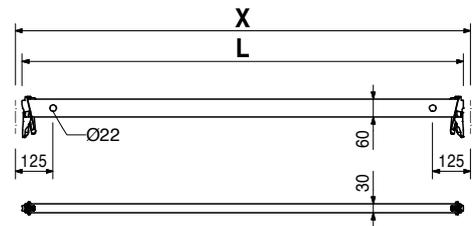
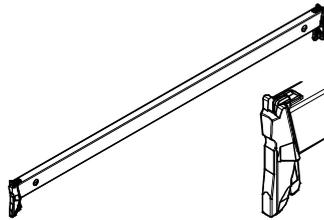
Item no. Weight kg

Item no.	Weight kg	Ledgers UH
404780	1.390	Ledger UH 25
404779	2.040	Ledger UH 50
400017	2.700	Ledger UH 75
401159	3.360	Ledger UH 100
410347	4.020	Ledger UH 125
400021	4.690	Ledger UH 150
400023	6.020	Ledger UH 200
400025	7.340	Ledger UH 250
400027	8.670	Ledger UH 300

L	X
204	250
454	500
704	750
954	1000
1204	1250
1454	1500
1954	2000
2454	2500
2954	3000

Note

Longitudinally-stamped for easier identification.
Ledgers UH can be replaced by
Ledgers UH Plus.



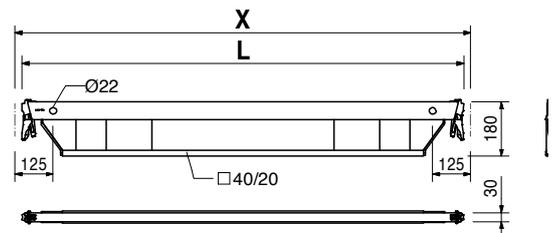
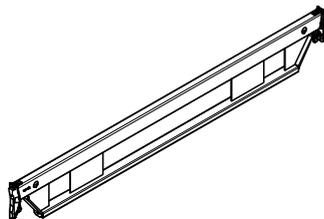
Item no.	Weight kg	Ledgers UHV
409107	10.900	Ledger UHV 150
409108	14.800	Ledger UHV 200
409109	18.000	Ledger UHV 250
409110	21.800	Ledger UHV 300

For high loads, e.g. material storage.

L	X
1454	1500
1954	2000
2454	2500
2954	3000

Note

Ledgers UHV can be replaced by
Ledgers UHV Plus.



Item no. Weight kg

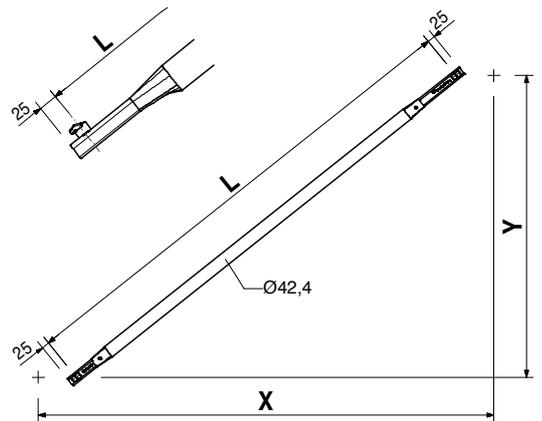
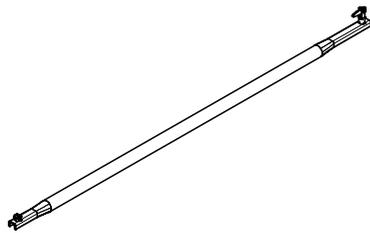
Item no.	Weight kg	Ledger Braces UBL
115156	2.660	Ledger Brace UBL 100/50
115513	4.640	Ledger Brace UBL 100/150
115157	5.810	Ledger Brace UBL 100/200
107867	3.790	Ledger Brace UBL 150/50
100055	4.440	Ledger Brace UBL 150/100
102846	5.340	Ledger Brace UBL 150/150
100057	6.380	Ledger Brace UBL 150/200
109034	6.740	Ledger Brace UBL 175/200
104391	5.000	Ledger Brace UBL 200/50
100059	5.510	Ledger Brace UBL 200/100
102862	6.240	Ledger Brace UBL 200/150
100061	7.150	Ledger Brace UBL 200/200
117689	7.580	Ledger Brace UBL 225/200
100063	6.640	Ledger Brace UBL 250/100
102861	7.260	Ledger Brace UBL 250/150
100065	8.050	Ledger Brace UBL 250/200
104762	7.490	Ledger Brace UBL 300/50
100067	7.830	Ledger Brace UBL 300/100
104766	8.360	Ledger Brace UBL 300/150
100069	9.040	Ledger Brace UBL 300/200

Mounted in the holes of the ledger.

L	X	Y
901	1000	500
1677	1000	1500
2136	1000	2000
1347	1500	500
1601	1500	1000
1953	1500	1500
2358	1500	2000
2500	1750	2000
1820	2000	500
2016	2000	1000
2305	2000	1500
2658	2000	2000
2829	2250	2000
2462	2500	1000
2705	2500	1500
3010	2500	2000
2795	3000	500
2926	3000	1000
3133	3000	1500
3400	3000	2000

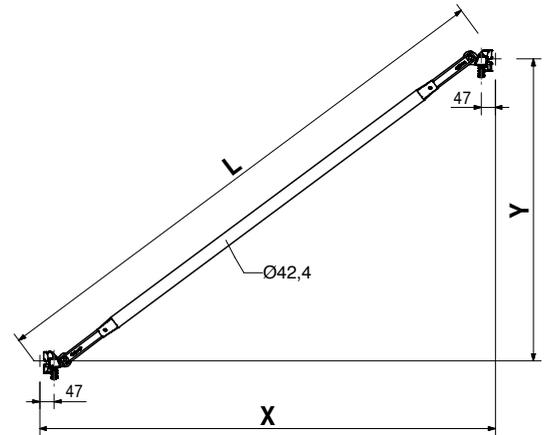
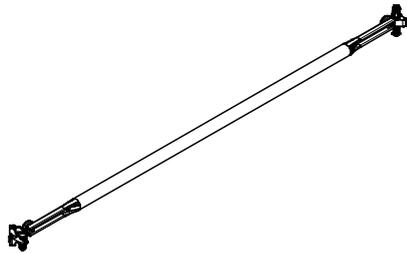
Note

Longitudinally-stamped for easier identification.
 UBL 150/250 identical to UBL 300/50,
 UBL 225/150 identical to UBL 175/200,
 UBL 250/50 identical to UBL 200/150.
 UBL 75/200 identical to UBL 225/50.

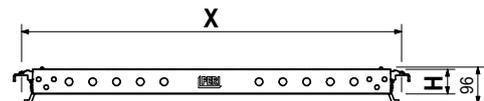
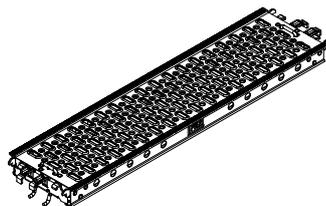


Item no. Weight kg

Item no.	Weight kg		L	X	Y
		Node Braces UBK			
124170	6.770	Node Brace UBK 75/200	2190	750	2000
112926	6.980	Node Brace UBK 100/200	2285	1000	2000
115354	5.210	Node Brace UBK 125/100	1625	1250	1000
112765	7.250	Node Brace UBK 125/200	2401	1250	2000
100981	5.700	Node Brace UBK 150/100	1821	1500	1000
100973	6.570	Node Brace UBK 150/150	2152	1500	1500
100572	7.590	Node Brace UBK 150/200	2539	1500	2000
100985	6.780	Node Brace UBK 200/100	2246	2000	1000
106630	7.500	Node Brace UBK 200/150	2521	2000	1500
100573	8.380	Node Brace UBK 200/200	2860	2000	2000
100989	7.930	Node Brace UBK 250/100	2696	2500	1000
106624	8.530	Node Brace UBK 250/150	2930	2500	1500
100574	9.300	Node Brace UBK 250/200	3226	2500	2000
100993	9.120	Node Brace UBK 300/100	3131	3000	1000
100575	10.300	Node Brace UBK 300/200	3625	3000	2000



Item no.	Weight kg		X	perm. p [kN/m ²]	H
		Steel Decks UDG-2 25			
132479	3.330	Steel Deck UDG-2 25 x 50	500	6,0	45
132488	4.460	Steel Deck UDG-2 25 x 75	750	6,0	45
132492	5.580	Steel Deck UDG-2 25 x 100	1000	6,0	45
132502	6.720	Steel Deck UDG-2 25 x 125	1250	6,0	45
132505	7.860	Steel Deck UDG-2 25 x 150	1500	6,0	45
132508	10.500	Steel Deck UDG-2 25 x 200	2000	6,0	60
132511	12.900	Steel Deck UDG-2 25 x 250	2500	3,0 / 4,5*	60
132515	15.800	Steel Deck UDG-2 25 x 300	3000	3,0	70



Note

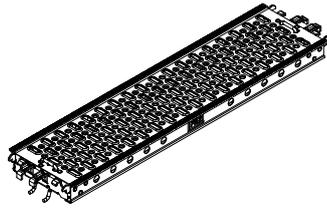
perm. p according to DIN EN 12811-1.

* Current Load Class 4, with extension of approval in 2020 Load Class 5.

Item no. Weight kg

Item no.	Weight kg	Steel Decks UDG 25
424124	3.880	Steel Deck UDG 25 x 50
424121	5.260	Steel Deck UDG 25 x 75
424118	6.630	Steel Deck UDG 25 x 100
424115	8.010	Steel Deck UDG 25 x 125
424112	9.410	Steel Deck UDG 25 x 150
424109	12.200	Steel Deck UDG 25 x 200
423771	14.900	Steel Deck UDG 25 x 250
424915	17.700	Steel Deck UDG 25 x 300

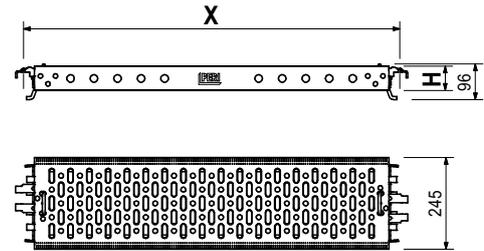
Mounted on Ledgers UH.



X	perm. p [kN/m ²]	max. p [kN/m ²]
500	6.0	40.0
750	6.0	40.0
1000	6.0	40.0
1250	6.0	28.4
1500	6.0	19.6
2000	6.0	10.9
2500	4.5	6.9
3000	3.0	4.7

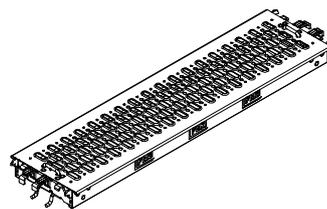
Note

Perm. p according to DIN EN 12811-1.
max. p = maximum possible load without deflection limitation.



Item no.	Weight kg	Industrial Decks UDI 25
404029	4.090	Industrial Deck UDI 25 x 50
405925	5.520	Industrial Deck UDI 25 x 75
406092	6.950	Industrial Deck UDI 25 x 100
406880	8.380	Industrial Deck UDI 25 x 125
407002	9.790	Industrial Deck UDI 25 x 150
408380	12.700	Industrial Deck UDI 25 x 200
408540	15.500	Industrial Deck UDI 25 x 250
408689	18.400	Industrial Deck UDI 25 x 300

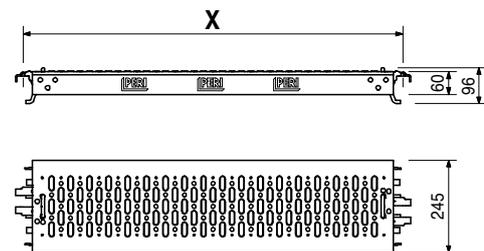
Mounted on Ledgers UH.



X	perm. p [kN/m ²]	max. p [kN/m ²]
500	6.0	40.0
750	6.0	40.0
1000	6.0	40.0
1250	6.0	28.4
1500	6.0	19.6
2000	6.0	10.9
2500	4.5	6.9
3000	3.0	4.7

Note

perm. p according to DIN EN 12811-1.
max. p = maximum possible load without deflection limitation.

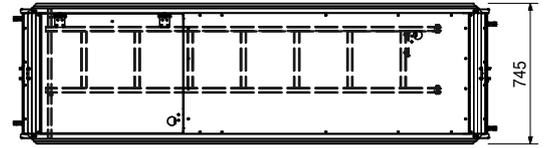
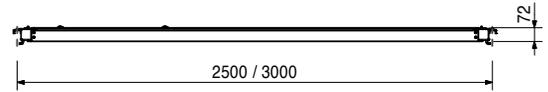
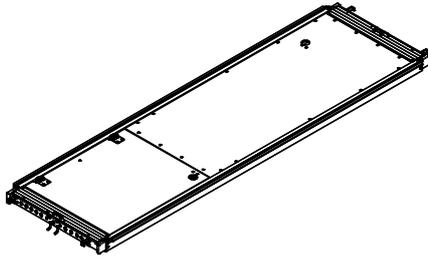


Item no. Weight kg

130334	25.200
133309	29.100

Ladder Decks UAW L
Ladder Deck UAW 75 x 250-L
Ladder Deck UAW 75 x 300-L
 Installation on Crossbeam or Ledger UH.

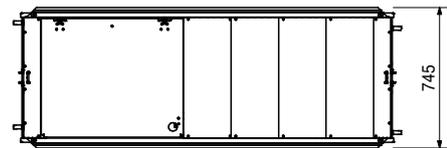
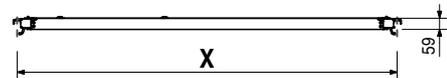
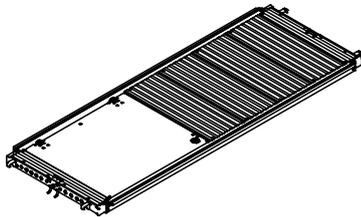
Note
 Load class 3, 2.0 kN/m²



132993	15.800
132990	18.900

Access Decks UAA 75
Access Deck UAA 75 x 150
Access Deck UAA 75 x 200

X
1500
2000

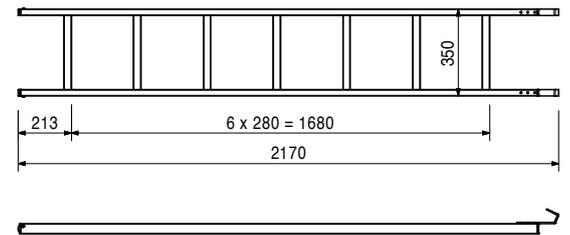
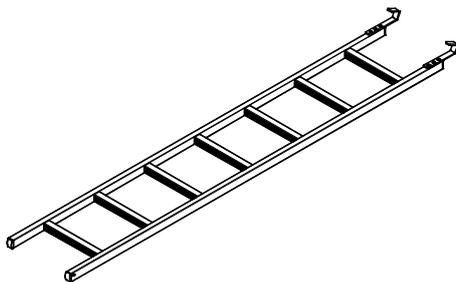


109879	3.820
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Accessories
Ladder UAF 200, Alu

109879	3.820
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Ladder UAF 200, Alu
 For mounting to Hatch UAF.

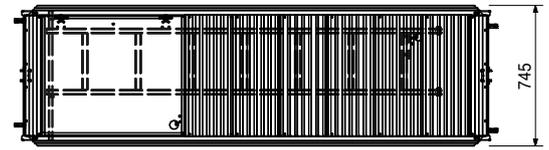
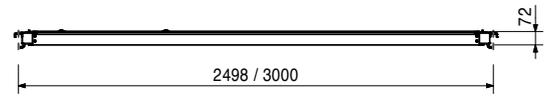
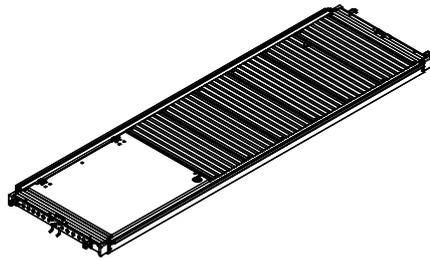


Item no. Weight kg

133314	26.400	Ladder Decks UAA 75 L
133315	29.600	Ladder Deck UAA 75 x 250-L Ladder Deck UAA 75 x 300-L

Technical Data

Load Class 3, 2.0 kN/m².



426393	15.600	Access Decks UAL-3
426392	19.600	Access Deck UAL-3, 75 x 150/3
426314	23.500	Access Deck UAL-3, 75 x 200/3 Access Deck UAL-3, 75 x 250/3

L

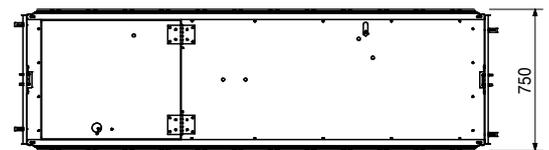
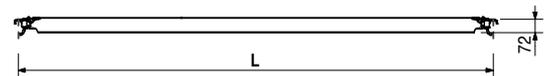
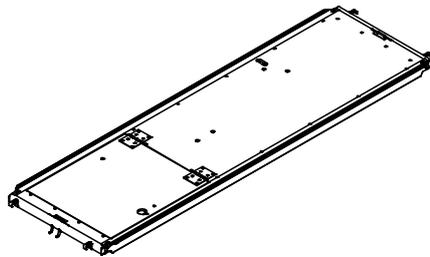
1500

2000

2500

Technical Data

Load Class 3, 2.0 kN/m².



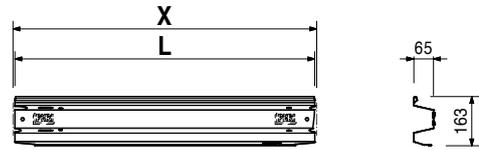
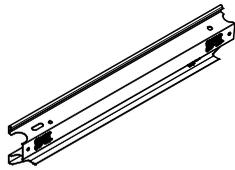
Accessories

126318	3.750	Ladder Flex UEL with hook
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Item no.	Weight kg		L	X
132592	0.414	Toeboards Steel UPY	236	250
110213	0.929	Toeboard Steel UPY 25	486	500
110514	1.450	Toeboard Steel UPY 50	736	750
110073	1.960	Toeboard Steel UPY 100	986	1000
134628	2.480	Toeboard Steel UPY 125	1236	1250
110160	2.990	Toeboard Steel UPY 150	1486	1500
110176	4.030	Toeboard Steel UPY 200	1986	2000
110208	5.060	Toeboard Steel UPY 250	2486	2500
110211	6.090	Toeboard Steel UPY 300	2986	3000

Note

- Standard: Surface, galvanised and painted in yellow.
- The accessory is required if an intermediate length is erected with a Standard Toeboard UPY and a UPY 50 or UPY 75.
- UPY 50: X + 25 cm, UPY 75: X + 50 cm



Accessories

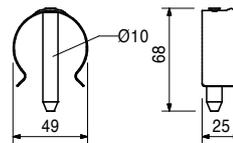
710242	0.063	Bolt ISO 4014 M10 x 100-8.8, galv.
780356	0.011	Nut ISO 7040 M10-8, galv.

		Toeboards Steel UPY C
134643	0.414	Toeboard Steel UPY 25-C
134642	0.929	Toeboard Steel UPY 50-C
134641	1.280	Toeboard Steel UPY 67-C
134640	1.450	Toeboard Steel UPY 75-C
134639	1.960	Toeboard Steel UPY 100-C
134638	2.480	Toeboard Steel UPY 125-C
134637	2.990	Toeboard Steel UPY 150-C
134636	4.030	Toeboard Steel UPY 200-C
134635	5.060	Toeboard Steel UPY 250-C
134634	6.090	Toeboard Steel UPY 300-C

Individual design of toeboards in RAL-colouring possible on request.

111053	0.059	Locking Pin Ø 48/57
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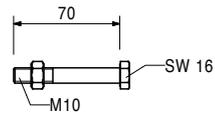
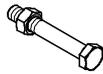
As tension-proof connection of standards with a diameter of 48 up to 57 mm.



Item no.	Weight kg
100719	0.060

Bolt ISO 4014 M10 x 70-8.8 MU

As tension-proof connection of standards for suspended scaffolds or lattice girders.

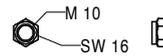


780356	0.011
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Nut ISO 7040 M10-8, galv.

Self-locking.

Note
Wrench size SW 16.



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