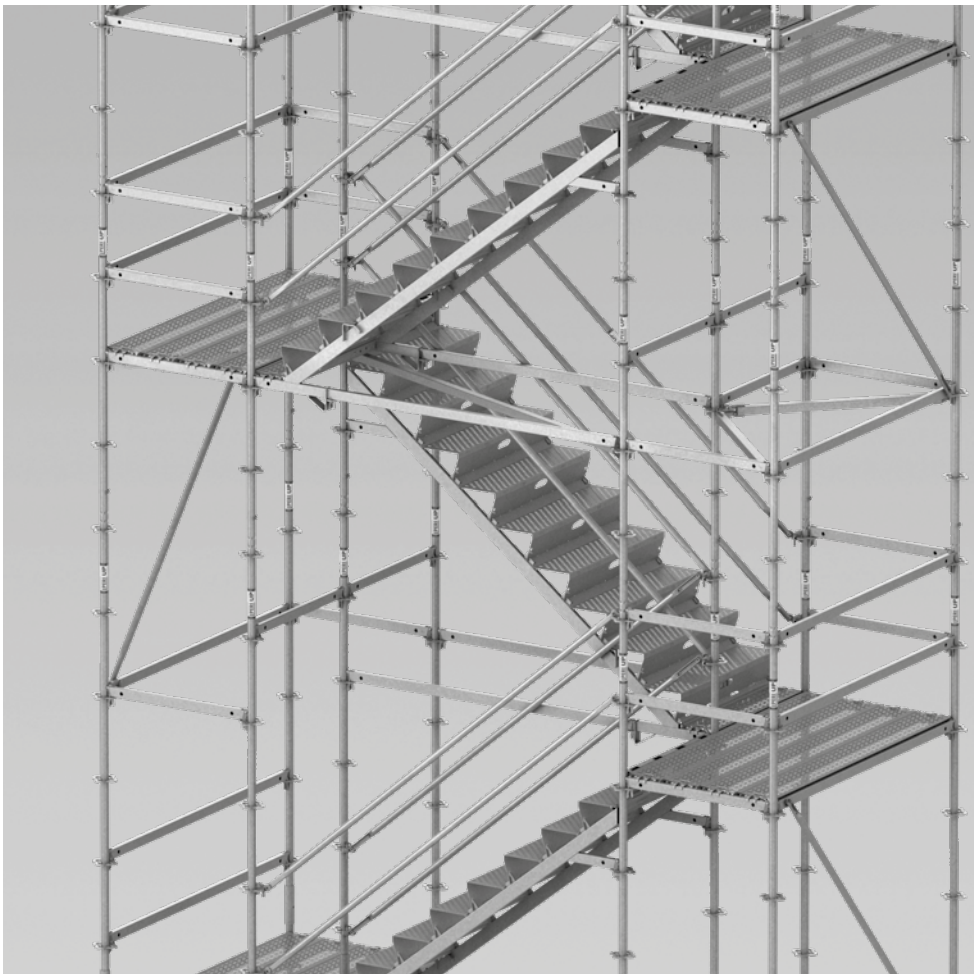
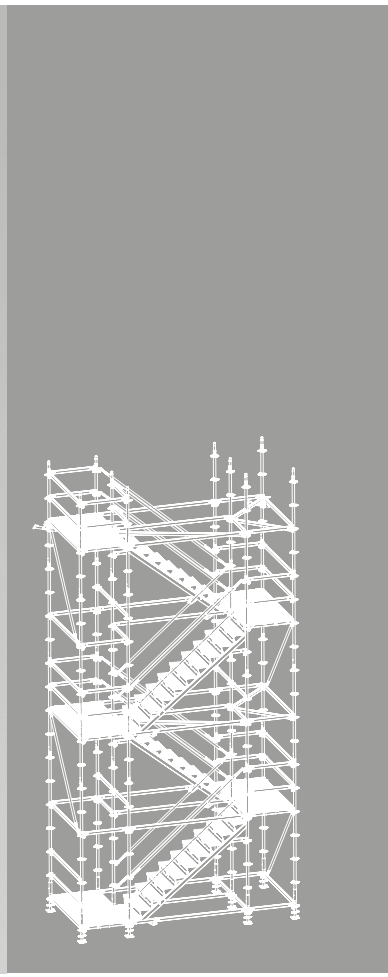
PERI UP Flex

Staircase 100 and 125 with Deck UDG

Instructions for Assembly and Use – Standard Configuration – Issue 03/2021
incl. supplemental pages PERI UP Flex 2nd generation

UK Edition 04|2021

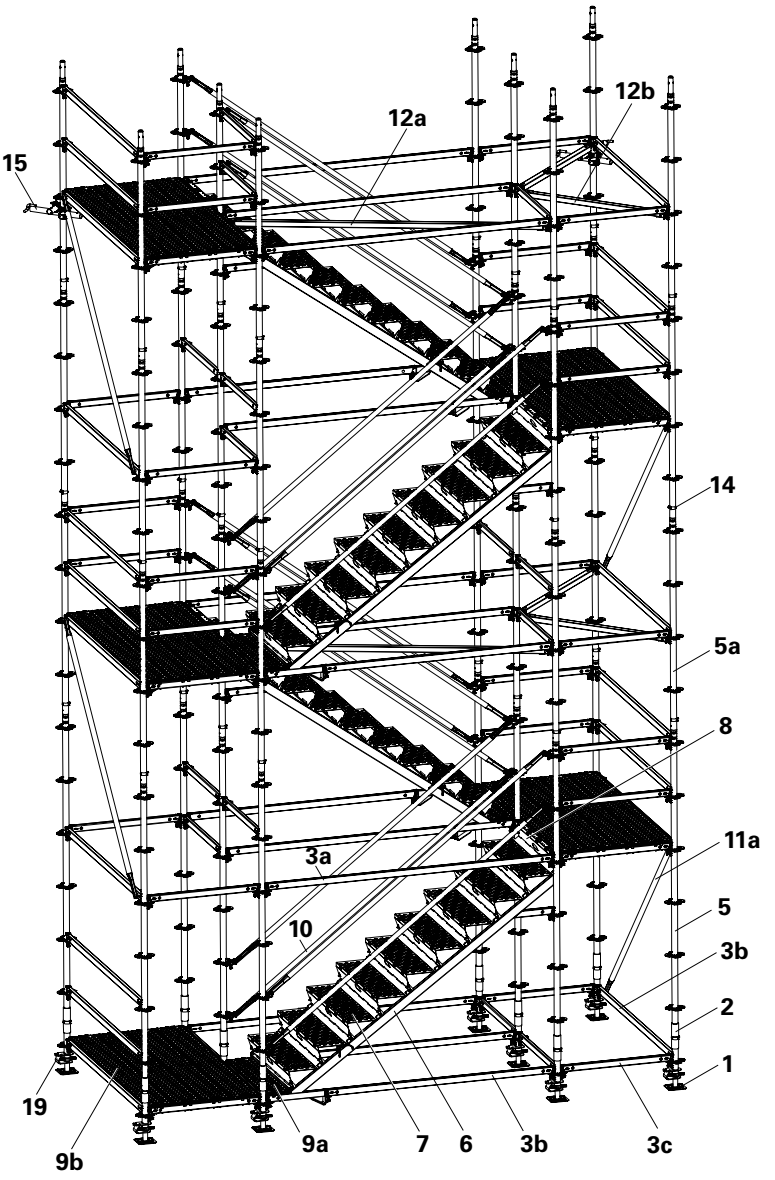




Overview

Main components

1 Base Spindle UJB
2 Base Standard UVB 24
3a Horizontal Ledger UH 250 Plus [1]
3b Horizontal Ledger UH 200 Plus [1]
3c Horizontal Ledger UH 100 Plus [1]
4 Horizontal Ledger UH 125 Plus [1] (for Stair Tower 125)
5 Standard UVR 300 [3]
5a Standard UVR 200 [3]
6 Stair Stringer UA 250/100
6a Stair Stringer UA 125/100 (for Stair Tower 125)
7 Step UAR 100
7a Step UAR 125 (for Stair Tower 125)
8 End Step UAE 100
8a End Step UAE 125 (for Stair Tower 125)
9a Steel Deck UDG 25 x 100 [2]
9b Steel Deck UDG 25 x 200 [2]
9c Steel Deck UDG 25 x 125 [2] (for Stair Tower 125)
9d Steel Deck UDG 25 x 250 [2] (for Stair Tower 125)
10 Node Brace UBK 250/200
10a Spacer UA 76
11a Ledger Brace UBL 200/200
11b Ledger Brace UBL 250/200 (for Stair Tower 125)
12a Horizontal Brace UBH Flex 250/100
12b Horizontal Brace UBH Flex 100/100
12c Horizontal Brace UBH Flex 250/125 (for Stair Tower 125)
12d Horizontal Brace UBH Flex 125/125 (for Stair Tower 125)
14 Locking Pin Ø 48/57
15 Wall Tie UWT 45
15a Wall Tie UWT 140
16 Standard Coupler NK 48/48
17 Swivel Coupling DK 48/48
18 Scaffold Tube 48.3 x 3.2
19 Spindle Locking UJS



[1] Alternatively, the Horizontal Ledger UH Plus can be used instead of the Horizontal Ledger UH.
[2] Alternatively, the Steel Deck UDG-2 or Industrial Deck UDI can be used instead of the Steel Deck UDG.
[3] Alternatively, the Standard UVR-2 can be used instead of the Standard UVR.

Content

Overview

Key

Pictogram | Definition


Danger / Warning / Caution


Note


To be complied with


Visual check


Tip


Incorrect use


Correct use


Load-bearing point


Safety helmet


Safety shoes


Safety gloves


Safety goggles


Personal protective equipment to prevent falling from a height (PPE)

Arrows in the illustrations

- Arrow representing an action
- Arrow representing a reaction of an action*
- Arrow representing forces

* If not identical to the action arrow.

Safety instruction categories
The safety instructions alert site personnel to the risks involved and provide information on how to avoid these risks. Safety instructions are featured at the beginning of the section or ahead of the instructions, and are highlighted as follows:

DANGER
This sign indicates an extremely hazardous situation which, if not avoided, will result in death or serious, irreversible injury.

WARNING
This sign indicates a hazardous situation which, if not avoided, could result in death or serious, irreversible injury.

CAUTION
This sign indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTE
This sign indicates situations in which failure to observe the information can result in material damage.

Format of the safety instructions

SIGNAL WORD
Type and source of hazard!
Consequences of non-compliance.
⇒ Preventative measures.

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**.

Units shown in the illustrations
Dimensions featured in the illustrations are in cm, but without units. Deviating units specified in addition, e.g. in m.
Exception:
In the Program overview section, measurements are always given in mm.

Load details featured in the illustrations are in kg, but without units. Deviating units specified in addition, e.g. in t.

Notes on illustrations
The illustration on the front cover of these instructions is understood to be a system representation only. The assembly steps presented in these Instructions for Assembly and Use 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.

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

Target groups

Scaffolding contractors/building contractors
These Instructions for Assembly and Use are designed for contractors who
- assemble, modify and dismantle the scaffolding, or
- use them, e.g. for concreting, or
- allow them to be used for other operations, e.g. carpentry or electrical work.

Competent person
(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.

Competent persons qualified to carry out inspections
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.**
- **A competent person must be present on site during scaffolding operations.**

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

** Instructions are given by the contractor themselves or a competent person selected by them.

Additional technical documentation

- Approval:
  – Z-8.22-863 PERI UP Flex Modular System
- Assembly Instructions:
  – PERI UP Flex Core Components
- User information:
  – User information for pallets and stacking devices
- Brochure:
  – PERI UP Access Technology

Intended use

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

The PERI UP Flex Staircases 100 and 125 with Deck UDG are based on the PERI UP Flex Modular Scaffolding. The PERI UP Flex Staircases 100 and 125 are used to reach elevated access points, e.g. to buildings or scaffolding. In addition, the PERI UP Flex Staircases 100 and 125 also allow larger load classes in the basic scaffold as passage decks are no longer required in the basic scaffold. Access takes place by means of the PERI UP Flex Staircases 100 and 125.

Clear step width between the guardrails
– Steps UAR 100: 84 cm
– Steps UAR 125: 109 cm

Step width
– Steps UAR 100: 104 cm
– Steps UAR 125: 129 cm

Storey height 200 cm

Ground plan dimensions
Stair tower with Steps 100:
Width x (landing platform + step + landing platform)
200 x (**100 + 250 + 100**) = 200 x 450 cm

Stair tower with Steps 125:
Width x (landing platform + step + landing platform)
250 x (**125 + 250 + 125**) = 250 x 500 cm

Permissible live load
Stairs and decks: 3.0 kN/m²
Steps: 2.4 kN
Entire construction: 40.0 kN uniformly distributed across all standards or 2.0 kN/m² across 20 linear metres for Staircase 100 and across 16 linear metres for Staircase 125.

Wind loads according to EN 12810 / 12811 and NF P 93-522
– Working wind load: dynamic pressure q = 0.2 kN/m²
– max. wind for heights:
  – 0 m: q = 0.6 kN/m²
  – 24 m: q = 0.77 kN/m²
  – 50 m: q = 0.87 kN/m²

Technical data
Horizontal equivalent load: 6 % of the live loads.

Standard configuration
– Flight of stairs corresponds to class B in accordance with EN 12811, Part 1.
– Covers stair towers with alternating staircase units with assembly heights from 2.0 m to max. 50.0 m for Staircase 100 and 40.0 m for Staircase 125 together with associated anchoring.
– Fulfils requirements for stair towers according to Employer's Liability Insurance Association Regulations BGR 113 "Staircases for Construction Work".

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.
Deviations from the standard configuration must be verified for the application by means of separate strength and stability calculations (Industrial Safety Regulation Appendix 1, No. 3.2.1 and explicitly reflected in the assembly instructions.)

For assembly, only original PERI scaffolding components may be used: these must be marked with the corresponding German approval numbers
– Z-8.1 – 957 for PERI UP Easy
– Z-8.1 – 970 for PERI UP Easy 100
– Z-8.22 – 863 for PERI UP Flex
.
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

General
The scaffolding 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 scaffolding 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 on a regular basis, especially 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.

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 Ø 48.3 x 3.2 mm according to EN 12811-1:2003 4.2.1.2.
- scaffold tube couplings according to EN 74.

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 scaffolding contractor must create installation instructions to ensure safe assembly, modification and dismantling of the scaffolding.

Before initial use, the safe functioning of the scaffold must be checked by a person qualified to carry out the inspection. The results of the inspection must be documented in an inspection record.

On the basis of the risk assessment and the Instructions for Assembly and Use, the scaffolding contractor must create installation instructions to ensure safe assembly, modification and dismantling of the scaffolding.
- 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 scaffolding 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,
- ensure and provide evidence that all loads that occur are transferred safely.

Use
Every contractor who uses or allows the scaffolding systems or sections of the scaffolding system 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 be then coordinated.

System-specific

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.

The load-distributing support used, such as planking, must match the respective base used. 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.

Wedge couplers are to be securely fitted using a 500 g hammer.

Anchoring

The anchoring forces and the position of the anchoring are described in the section on reaction forces.

Ties 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.

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

Inspecting the anchoring

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 higher than the required anchoring force F.

The scope of testing must, however, include a minimum of 5 load tests for all dowels used for concrete anchoring bases (at least 10 %) and for other building materials (at least 30 %).

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 so that unintentional falling over, falling apart, sliding, falling down or rolling is avoided.
- no persons are allowed to remain under the suspended load.

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

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

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

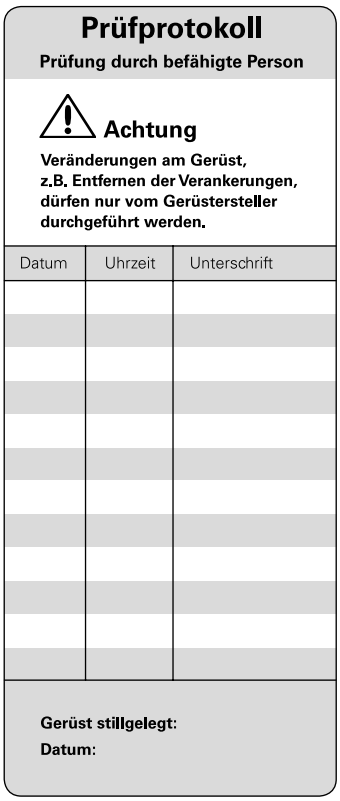
Identification marking

When carrying out the work the following signs must be observed:
If certain parts of the scaffolding are not ready for use – especially during assembly, modification and dismantling – a "No Entry" warning sign restricting access must be clearly displayed (see Sign 1).
In addition, the area must be adequately closed off in order to prevent access.

After assembly has been completed, all scaffold entry points must clearly display the designated sign. (Sign 2)
The signs do not replace the inspection record! (Sign 2, rear side)

Sign 1

Sign 2



Sign 2, rear side

Laws and regulations

When assembling, modifying, dismantling and using the scaffolding in Germany, accident prevention regulations and guidelines of the employer's liability insurance associations, as well as national health and safety regulations, must be followed, especially:
– Product Safety Act (ProdSG)
– Directive 2009/104/EC
– Operating Safety Regulation (BetrSichV)
– Statutory Accident Insurance (DGUV) Information 201-011
– BGV A1 (Trade Association Regulations)
– TRBS 2121 (Technical Regulations for Operational Safety)
– TRBS 1203 (Technical Regulations for Operational Safety)
– Regulations for Occupational Health and Safety on Construction Sites 30 (RAB 30)
The latest version in each case is applicable.

In other countries, ensure that the relevant national guidelines and regulations in the respective current version are complied with!

Refer to Instructions for Short Lift systems to NASC SG4:15

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.

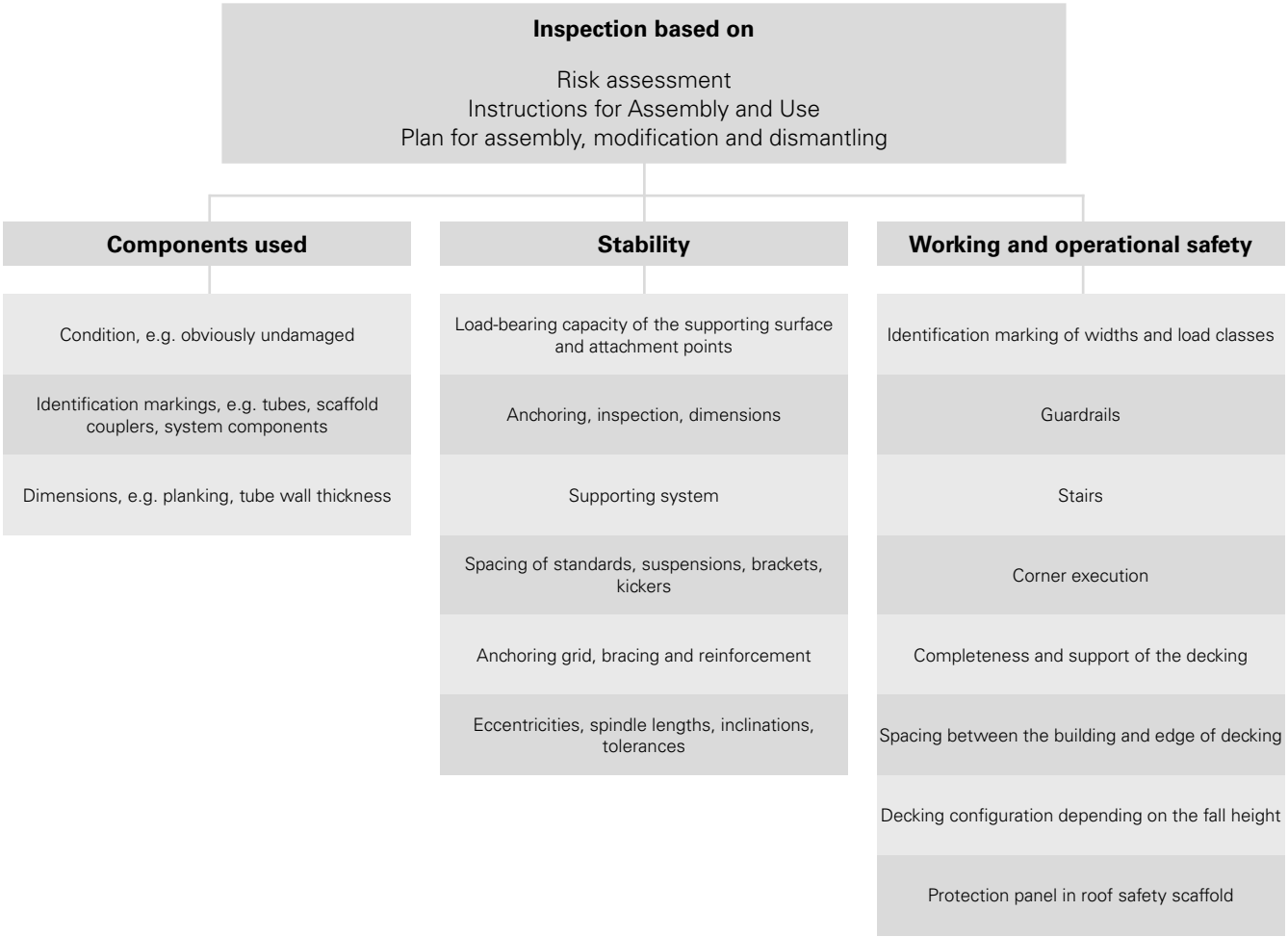
WARNING

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 point.**
- **Handover of a usage plan.**

WARNING

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

Safety during assembly

Refer to Instructions for Short Lift systems to NASC SG4:15.
Always ensure edge protection for all platforms. Do not rely on harnesses as primary protection.

Attachment points for PPE

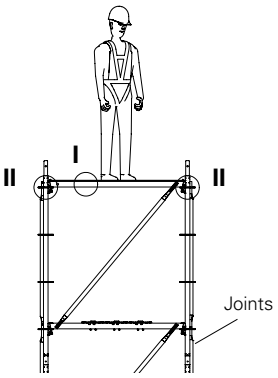
Each specified attachment point is intended for securing one person only!!

General information

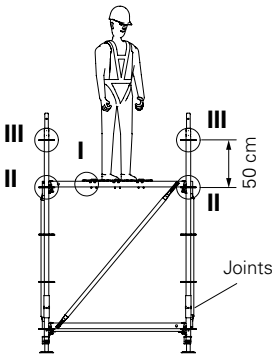
- The use of personal protective equipment to prevent falling from a height is regulated in the project-related risk assessment that has been prepared by the contractor (user).
- When using personal protective equipment to prevent falling from a height, all valid standards and safety regulations are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

Requirements

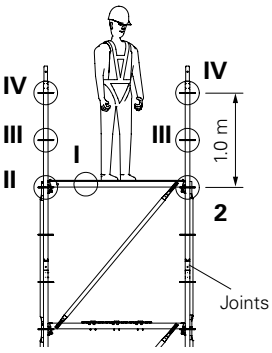
- The stair tower underneath the final assembly level is complete.
- This means that all ledgers and braces have been installed and the decks are in place as the topmost assembly level.
- The joints of the topmost standards must lie underneath the last assembly level.



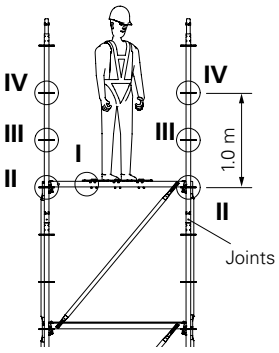
Attachment points
The standard ends in the last assembly level:
- each horizontal ledger in the assembly level (**I**)
- each rosette in the assembly level (II)



Attachment points
The standard ends 50 cm above the last assembly level:
- each horizontal ledger in the assembly level (**I**)
- each rosette up to max. 50 cm above the last assembly level (II, III)



Attachment points
The standard ends 1.0 m above the last assembly level:
- each horizontal ledger in the assembly level (**I**)
- each rosette up to max. 1.0 m above the last assembly level (II, III, IV)



Attachment points
The standard ends 1.5 m above the last assembly level:
- each horizontal ledger in the assembly level (**I**)
- each rosette up to max. 1.0 m above the last assembly level (II, III, IV)

A1 Base assembly

A1.1 Base level

1	Base Spindle UJB	10x
2	Base Standard UVB 24	10x
3a	Horizontal Ledger UH 250	1x
3b	Horizontal Ledger UH 200	2x
3c	Horizontal Ledger UH 100	8x
9b	Steel Deck UDG 25x200	4x

Assembly aid

3a	Horizontal Ledger UH 250	2x
9b*	Steel Deck UDG 25x200	2x

Caution

Moving components!
During assembly there is a risk of the hands and feet being trapped!
⇒ Wear suitable safety gloves!
⇒ Wear suitable safety shoes!

Assembly

1. Assemble frame.
   Distance to building ≤ 30 cm.
   (Fig. A1.05)
2. Install assembly aid:
   – Brace frame with Horizontal Ledgers UH 250 (**3a**). (Fig. A1.06)
3. Horizontally align the frame.
   Spindle range: lsp ≤ 20 cm.
4. Secure wedges on all ledgers using a 500 g hammer. (Fig. A1.01 to A1.04)
5. Insert Steel Decks UDG 200 (**9b**) (landing platform). (Fig. A1.07)
   Open and close securing hooks (which prevent lifting) when industrial decks have been lowered onto the Horizontal Ledgers. (Fig. A1.08 to Fig. A1.11)

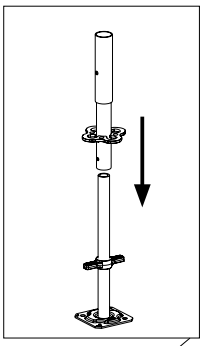


Fig. A1.01

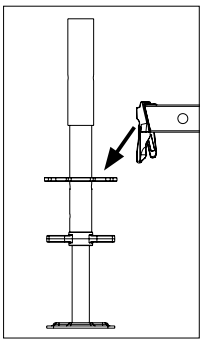


Fig. A1.02

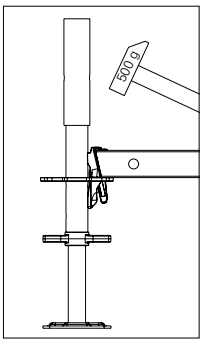


Fig. A1.03

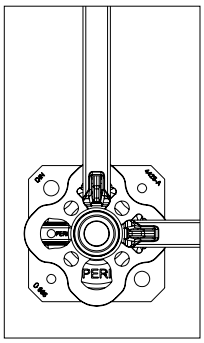


Fig. A1.04

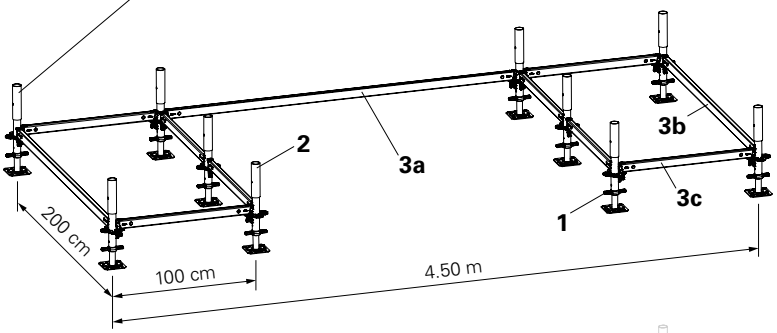


Fig. A1.05

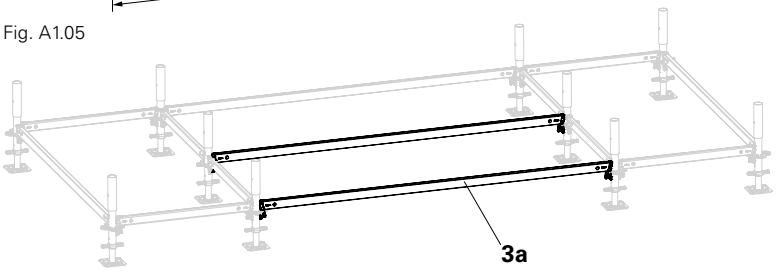


Fig. A1.06

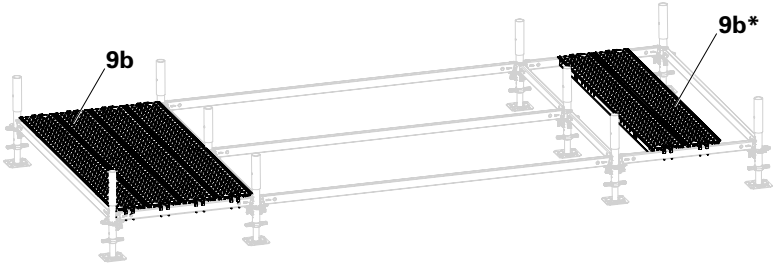


Fig. A1.07

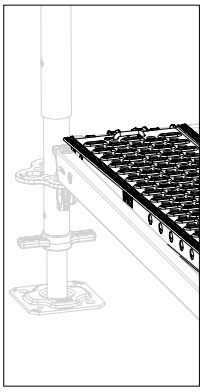


Fig. A1.08

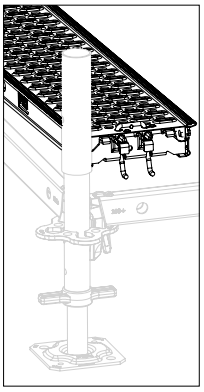


Fig. A1.09

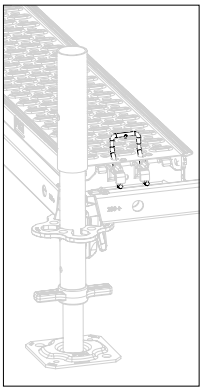


Fig. A1.10

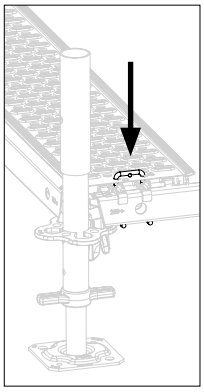


Fig. A1.11

Securing hooks must be flush with deck.

6. Install assembly aid:
   – Insert Steel Decks UDG 200 (9b*). (Fig. A1.07)

A1.2 Standards and ledgers, guard-rail in advance

5	Standard UVR 300	10x
3b	Horizontal Ledger UH 200	4x
3c	Horizontal Ledger UH 100	7x
10	Node Brace UBK 250/200	2x

Assembly

1. Mount Standards UVR 300 (**5**) apart from two pieces. (Fig. A1.13)
   Install Standards UVR with holes lined up so that the locking pins can be easily installed. (Fig. A1.12)
2. Fit Node Braces UBK (**10**) into the top rosettes of the last Standards UVR 300. Insert Standards UVR 300. (Fig. A1.14)
3. Fit Node Braces UBK (**10**) into the bottom rosettes.
   (Fig. A1.15 to Fig. A1.17)
4. Attach Horizontal Ledgers UH 200 and UH 100 (**3b + 3c**) and secure with hammer blow.

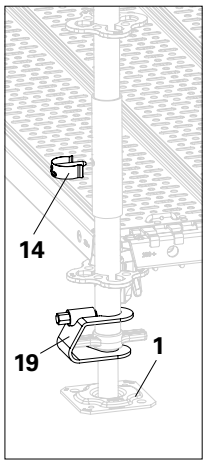


Fig. A1.12

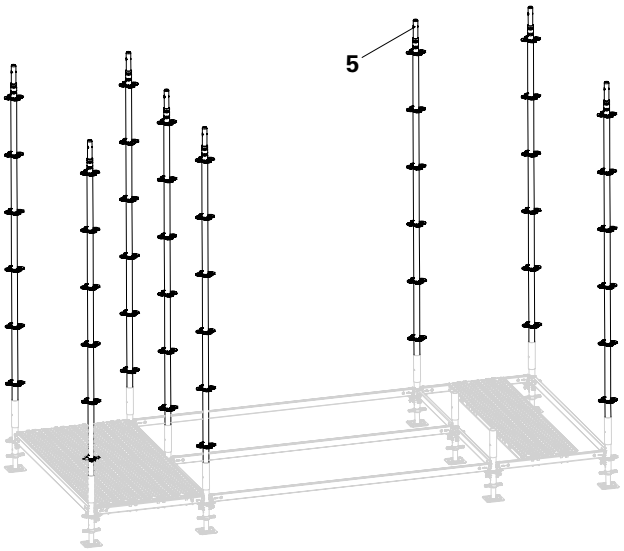


Fig. A1.13

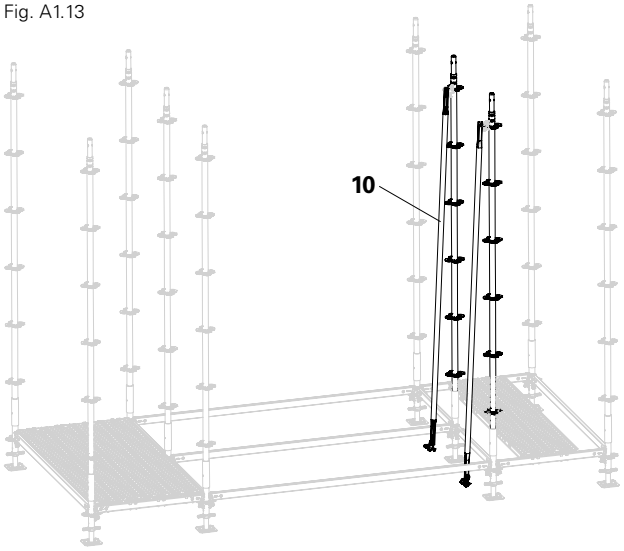


Fig. A1.14

A1.3 Moving by crane

All standards or base standards can be secured with a locking pin Ø 48/57 (**14**) if the steel staircase is to be lifted, e.g. with a crane, in order to move it.

19 Spindle Locking UJS	10x
14 Locking Pin Ø 48/57	10x

Assembly

1. Secure Base Spindles UJB (**1**) with Spindle Locking UJS (**19**). (Fig. A1.12)
2. Tightly connect Base Standards UVB and Standards UVR using Locking Pins Ø 48/57 (**14**). (Fig. A1.12)

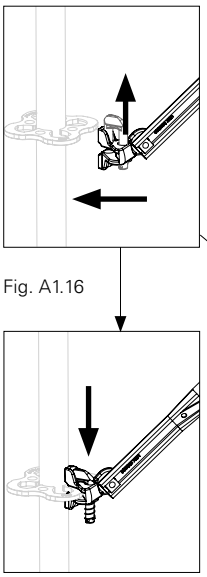


Fig. A1.16

Fig. A1.17

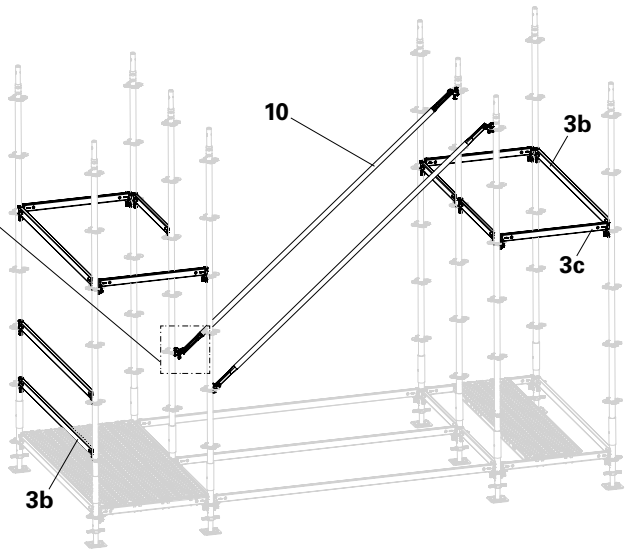


Fig. A1.15

A1 Base assembly

A1.4 Decks and braces

9b	Steel Deck UDG 25x200	4x
11a	Ledger Brace UBL 200/200	1x

Assembly aid

9b*	Steel Deck UDG 25x200	2x

Assembly

1. Insert Steel Decks UDG 200 (**9b**) (landing platform).
2. Insert Steel Decks UDG (assembly aid 9b*). (Fig. A1.18)
3. Insert Ledger Brace UBL (**11a**) into the top Horizontal Ledger UH with the mounting finger. (Fig. A1.19)
   Insert the gravity pin into the hole of the bottom Horizontal Ledger UH, turn pin to a transverse position to secure.
   (Fig. A1.19a)
4. Remove assembly aids from the bottom level.

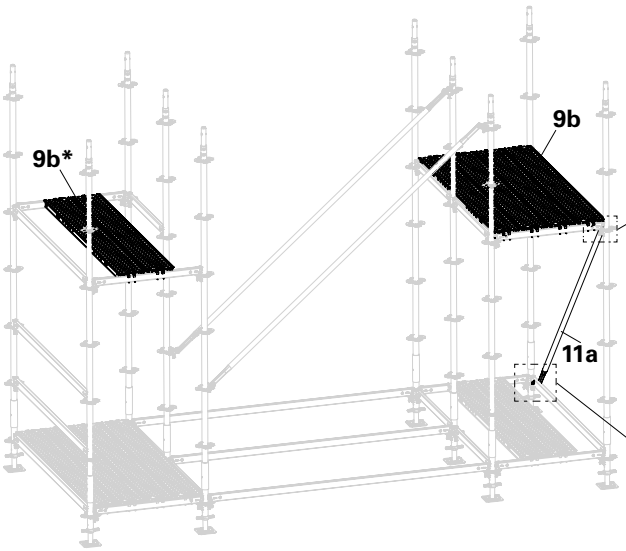


Fig. A1.18

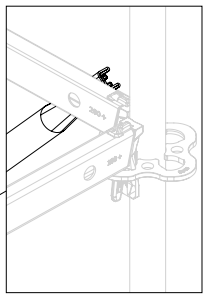


Fig. A1.19

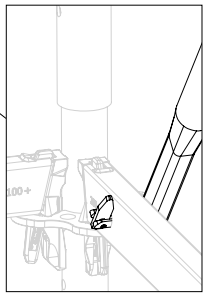


Fig. A1.19a

A2.1 Stair stringers

6	Stair Stringer UA 250/200	2x
3b	Horizontal Ledger UH 200	2x

Assembly

1. Remove both Horizontal Ledgers UH 250 which were installed as assembly aids (not shown).
2. Fit the Stair Stringers UA (**6**) into the rosettes at the top and bottom and hammer in securely.
3. Brace with two Horizontal Ledgers UH 200 (**3b**).
4. Securely fix wedges using a 500 g hammer.

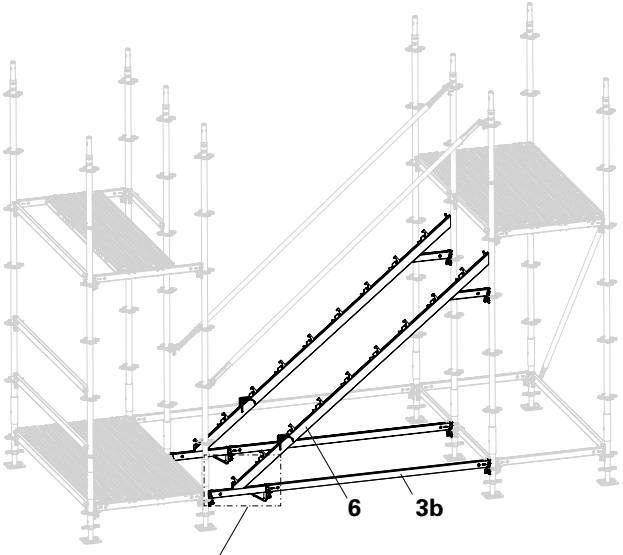


Fig. A2.01

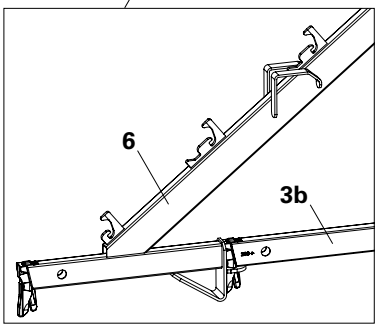


Fig. A2.02

A2.2 Steps

9a	Steel Deck UDG 25x100	1x
7	Step UAR 100	9x
8	End Step UAE 100	1x
3a	Horizontal Ledger UH 250	1x
9d	Steel Deck UDG 25x250	2x

Assembly: first step

1. Position Steel Deck UDG 100 (**9a**) on the Stair Stringers UA (**6**).
2. Tilt the first step (**7**) backwards slightly and place it in the lowest support of the Stair Stringers UA (**6**) as in (Fig. A2.03).
3. Tilt the step forwards into the supports of the Stair Stringers UA. (Fig. A2.03)
4. Tilt the step until the top side rests against the Stair Stringers UA, and the bottom side is correctly positioned in the hook. (Fig. A2.04 and Fig. A2.04a)

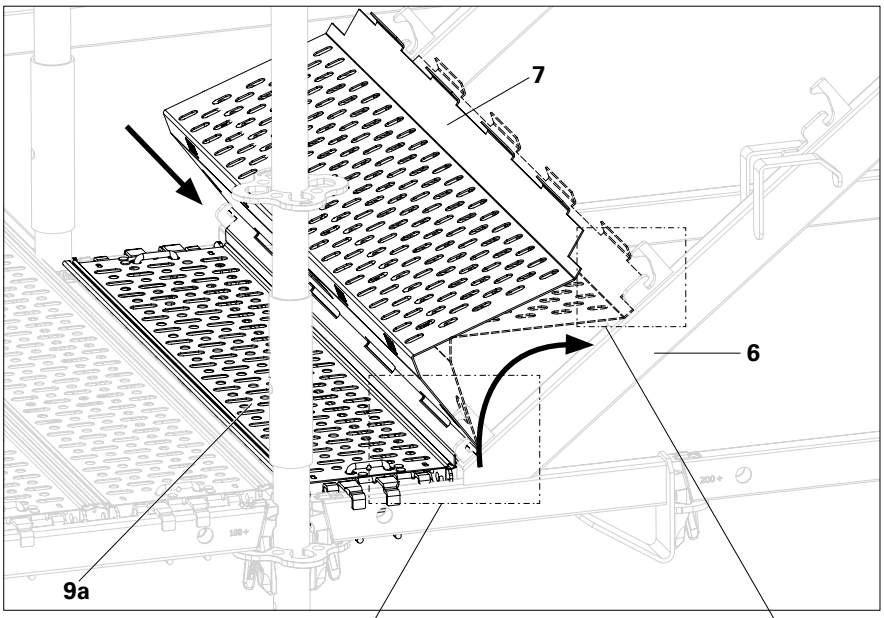


Fig. A2.03

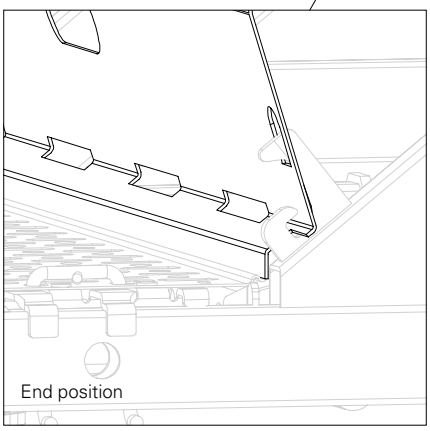


Fig. A2.04a

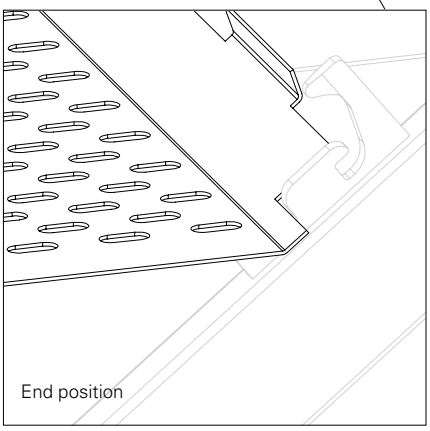


Fig. A2.04

Second to last step

1. Position the second step (**7**) with the front side on the first step.
   Tilt the step forwards into the supports of the Stair Stringers UA (**6**).
   The upturned edges engage in the slits. (Fig. A2.05)
2. Turn the step upwards. The slits support the upturned edges and connect both steps. The top of the step rests against the Stair Stringers UA.
   (Fig. A2.06)
3. Repeat procedure up to the last step.
   (Fig. A2.07)

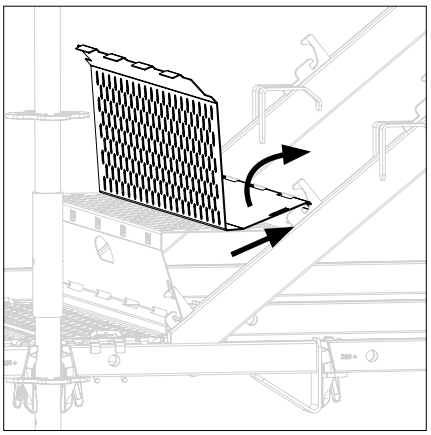


Fig. A2.05

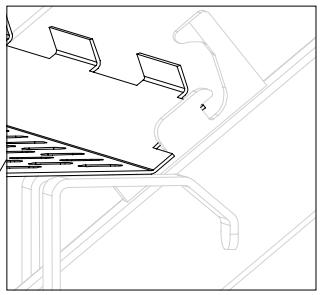


Fig. A2.06a

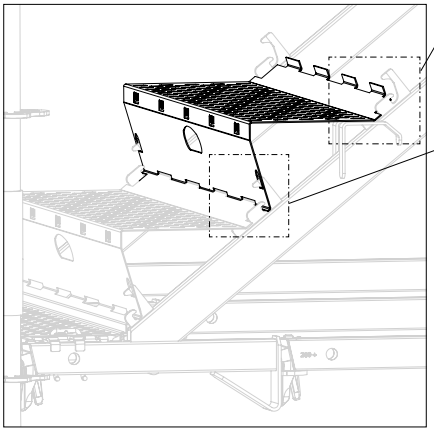


Fig. A2.06

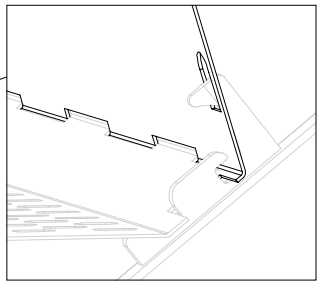


Fig. A2.06b

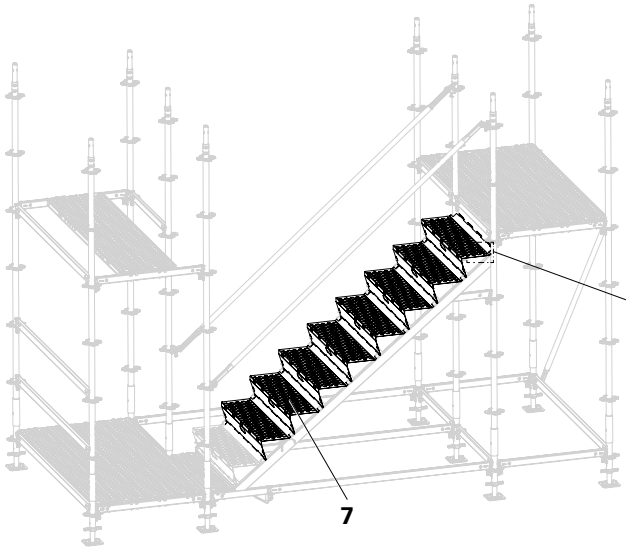


Fig. A2.07

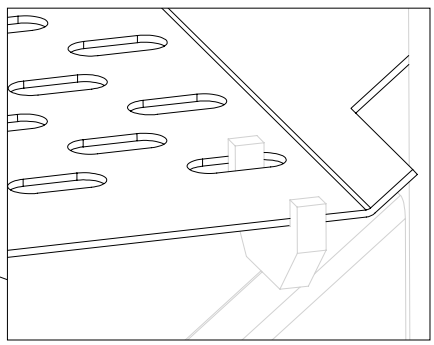


Fig. A2.07a

output stage

1. Lift the last step (**7**) out of the holder slightly.
2. Place the End Step UAE (**8**) horizontally on the last step (**7**). (Fig. A2.08a)
3. The upturned edges engage in the slits. The End Step UAE (**8**) and the last step are wedged together. (Fig. A2.09)
4. Pull back the End Step UAE (**8**) together with the last step, and then swivel up. End Step UAE (**8**) engages with the Horizontal Ledger. Last step engages in the Stair Stringers UA (**6**). (Fig. A2.09 and Fig. A2.10)
5. Check step: is the end step firmly engaged? (Fig. A2.10)
6. On the end step: tighten screws to prevent lifting. (Fig. A2.10)
7. Attach Horizontal Ledger UH 250 (**3a**) from the stairs, and secure with hammer blow. (Fig. A2.08)
8. Install assembly aid:
   – Install Steel Deck UDG 25x250 (**9d**) from the stairs. (Fig. A2.08)

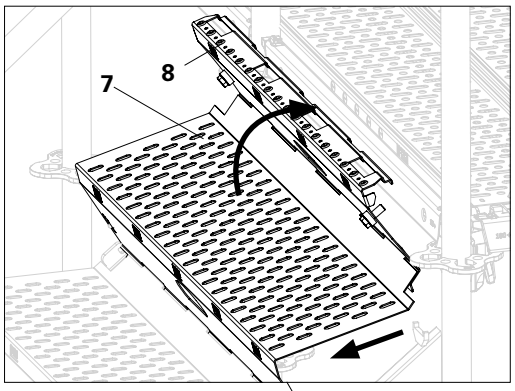


Fig. A2.08a

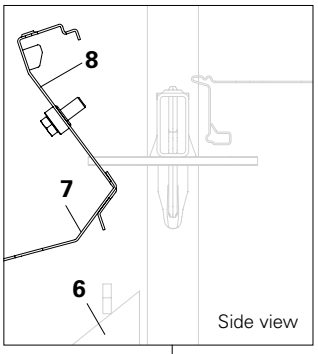


Fig. A2.09

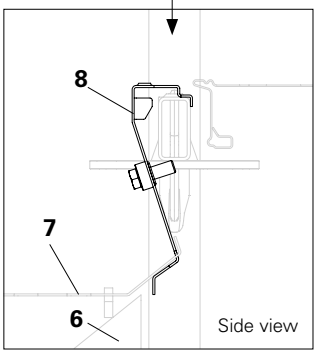


Fig. A2.10

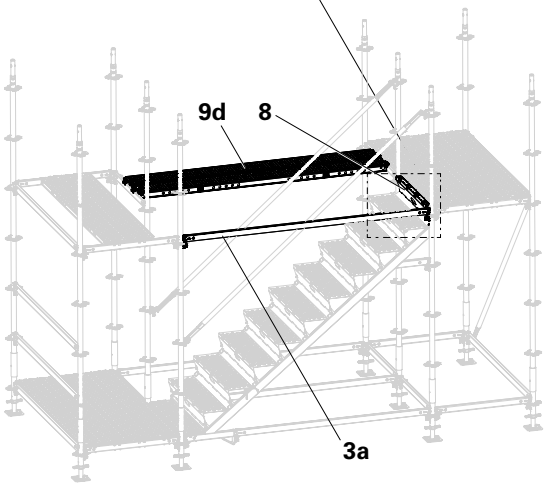


Fig. A2.08

A2.3 Guardrails

10	Node Brace UBK 250/200	2x
3b	Horizontal Ledger UH 200	2x
3c	Horizontal Ledger UH 100	4x

Assembly aid

3a	Horizontal Ledger UH 250	1x

Assembly

1. Fit Node Braces UBK (**10**) into the rosettes.
2. Fit Horizontal Ledgers UH (3b, 3c) as landing guardrails.
3. Fit the Horizontal Ledger UH 250 (**3a**) as an assembly aid. (Fig. A2.11)
3. Secure wedges on all ledgers using a 500 g hammer.
   The first flight of stairs is now installed.

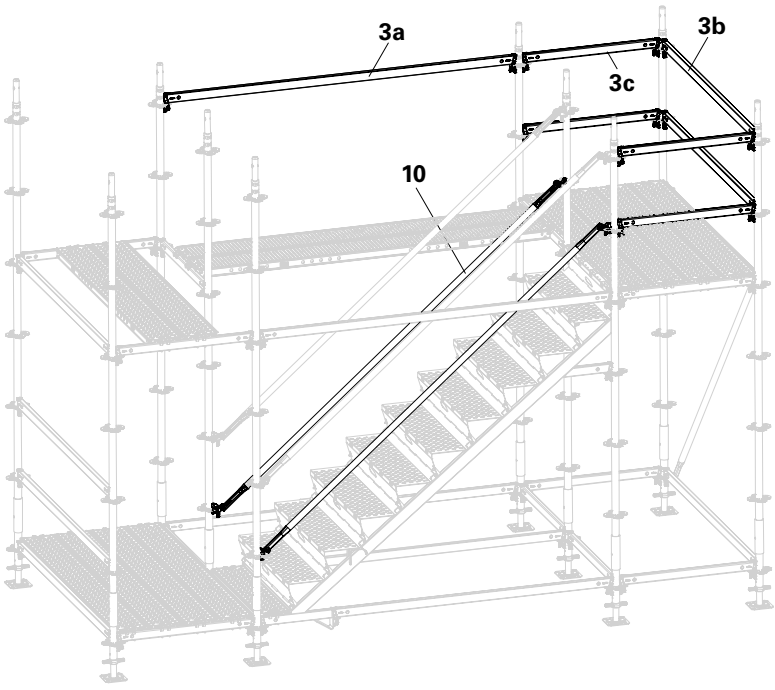


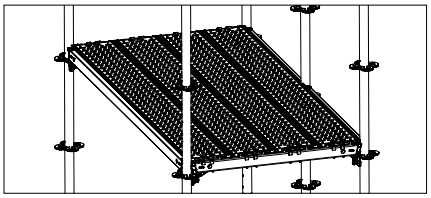
Fig. A2.11

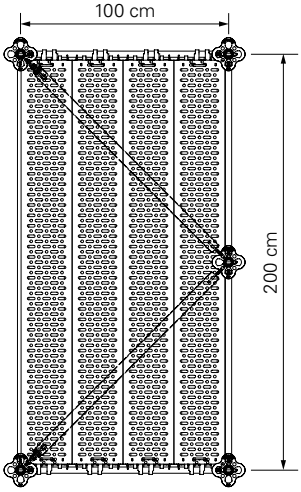
A2.4 Landing platform variants

Landing platforms are available in widths of 100 cm or 125 cm in three variants for Steel Decks UDG.

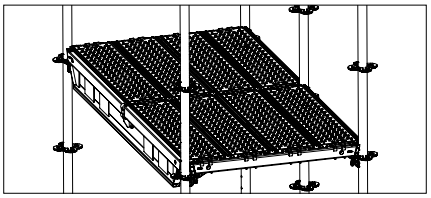
Staircase 100

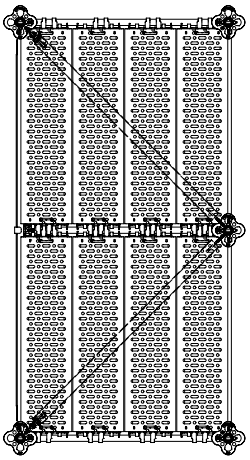
Version 1
UDG 25 x 200 long UH outside



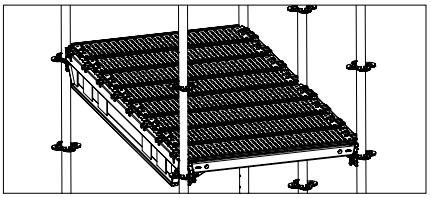


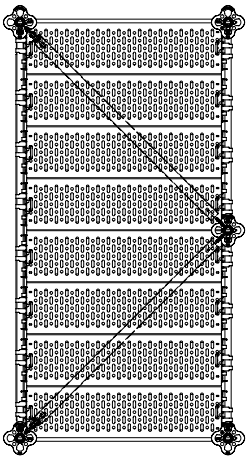
Version 2
UDG 25 x 100 long UHV and UHA outside





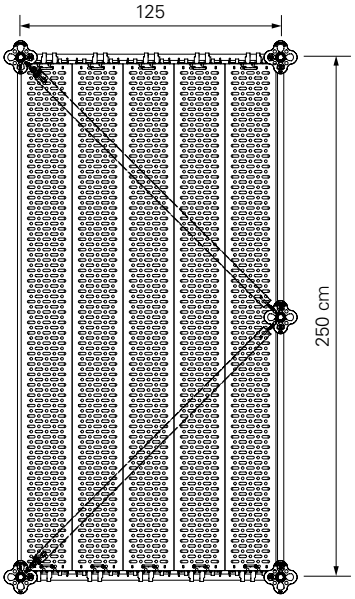
Version 3
UDG 25 x 100 laterally UHV outside



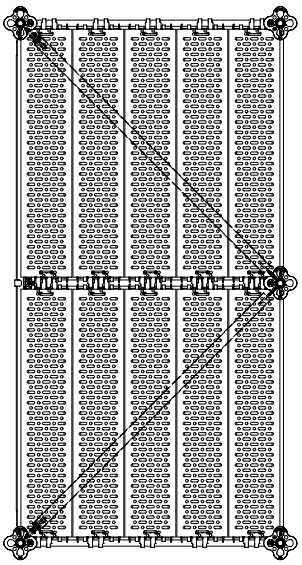


Staircase 125

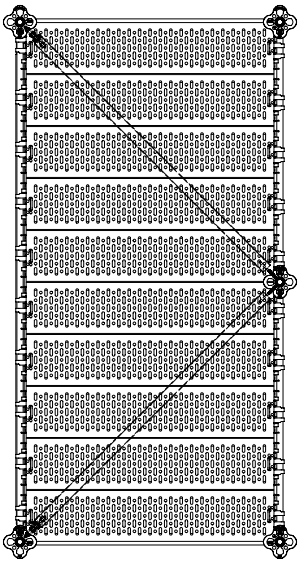
Variant 1a
UDG 25 x 250 long UH outside



Variant 2a
UDG 25 x 125 long UHV and UHA outside



Variant 3a
UDG 25 x 125 laterally UHV outside



Refer to Instructions for Short Lift systems to NASC SG4:15

DANGER

During assembly, there is no side protection on the scaffolding!
A fall can result in serious injuries or even death!
⇒ Use personal protective equipment to prevent falling from a height.

A3.1 Standards and ledgers, guardrail in advance

5a	Standard UVR 200	10x
14	Locking Pin Ø 48/57	10x
3b	Horizontal Ledger UH 200	2x
3c	Horizontal Ledger UH 100	9x
10	Node Brace UBK 250/200	2x

Assembly

1. Mount Standards UVR 200 (**5a**) apart from two pieces.
   Install Standards UVR with holes lined up so that the locking pins can be easily installed.
2. Fit Node Braces UBK (**10**) into the top rosettes of the last Standards UVR. Insert Standards UVR.
3. Fit Node Braces UBK into the bottom rosettes.
4. Attach Horizontal Ledgers UH 200 and UH 100 (3b, 3c) and secure with hammer blow.

All standards or base standards can be secured with a locking pin Ø 48/57 (**14**) if the steel staircase is to be lifted, e.g. with a crane, in order to move it.

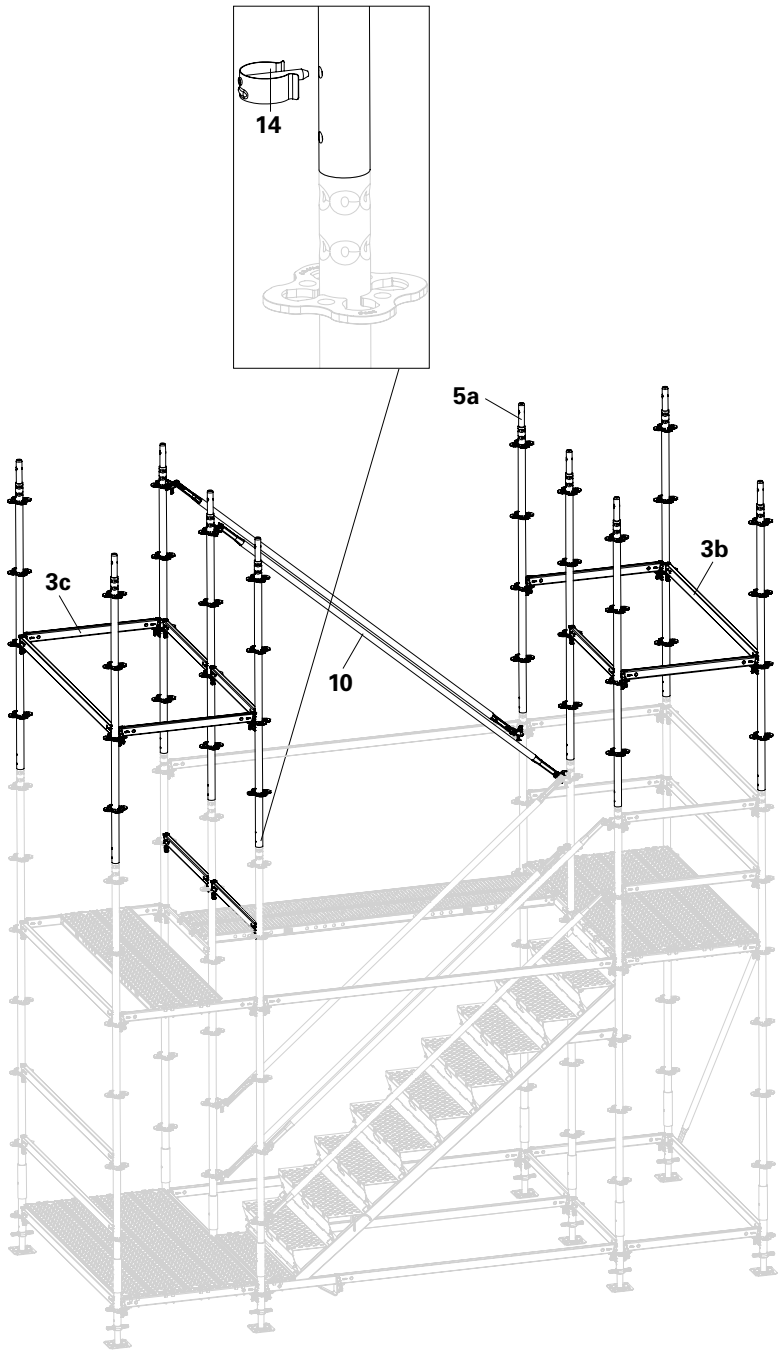


Fig. A3.01

A3.2 Decks and braces

9b	Steel Deck UDG 25x200	4x
11a	Ledger Brace UBL 200/200	1x
12a	Horizontal Brace UBH Flex 250/100	1x
12b	Horizontal Brace UBH Flex 100/100	4x

Assembly aid

9b*	Steel Deck UDG 25x200	2x

Assembly

1. Insert Steel Decks UDG 200 (landing platform 9b). (Fig. A3.02)
2. Insert Steel Decks UDG (assembly aid 9b*). (Fig. A3.02)
3. Install Ledger Brace UBL (**11a**). (Fig. A3.03)
4. Install Horizontal Braces UBH (12a, 12b) under the Steel Decks UDG (9b, 9b*):
   - Attach hook in the round hole of the rosette. (Fig. A3.04)
   - On the opposite side of the Horizontal Braces, unlock the lock and pull back the slider. (Fig. A3.05)
   - Attach the hook from below. (Fig. A3.05)
   - When pushing the slider forward, the securing device drops down and holds the Horizontal Brace UBH in place. (Fig. A3.05)

Install the first level of Horizontal Braces UBH at a height of 4.0 m, then at spacings of 4.0 m.

Alternative:
The Horizontal Braces UBH Flex 250/100 and UBH Flex 100/100 can be replaced by scaffold tubes and standard couplers.

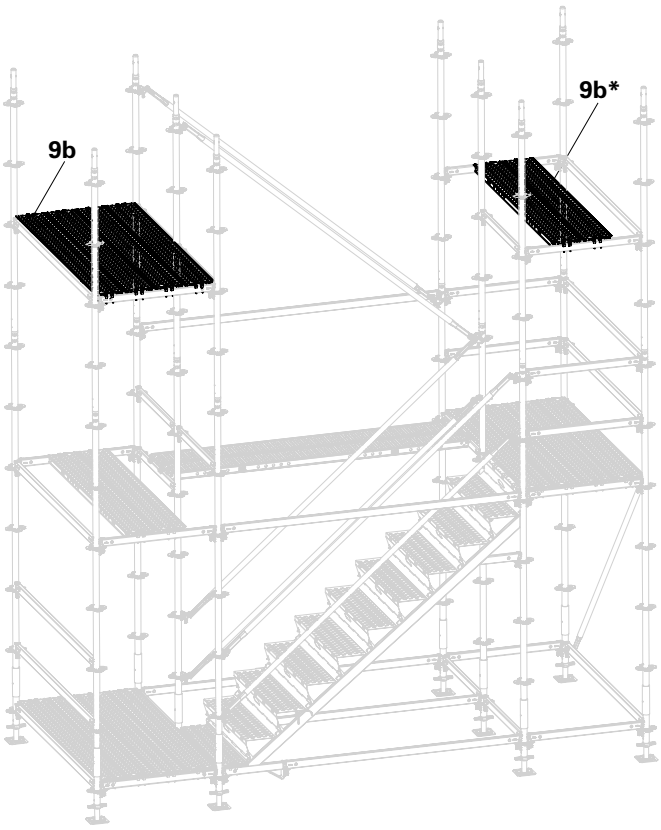


Fig. A3.02

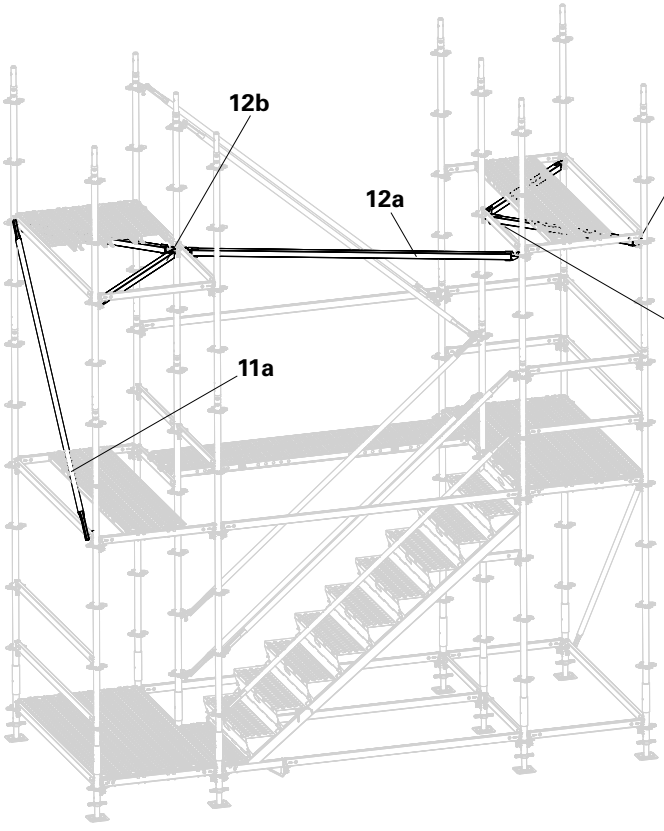


Fig. A3.03

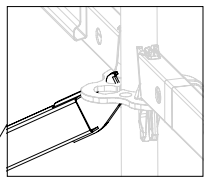


Fig. A3.04

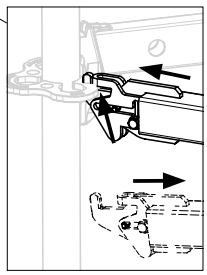


Fig. A3.05

A3.3 Stair stringers

6	Stair Stringer UA 250/200	2x
3b	Horizontal Ledger UH 200	2x

Assembly

1. Fit the Stair Stringers UA (**6**) into the rosettes at the top and bottom and hammer in securely.
2. Brace with two Horizontal Ledgers UH 200 (**3b**). (Fig. A3.06)
3. Remove assembly aids.

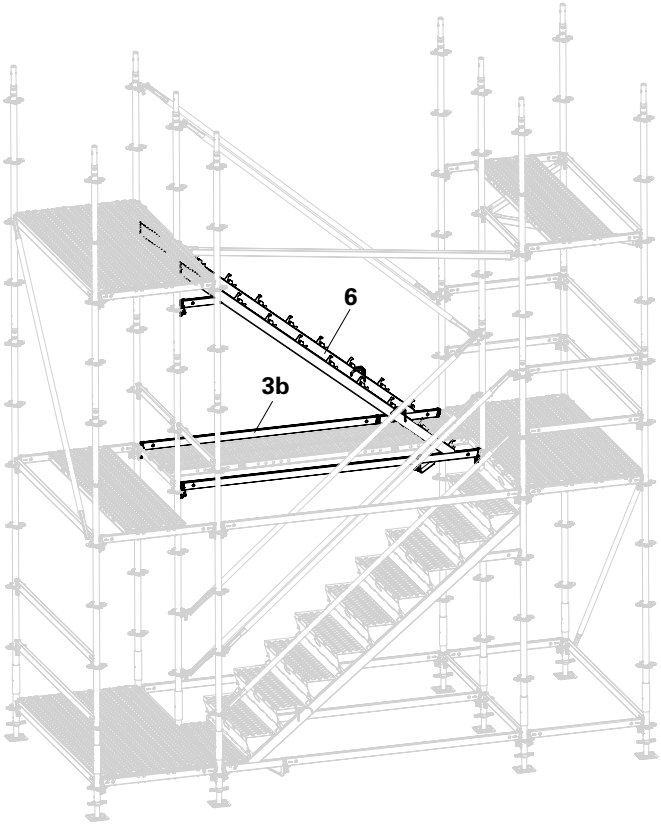


Fig. A3.06

A3.4 Steps

9a	Steel Deck UDG 25x100	1x
7	Step UAR 100	9x
8	End Step UAE 100	1x
3a	Horizontal Ledger UH 250	1x

Assembly aid

9d	Steel Deck UDG 25x250	2x

Assembly

1. Position Steel Deck UDG 100 (**9a**) on the Stair Stringers UA.
2. Install, interlock and turn Steps UAR (**7**).
3. Interlock End Step UAR (**8**) with the last Step UAR and engage with Horizontal Ledger UH (Fig. A3.07)
4. Screw in screws on the End Step UAE (**8**) for protection against lifting.
5. Check steps: all steps connected and secured, last step engaged?
6. Install Horizontal Ledger UH 250 (**3a**) and the assembly aid Steel Deck UDG 25x250 (**9d**) from the stairs. (Fig. A3.07)

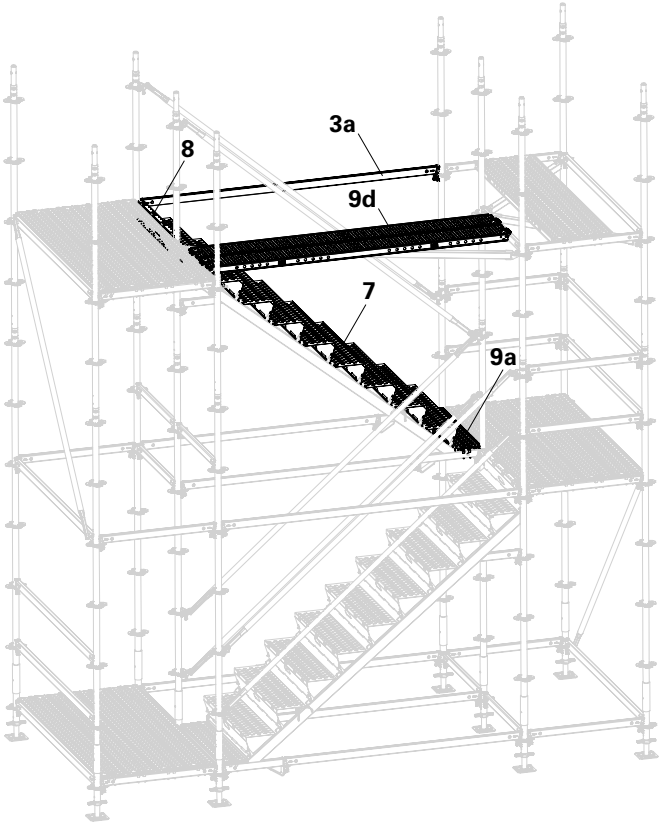


Fig. A3.07

A3.5 Guardrails

10	Node Brace UBK 250/200	2x
3b	Horizontal Ledger UH 200	2x
3c	Horizontal Ledger UH 100	4x

Assembly

1. Fit Node Braces UBK (**10**) into the rosettes.
2. Fit Horizontal Ledgers UH (3b, 3c) as landing guardrails.
   (Fig. A3.08)
3. Secure wedges on all ledgers using a 500 g hammer.

The second flight of stairs is now installed.

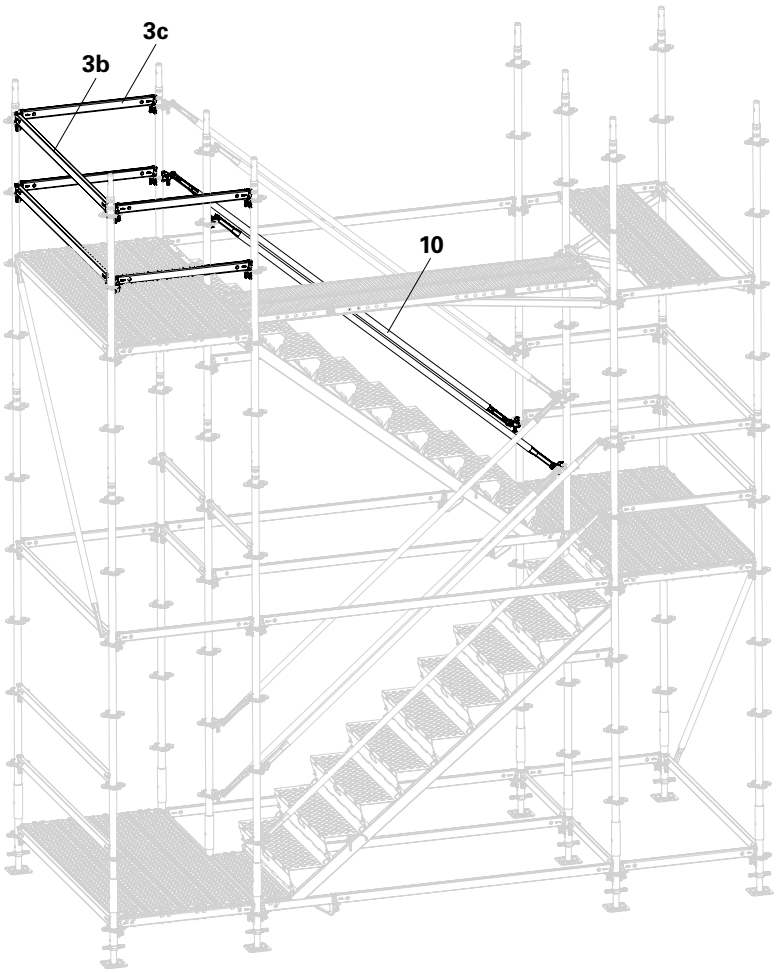


Fig. A3.08

A3.6 Other flights of stairs

Fig. A3.09 shows the view from the building side.

Install additional flights of stairs, as described in 3.1 to 3.5.

Staircase assembly is to take place in line with erection progress:
1. Assembly aids from one flight of stairs to the next.
2. Horizontal Braces UBH (12a, 12b) every 4.0 m. (Fig. A3.09)
3. Anchoring every 8.0 m.
   If the spacing between the last level and the last tie position is <8.0 m, the last level must always be anchored.
4. Insert locking pins Ø 48 into the Standards in the last 8 m.

A3.7 Last flight of stairs

3a Horizontal Ledger UH 250	2x

Assembly
Brace with Horizontal Ledger UH 250 (**3a**) - at the position of the Horizontal Ledger UH 200 of the Stair Stringers UA.
(Fig. A3.09)

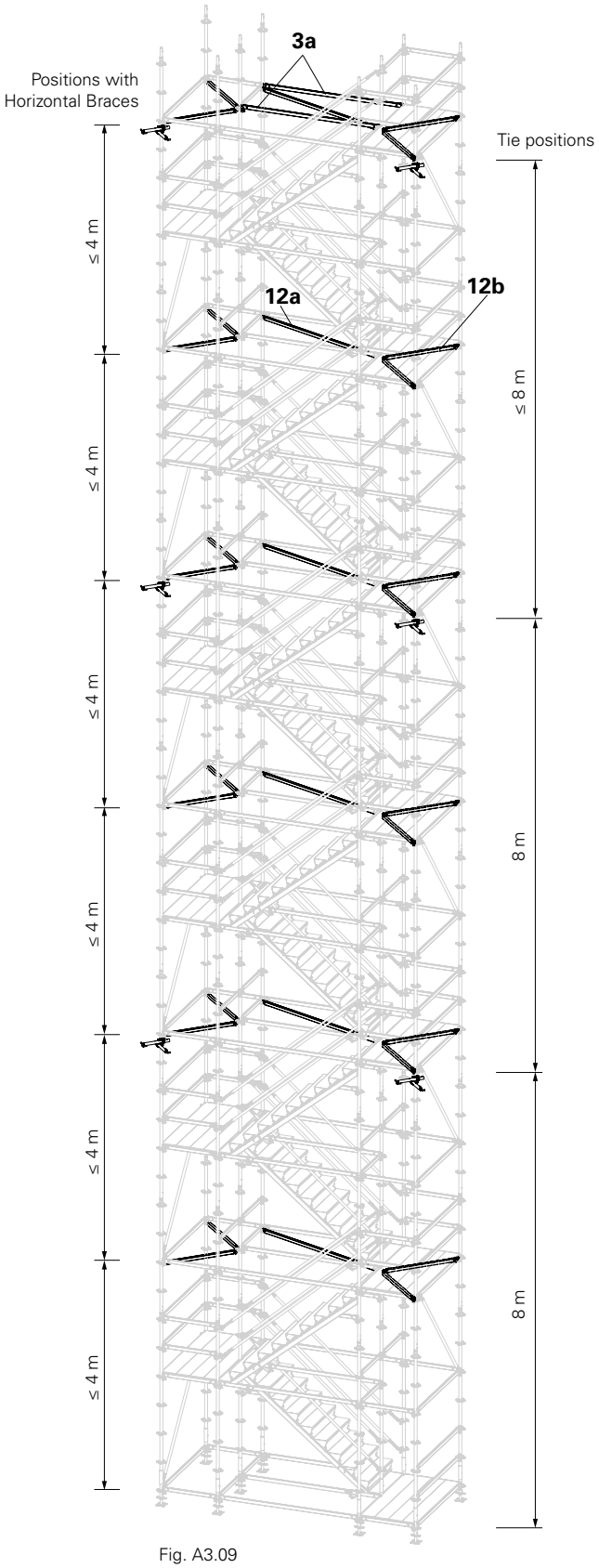


Fig. A3.09

A3.8 Accessing the building

Fig. A3.10 shows the view from the building side.

It is possible to access the building from all landing platforms.
In order to facilitate this, remove the Horizontal Ledgers UH 100 from the inner side of the tower.
Alternative measures are not necessary.

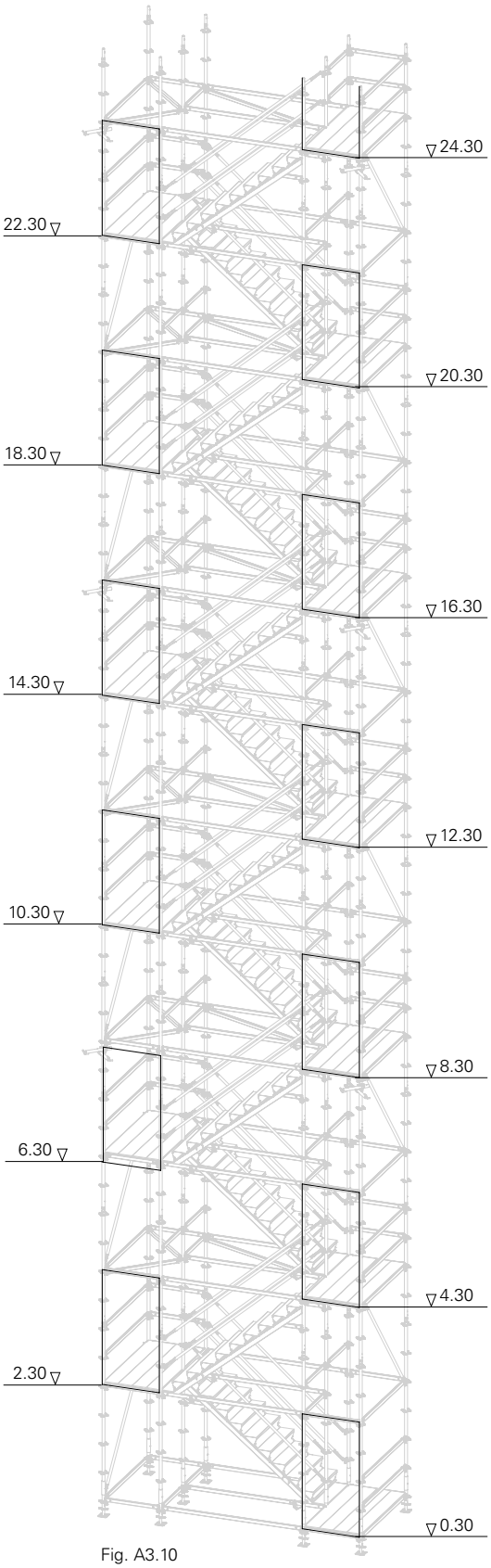


Fig. A3.10

Ties do not transfer vertical loads!

Ties should be installed progressively with the erection of the scaffolding.
- Fix ties with M12 eyebolts or an equivalent connection.
- The load-bearing capacity of the fixing materials between the wall ties and anchoring base must be verified by the contractor.
  Tie loads: see tables in Part B.
- Insert the first tie at a height of 8.0 m. The positions of the other ties is given in the Tables in Part B.
- Install ties only in the levels that have been braced with horizontal braces.

A4.1 Triangulated tie

For shorter wall spacings, both corner standards must be connected with triangular ties under 45°.

15 Wall Tie UWT 45	4x
16 Standard Coupler NK 48/48	4x

Assembly
1. Fix the Standard Couplers (**16**) to the Corner Standards with Wall Ties UWT 45 (**15**).
2. Fix Wall Ties UWT 45 to the wall, e.g. with M12 eyebolts and dowels, or equivalent connection.

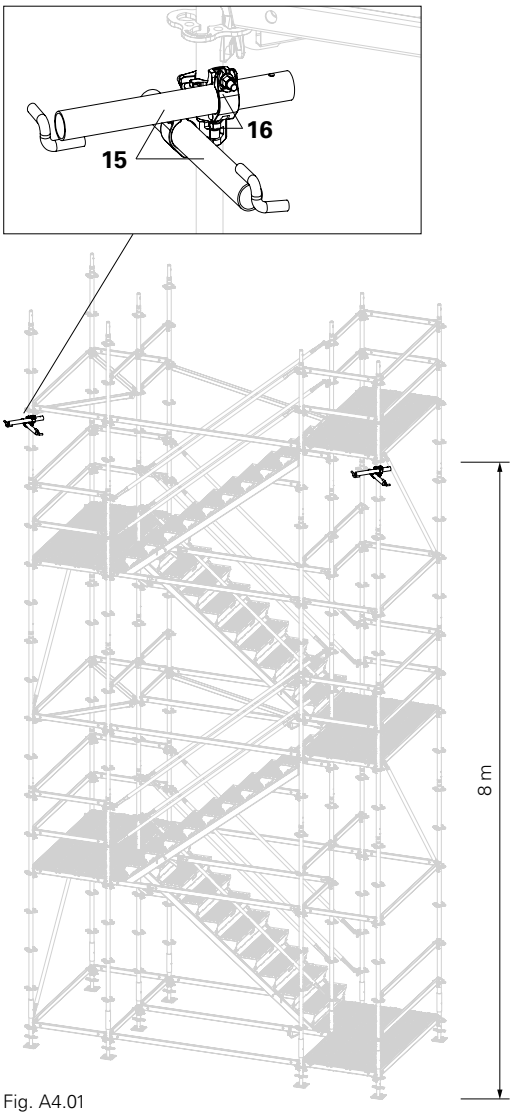


Fig. A4.01

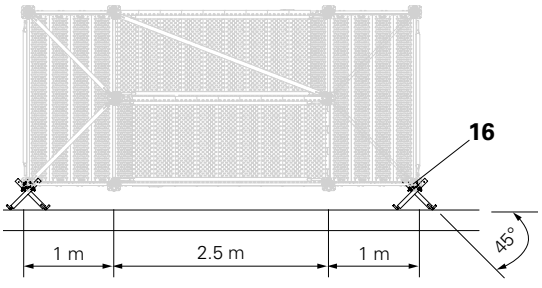


Fig. A4.02

A4.2 Single wall ties with bracing

For large wall spacings up to max. 200 cm, single wall ties and crossed diagonals are to be used.

15a	Wall Tie UWT from 140	2x
18	Scaffold Tube 48.3 x 3.2	2x
16	Standard Coupler NK 48/48	2x
17	Swivel Coupling DK 48/48	5x

Assembly

1. Fix wall ties, e.g. UWT 140 (**15a**), to the corner standards using standard couplers (**16**).
2. Fix Wall Ties UWT 140 to the wall, e.g. with M12 eyebolts and dowels, or equivalent connection.
3. Fix scaffold tubes (**18**) to the Wall Ties UWT 140 using swivel couplings (**17**). (Fig. A4.05)
4. At the intersection point of the scaffold tubes, fit swivel couplers for connecting both scaffold tubes. (Fig. A4.03 and A4.04)

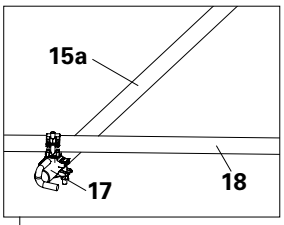


Fig. A4.05

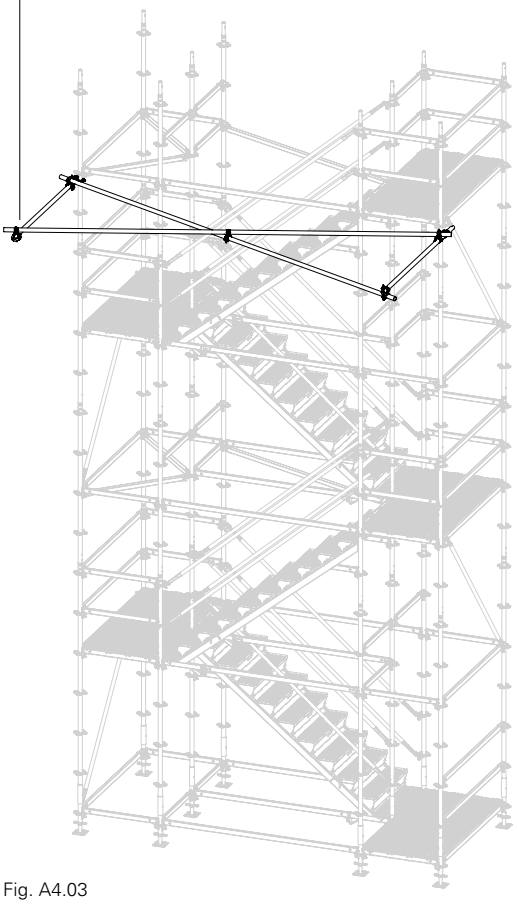


Fig. A4.03

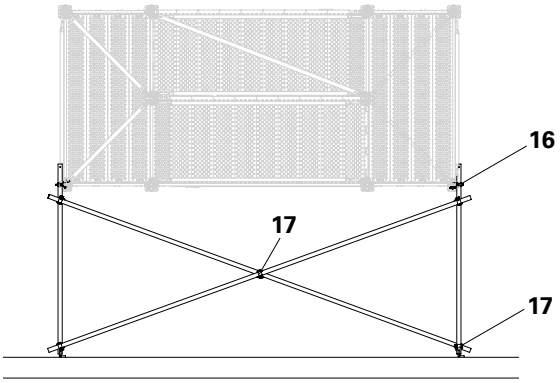
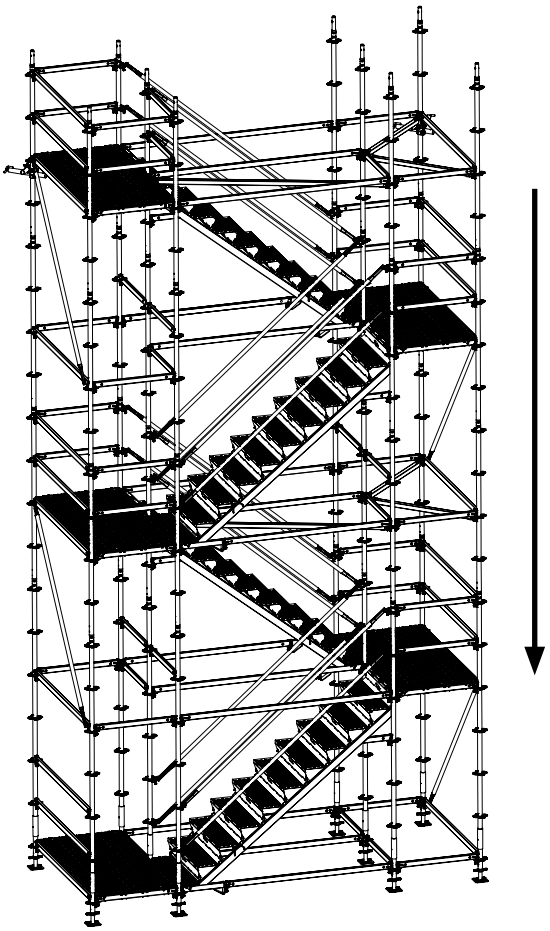


Fig. A4.04

The scaffolding contractor can also undertake other measures on the basis of his own risk assessment.

Suggested sequence

- Dismantle from top to bottom, i.e. in the reverse order as shown in the assembly procedure.
- Remove the tie progressively with the stair tower from top to bottom.
- In the event of work being interrupted, the top level should not extend more than 3.0 m beyond the last tie position.



Step width 125 cm: necessary adjustments

In Sections A1 to A5, the assembly for a staircase with a step width of 100 cm is shown.
The details apply accordingly for the larger step width of 125 cm.
There are changes to the ground plan dimensions of the staircase and therefore also the lengths of the following components:

– Step UAR 125
– End Step UAE 125
– Steel Deck UDG 25x125
– Steel Deck UDG 25x250
– Horizontal Ledger UH 125
– Horizontal Ledger UH 250
– Ledger Brace UBL 250/200
– Horizontal Brace UBH Flex 125/125
– Horizontal Brace UBH Flex 125/250

Other components are not affected.
Landing platform variant: see Section A2.4.

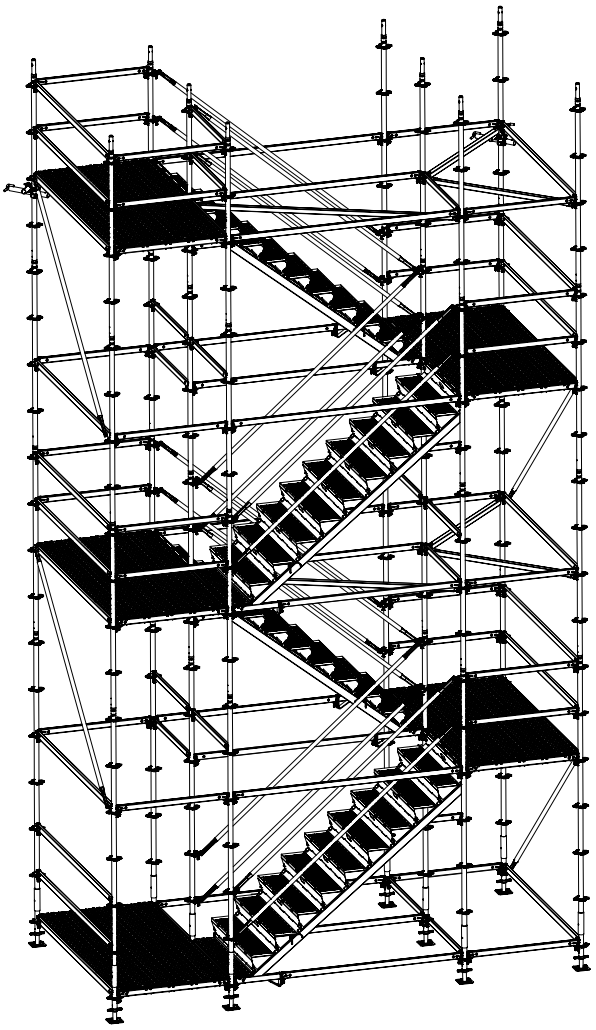


Fig. A6.01

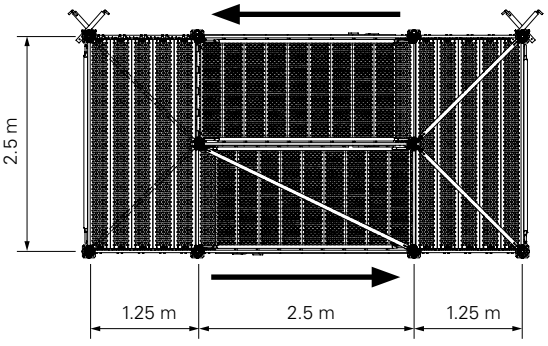


Fig. A6.02

10a	Spacer UA 76	4x
10	Node Brace UBK 250/200	2x

For the required spacing of the guard-rails for components that cross each other (≥ 76 mm), which is necessary in some countries, the Spacer UA 76 (**10a**) can be fitted and then the Node Braces UBK can be attached to it.

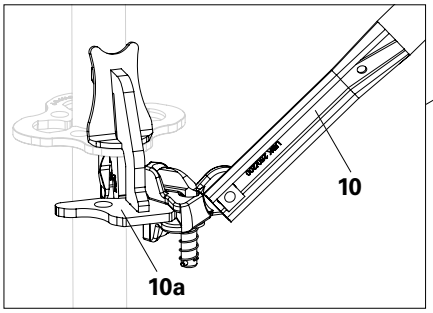


Fig. A7.01

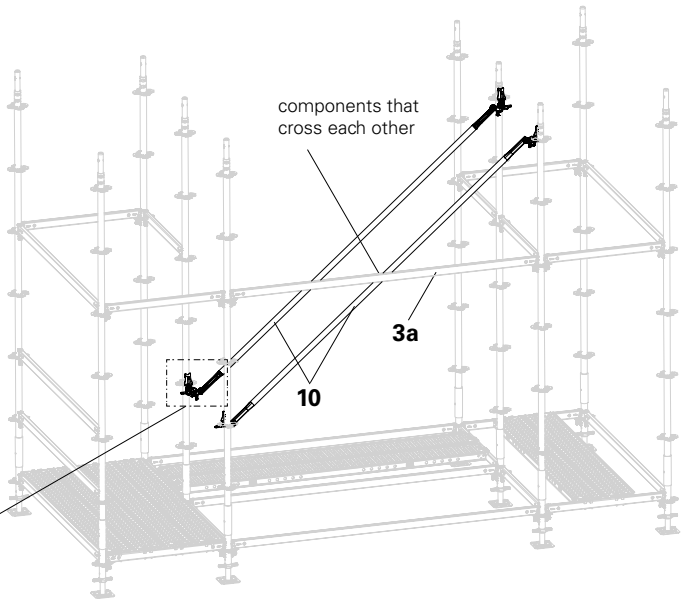


Fig. A7.02

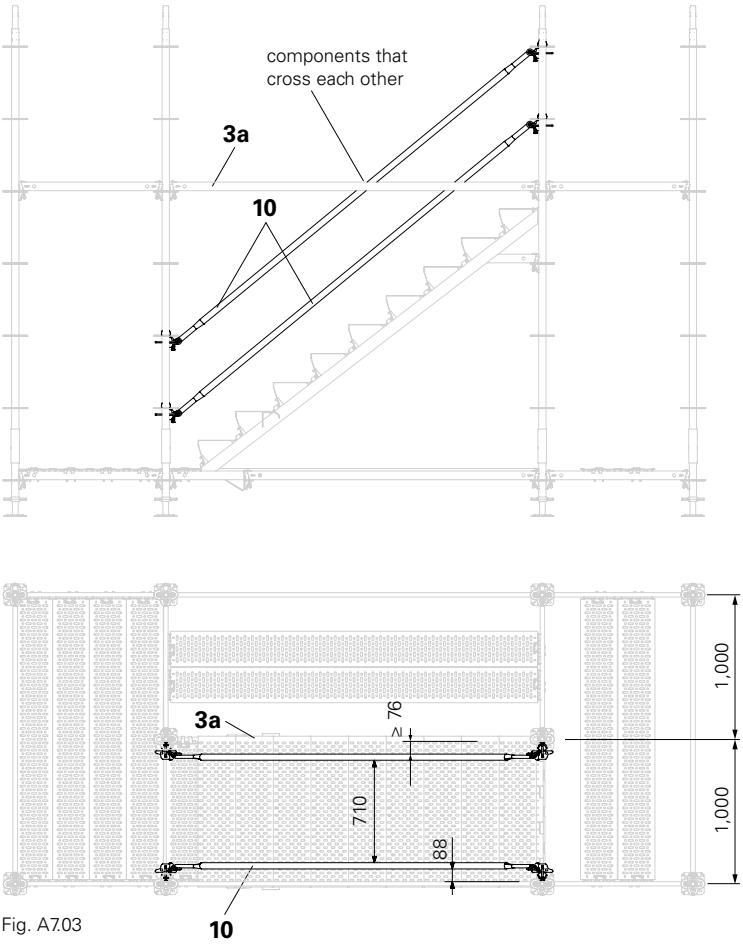


Fig. A7.03

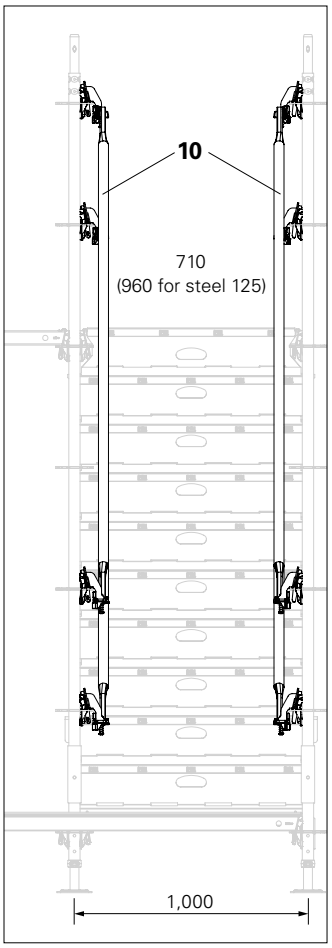


Fig. A7.04

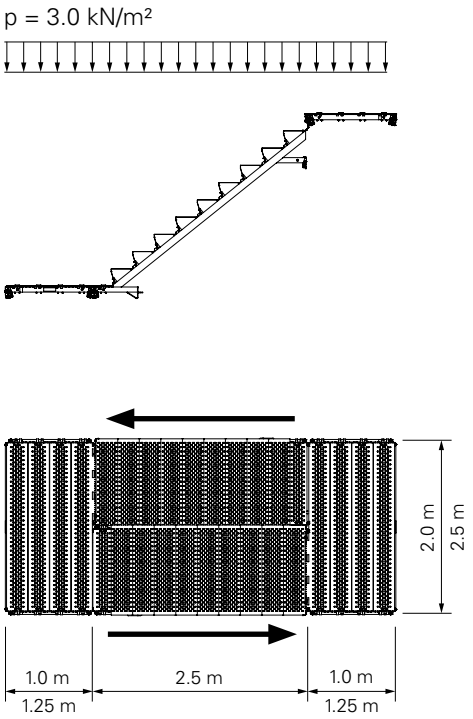
B1 Live loads

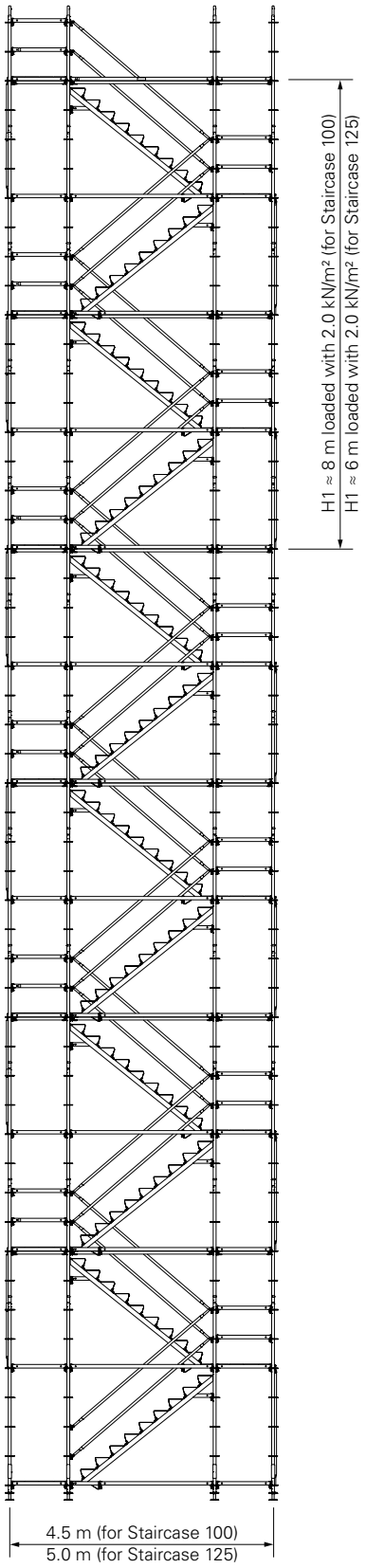
B1.1 Loads on Steps UAR

The permissible live load is
– Individual load in the bay centre:
  p = 2.4 kN
– Surface load:
  p = 3.0 kN/m²

B1.2 Loads on flights of stairs and landing platforms

The permissible live load is:
p = 3.0 kN/m²





B1.3 Loads on stair tower

A stair tower consists of several flights of stairs and landing platforms, which are arranged above one another like a tower.

The permissible live load of the stair tower is 40.0 kN which is evenly distrib-uted on all legs (in accordance with NF P 93-522) or p = 2.00 kN/m² for a maxi-mum length of 20 linear metres.

(16 linear metres for 1.25m wide staircase)

Staircase 100:
For staircases with a landing platform width of 1.0 m, approx. 4 levels are loaded.

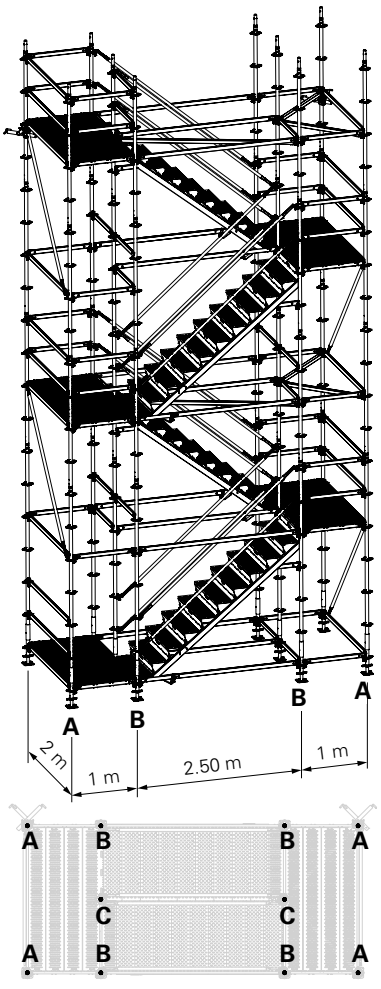
Staircase 125:
For staircases with a landing platform width of 1.25 m, approx. 3 levels are loaded.

B2.1 Stair tower with a step width of 100 cm

The support forces for the stair towers are given in the table and depend on the respective overall height.

Table 1

Height of access point [m]	Foundation for complete tower			Foundation for individual standards			Stair tower with step width 100 cm
	medium standard loads [kN]			max. standard loads [kN]			
	A	B	C	A	B	C	
4.3	2.7	3.1	3.5	4.0	4.4	4.8	
6.3	4.0	4.7	5.2	5.9	6.6	7.1	
8.3	5.3	6.2	6.9	7.9	8.8	9.5	
10.3	5.6	6.7	7.6	8.2	9.3	10.2	
12.3	5.9	7.3	8.3	8.5	9.9	10.9	
14.3	6.2	7.8	9.0	8.8	10.4	11.6	
16.3	6.5	8.3	9.7	9.1	10.9	12.3	
18.3	6.8	8.9	10.4	9.4	11.5	13.0	
20.3	7.1	9.4	11.1	9.7	12.0	13.7	
22.3	7.4	9.9	11.8	10.0	12.5	14.4	
24.3	7.7	10.5	12.5	10.3	13.1	15.1	
26.3	8.0	11.0	13.2	10.6	13.6	15.8	
28.3	8.3	11.5	13.9	10.9	14.1	16.5	
30.3	8.6	12.1	14.6	11.2	14.7	17.2	
32.3	8.9	12.6	15.3	11.5	15.2	17.9	
34.3	9.2	13.1	16.0	11.8	15.7	18.6	
36.3	9.6	13.7	16.7	12.2	16.3	19.3	
38.3	9.9	14.2	17.4	12.5	16.8	20.0	
40.3	10.2	14.7	18.1	12.8	17.3	20.7	
42.3	10.5	15.3	18.9	13.1	17.9	21.5	
44.3	10.8	15.8	19.6	13.4	18.4	22.2	
46.3	11.1	16.3	20.3	13.7	18.9	22.9	
48.3	11.4	16.9	21.0	14.0	19.5	23.6	
50.3	11.7	17.4	21.7	14.3	20.0	24.3	



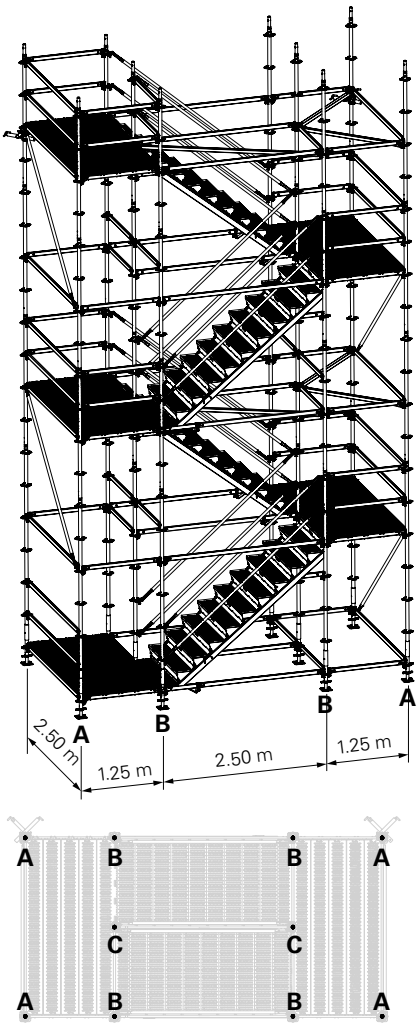
For the medium standard loads, the permissible load was distributed evenly across all standards. To determine the maximum leg loads, 80 % of the permissible load was concentrated on one side of the scaffolding.

B2.2 Stair tower with a step width of 125 cm

The support forces for the stair towers are given in the table and depend on the respective overall height.

Table 2

Height of access point [m]	Foundation for complete tower			Foundation for individual standards			Stair tower with step width 125 cm
	medium standard loads [kN]			max. standard loads [kN]			
	A	B	C	A	B	C	
2.3	1.4	1.6	1.9	2.0	2.3	2.5	
4.3	2.7	3.2	3.7	4.0	4.5	5.0	
6.3	4.0	4.8	5.5	6.0	6.8	7.4	
8.3	5.4	6.4	7.3	8.0	9.0	9.9	
10.3	5.7	7.0	8.0	8.3	9.6	10.6	
12.3	6.0	7.6	8.8	8.6	10.2	11.4	
14.3	6.3	8.1	9.6	8.9	10.7	12.2	
16.3	6.7	8.7	10.4	9.3	11.3	13.0	
18.3	7.0	9.3	11.2	9.6	11.9	13.8	
20.3	7.3	9.9	12.0	9.9	12.5	14.6	
22.3	7.7	10.5	12.8	10.3	13.1	15.4	
24.3	8.0	11.1	13.6	10.6	13.7	16.2	
26.3	8.3	11.6	14.4	10.9	14.2	17.0	
28.3	8.6	12.2	15.2	11.2	14.8	17.8	
30.3	9.0	12.8	16.0	11.6	15.4	18.6	
32.3	9.3	13.4	16.8	11.9	16.0	19.4	
34.3	9.6	14.0	17.6	12.2	16.6	20.2	
36.3	9.9	14.6	18.4	12.5	17.2	21.0	
38.3	10.3	15.1	19.2	12.9	17.7	21.8	
40.3	10.6	15.7	20.0	13.2	18.3	22.6	



For the medium leg loads, the permissible load was distributed evenly across all legs. To determine the maximum leg loads, 80 % of the permissible load was concentrated on one side of the scaffolding.

B3.1 Tie positions – installation heights

Table 3

Staircase 100

Height of access point [m]	Tie positions	Tie installation height [m]						
2 – 8	1	8						
10 – 16	2	8	16					
18 – 24	3	8	16	24				
26 – 32	4	8	16	24	32			
34 – 40	5	8	16	24	32	40		
42 – 48	6	8	16	24	32	40	48	
50	7	8	16	24	32	40	48	50

Staircase 125

Height of access point [m]	Tie positions	Tie installation height [m]						
2 – 8	1	8						
10 – 16	2	8	16					
18 – 24	3	8	16	24				
26 – 32	4	8	16	24	32			
34 – 40	5	8	16	24	32	40		

Staircase 100:

Tension and compression-proof anchorage
Tie heights are measured without the length of the jack extension.

Height up to 50 m:
Fit the first tie at a height of 8.0 m, and then at spacings of 8.0 m.

Top level:
Always anchor!

Intermediate access on every storey:
Remove Horizontal Ledger UH 100 on the inner side of the landing platform.

Staircase 125:

Tension and compression-proof anchorage
Tie heights are measured without the length of the jack extension.

Height up to 40 m:
Fit the first tie at a height of 8.0 m, and then at spacings of 8.0 m.

Top level:
Always anchor!

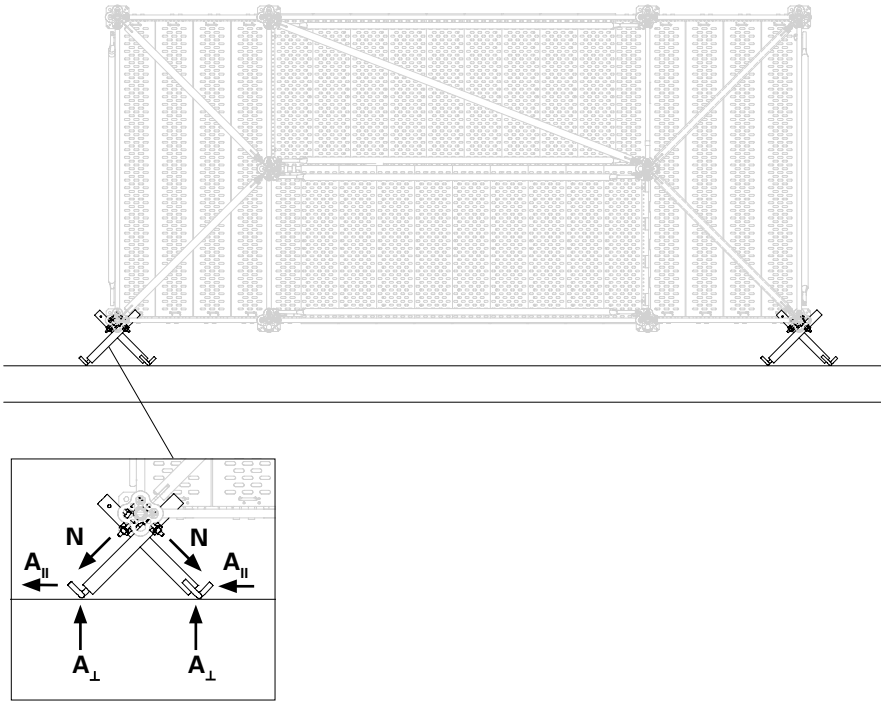
Intermediate access on every storey:
Remove Horizontal Ledger UH 125 on the inner side of the landing platform.

B3.2 Tie forces

The tie forces have been calculated for an unclad stair tower in front of an open facade (60 % openings).
A wind load with the following dynamic pressures has been taken into account for the face areas of the scaffold:

Load combination – service condition
Constant dynamic pressure:
$q = 0.20$ kN/m²

Load combination – max. wind load
Dynamic pressure changing with height:
$q_1 = 0.60$ kN/m² (at 0 m)
$q_2 = 0.77$ kN/m² (at 24 m) and
$q_3 = 0.87$ kN/m² (at 50 m)
with a service life factor of 0.7.



with Table 3:
for 8 m tie spacings:
max. N = **8.4** kN
max. A_{II} = max. $A_{\perp}$ = **6.0** kN

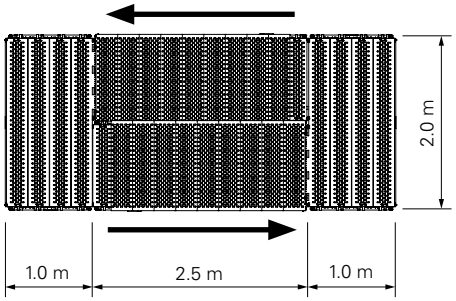
for 6 m tie spacings:
max. N = **7.3** kN
max. A_{II} = max. $A_{\perp}$ = **5.1** kN

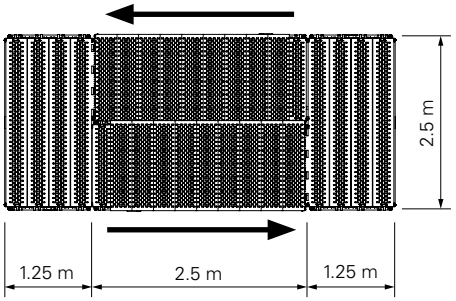
for 4 m tie spacings:
max. N = **5.5** kN
max. A_{II} = max. $A_{\perp}$ = **3.9** kN

with Table 3:
for 8 m tie spacings: max.
N = **10.3** kN
max. A_{II} = max. $A_{\perp}$ = **7.3** kN

for 6 m tie spacings: max.
N = **5.7** kN
max. A_{II} = max. $A_{\perp}$ = **6.3** kN

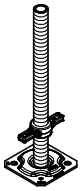
for 4 m tie spacings: max.
N = **6.7** kN
max. A_{II} = max. $A_{\perp}$ = **4.7** kN

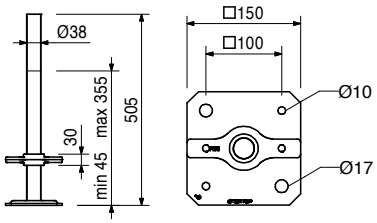




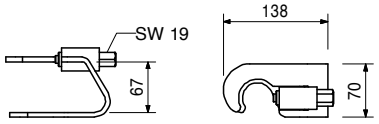
PERI UP Flex Staircase 100, 125

Item. no.	Weight kg		
100411	3.390	**Base Spindle UJB 38-50/30**	**Note** With captive red quick jack nut.

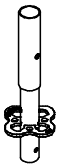


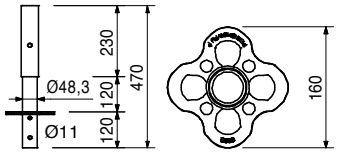


100863	1.020	**Spindle Locking UJS** Locks base spindles and section spindles Ø 38 mm in the leg during moving procedures.	**Technical data** Permissible load 1.5 kN.

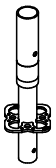


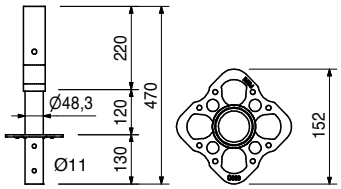
100014	2.470	**Base Standard UVB 24** For fitting onto the base spindles directly.	





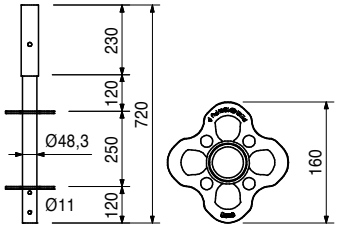
133499	2.270	**Base Standard UVB 25** For fitting onto the base spindles directly. Can also be used as 25 cm standard.	



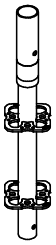


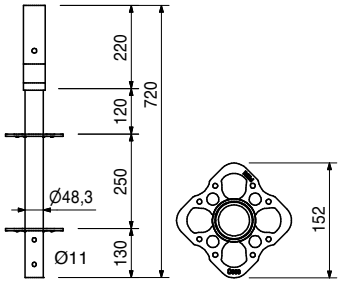
PERI UP Flex Staircase 100, 125

Item. no.	Weight kg	
117194	3.980	**Base Standard UVB 49** For fitting onto the base spindles directly. Reduces necessary spindle adjustments with 25 cm rosette spacing.

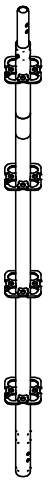


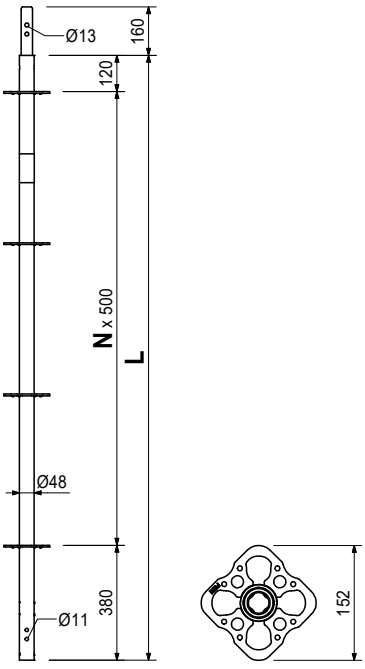
135187	3.590	**Base Standard UVB 50** For fitting onto the base spindles directly.





		Standards UVR-2	L
132219	2.480	**Standard UVR-2 50**	500
132224	4.340	**Standard UVR-2 100**	1,000
132229	6.180	**Standard UVR-2 150**	1,500
132234	8.030	**Standard UVR-2 200**	2,000
132239	11.700	**Standard UVR-2 300**	3,000

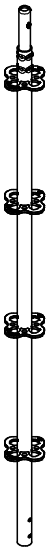


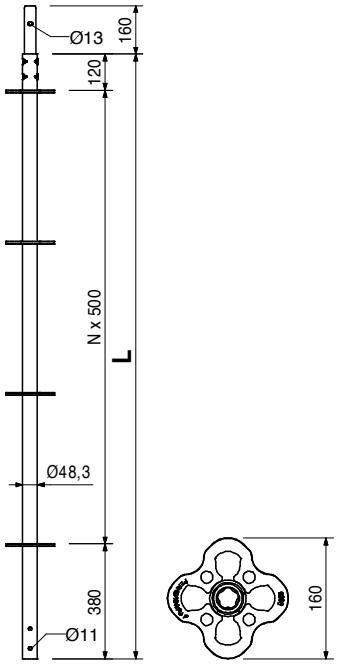


PERI UP Flex Staircase 100, 125

Item. no.	Weight kg	Standards UVR	L
401306	5.380	**Standard UVR 100**	1,000
400009	10.000	**Standard UVR 200**	2,000
400012	14.700	**Standard UVR 300**	3,000

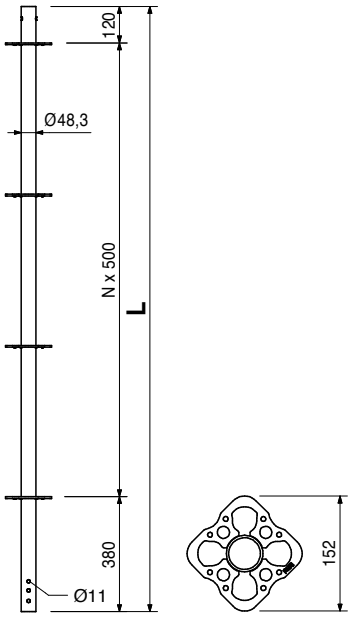
Without spigot for supporting head spindles.





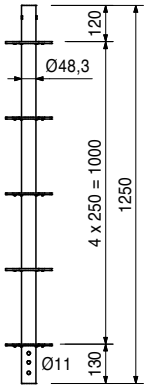
		Top Standards UVH	L
101309	2.090	**Top Standard UVH 50**	500
100000	4.210	**Top Standard UVH 100**	1,000
100003	6.310	**Top Standard UVH 150**	1,500
100005	8.420	**Top Standard UVH 200**	2,000
100007	10.500	**Top Standard UVH 250**	2,500

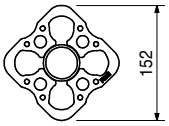
Without spigot for supporting head spindles.



PERI UP Flex Staircase 100, 125

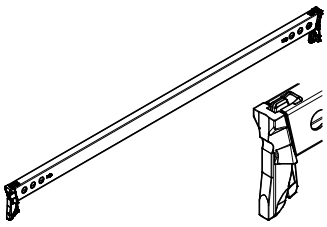
Item. no.	Weight kg	
117195	6.060	**Top Standard UVH 125** Without spigot for supporting head spindles. Reduces necessary spindle adjustments with 25 cm rosette spacing.

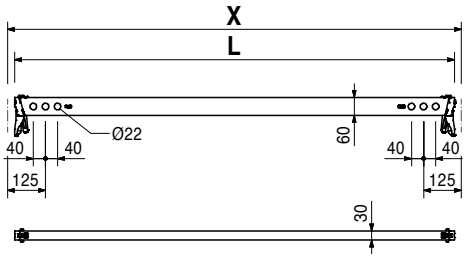




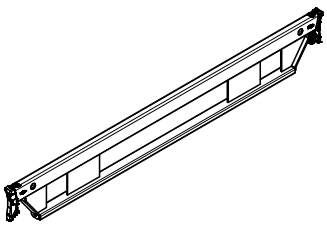
		Horizontal Ledger UH Plus	L	X
114613	1.410	**Horizontal Ledger UH 25 Plus**	204	250
114595	2.030	**Horizontal Ledger UH 50 Plus**	454	500
114629	2.690	**Horizontal Ledger UH 75 Plus**	704	750
114632	3.740	**Horizontal Ledger UH 100 Plus**	954	1,000
114638	4.510	**Horizontal Ledger UH 125 Plus**	1,204	1,250
114641	4.680	**Horizontal Ledger UH 150 Plus**	1,454	1,500
117032	5.340	**Horizontal Ledger UH 175 Plus**	1,704	1,750
114645	6.000	**Horizontal Ledger UH 200 Plus**	1,954	2,000
116356	6.660	**Horizontal Ledger UH 225 Plus**	2,204	2,250
114648	7.320	**Horizontal Ledger UH 250 Plus**	2,454	2,500
114651	8.650	**Horizontal Ledger UH 300 Plus**	2,954	3,000

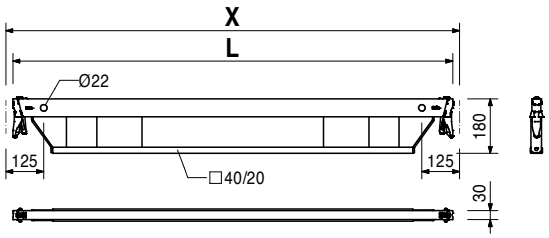
Note
With length marking for easier identification.





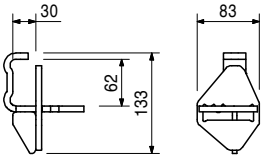
		Horizontal Ledger UHV Plus	L	X
114687	14.700	**Horizontal Ledger UHV 200 Plus**	1,954	2,000
114691	17.900	**Horizontal Ledger UHV 250 Plus**	2,454	2,500





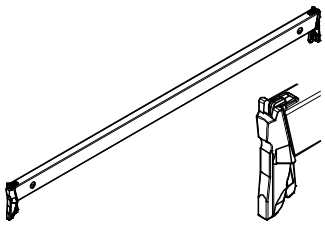
PERI UP Flex Staircase 100, 125

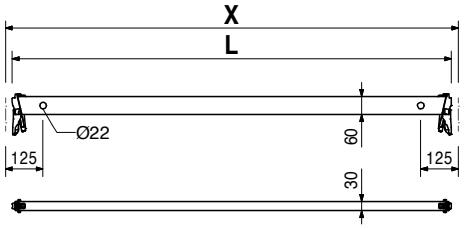
Item. no.	Weight kg	
101731	0.841	**Ledger-to-Ledger Coupler UHA** For connecting horizontal ledgers at right-angles.



			L	X
		Horizontal Ledger UH		
400017	2.700	**Horizontal Ledger UH 75**	704	750
401159	3.360	**Horizontal Ledger UH 100**	954	1,000
410347	4.020	**Horizontal Ledger UH 125**	1,204	1,250
400023	6.020	**Horizontal Ledger UH 200**	1,954	2,000
400025	7.340	**Horizontal Ledger UH 250**	2,454	2,500

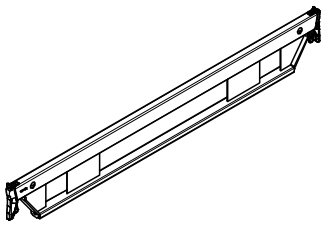
Note
With length marking for easier identification.
Horizontal Ledgers UH can be replaced by Horizontal Ledgers UH Plus.

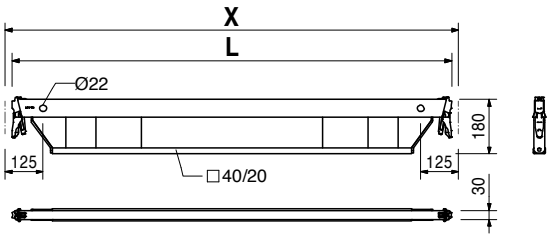




			L	X
		Heavy-Duty Horizontal Ledger UHV		
409108	14.800	**Heavy-Duty Horizontal Ledger UHV 200**	1,954	2,000
409109	18.000	**Heavy-Duty Horizontal Ledger UHV 250**	2,454	2,500

For high loads, e.g. in the case of material storage.



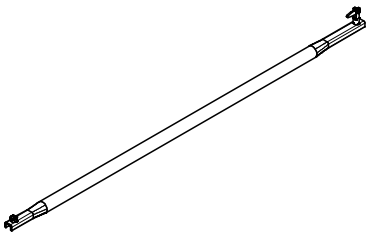


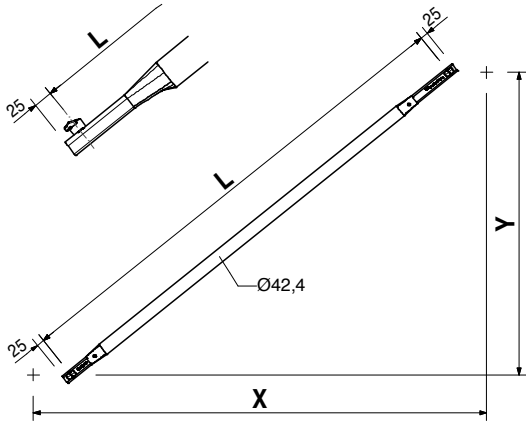
PERI UP Flex Staircase 100, 125

Item. no.	Weight kg		L	X	Y
		Ledger Brace UBL			
100059	5.510	**Ledger Brace UBL 200/100**	2,016	2,000	1,000
100063	6.640	**Ledger Brace UBL 250/100**	2,462	2,500	1,000
100061	7.150	**Ledger Brace UBL 200/200**	2,658	2,000	2,000
100065	8.050	**Ledger Brace UBL 250/200**	3,010	2,500	2,000

They are attached using holes in the horizontal ledgers.

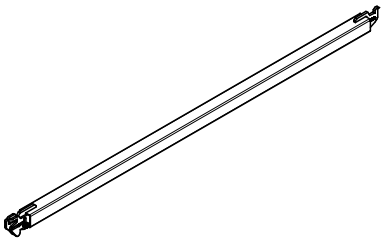
Note
With length marking for easier identification.

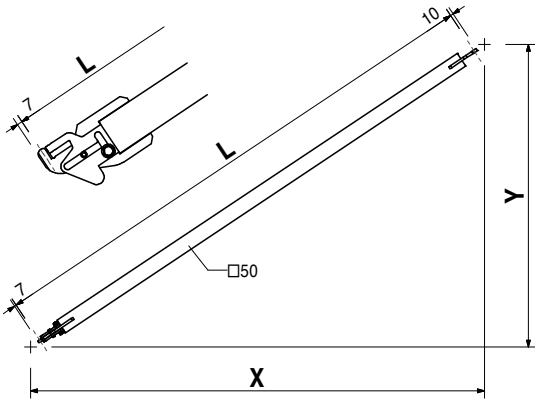




			L	X	Y
		Horizontal Brace UBH Flex			
114818	4.580	**Horizontal Brace UBH Flex 100/100**	1,335	1,000	1,000
114904	5.620	**Horizontal Brace UBH Flex 125/125**	1,689	1,250	1,250
114819	8.350	**Horizontal Brace UBH Flex 250/100**	2,620	2,500	1,000
114996	8.640	**Horizontal Brace UBH Flex 250/125**	2,720	2,500	1,250

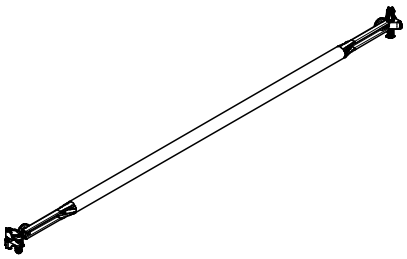
For horizontal bracing of towers.
Also for use beneath Decks UDI or UDG.

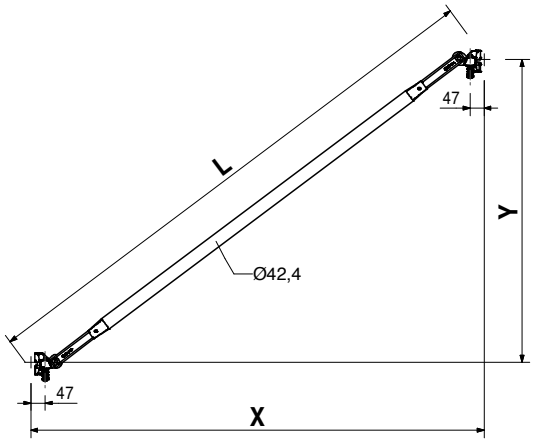




PERI UP Flex Staircase 100, 125

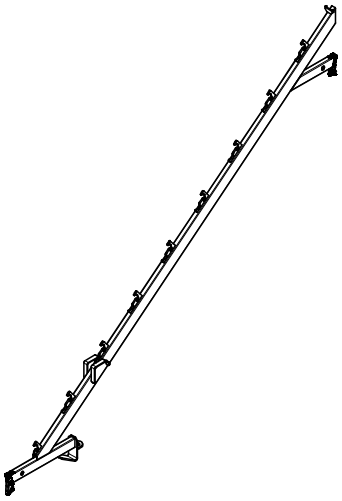
Item. no.	Weight kg		L	X	Y
		Node Brace UBK			
115354	5.210	**Node Brace UBK 125/100**	1,625	1,250	1,000
100574	9.300	**Node Brace UBK 250/200**	3,226	2,500	2,000

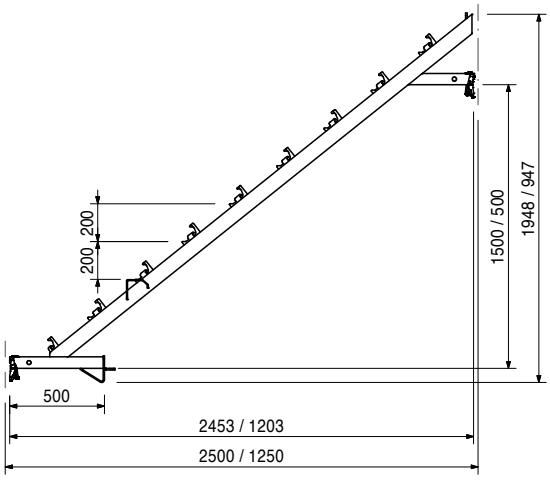




		Stair Stringers UA
114731	9.780	**Stair Stringer UA 125/100**
109219	15.800	**Stair Stringer UA 250/200**

Technical data
Permissible load 3.0 kN/m².

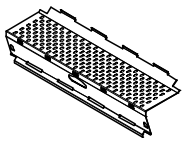


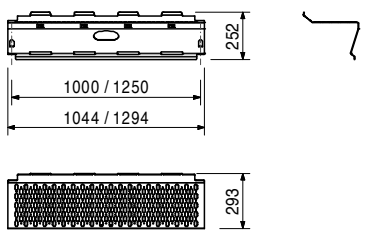


		Steps UAR
109198	7.390	**Step UAR 100**
114179	9.250	**Step UAR 125**

Step for Stair Stringer UA.
Non-slip due to perforated surface.

Technical data
Permissible load 3.0 kN/m².





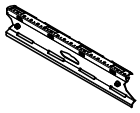
PERI UP Flex Staircase 100, 125

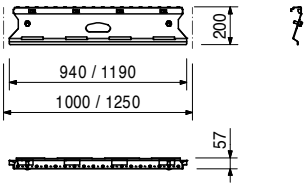
Item. no.	Weight kg	
		End Steps UAE
109208	5.610	**End Step UAE 100**
114180	6.590	**End Step UAE 125**

End Step for Stair Stringer UA. Secures all steps.

Technical data

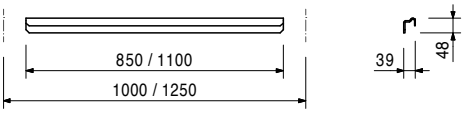
Permissible load 3.0 kN/m².





		Edge Profiles UH
114349	0.770	**Edge Profile UH 100**
114621	0.997	**Edge Profile UH 125**

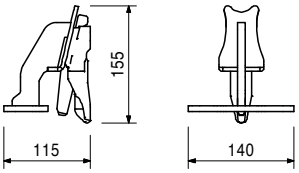
Assembly on Horizontal Ledger UH for anti-slip protection on the first step at start of staircases with Stair Stringer UA.



124266	1.230	**Spacer UA 76**

Note

Enables connection of Node Braces UBK as guard-rails with 76 mm distance to all components that cross each other.

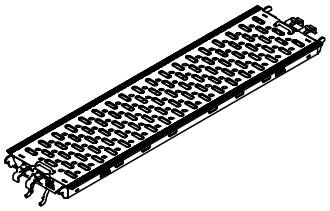


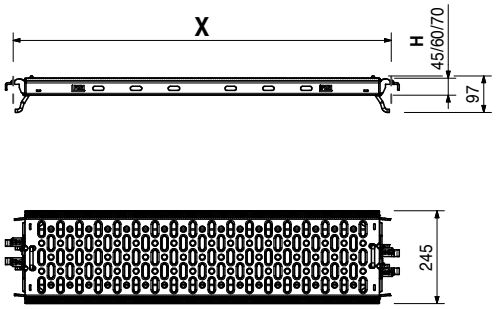
PERI UP Flex Staircase 100, 125

Item. no.	Weight kg				
		Steel Deck UDG-2 25	**X**	**perm. p [kN/m²]**
132479	3.330	**Steel Deck UDG-2 25 x 50**	500	6.0
132488	4.460	**Steel Deck UDG-2 25 x 75**	750	6.0
132492	5.580	**Steel Deck UDG-2 25 x 100**	1,000	6.0
132502	6.720	**Steel Deck UDG-2 25 x 125**	1,250	6.0
132505	7.860	**Steel Deck UDG-2 25 x 150**	1,500	6.0
132508	10.500	**Steel Deck UDG-2 25 x 200**	2,000	6.0
132511	12.900	**Steel Deck UDG-2 25 x 250**	2,500	4.5
132515	15.800	**Steel Deck UDG-2 25 x 300**	3,000	3.0

Length X: 500 - 1,500 with H of 45 mm
Length X: 2,000 - 2,500 with H of 60 mm
Length X: 3,000 with H of 70 mm

Note
Values correspond with EN 12811-1

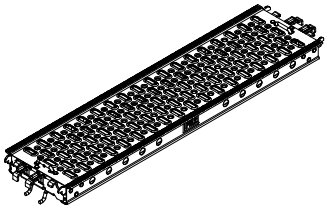


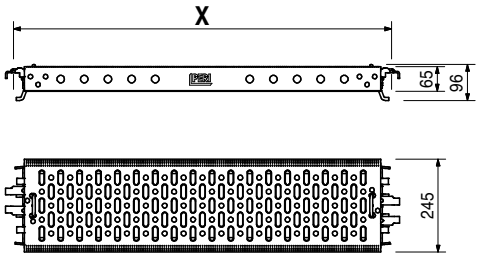


		Steel Decks UDG	**X**	**perm. p [kN/m²]**	**max. p [kN/m²]**
424118	6.630	**Steel Deck UDG 25 x 100**	1,000	6.0	40.0
424115	8.010	**Steel Deck UDG 25 x 125**	1,250	6.0	28.4
424109	12.200	**Steel Deck UDG 25 x 200**	2,000	6.0	10.9
423771	14.900	**Steel Deck UDG 25 x 250**	2,500	4.5	6.9

Fit onto Horizontal Ledgers UH.

Note
Values corresponding to EN 12811-1.
max. p = max. possible surface load without deflection restriction.





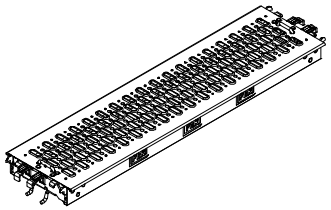
PERI UP Flex Staircase 100, 125

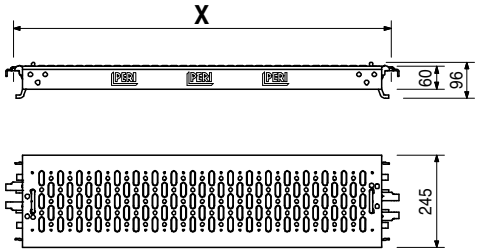
Item. no.	Weight kg	
		Industrial Steel Decks UDI
406092	6.950	**Industrial Steel Deck UDI 25 x 100**
406880	8.380	**Industrial Steel Deck UDI 25 x 125**
408380	12.700	**Industrial Steel Deck UDI 25 x 200**
408540	15.500	**Industrial Steel Deck UDI 25 x 250**

Fit onto Horizontal Ledgers UH.

X	perm. p [kN/m²]	max. p [kN/m²]
1,000	6.0	40.0
1,250	6.0	28.4
2,000	6.0	10.9
2,500	4.5	6.9

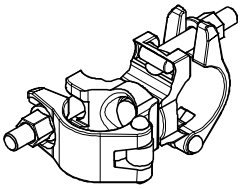
Note
Values corresponding to EN 12811-1.
max. p = < max. possible surface load without deflection restriction.

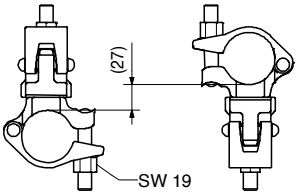




017010	1.400	**Swivel Coupling SW 48/48, galv.**

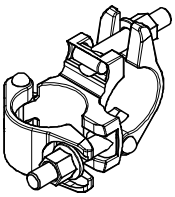
For scaffold tubes Ø 48 mm.

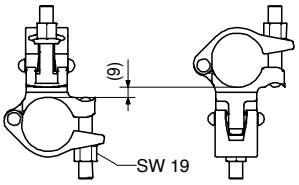




017020	1.120	**Standard Coupler RA 48/48, galv.**

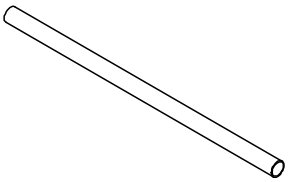
For scaffold tubes Ø 48 mm.

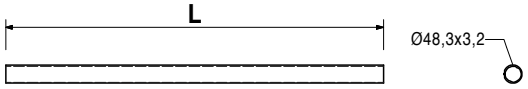




		Scaffold Tubes Steel Ø 48.3 x 3.2
026419	17.750	**Scaffold Tubes Steel Ø 48.3 x 3.2, L = 5.0 m**
026418	21.600	**Scaffold Tubes Steel Ø 48.3 x 3.2, L = 6.0 m**

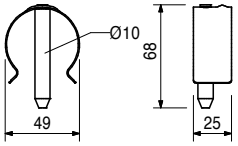
L
5,000
6,000



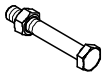


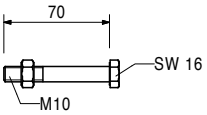
PERI UP Flex Staircase 100, 125

Item. no.	Weight kg	
111053	0.059	**Locking Pin Ø 48/57** As tension-proof connection of standards with a diameter of 48 up to 57 mm.

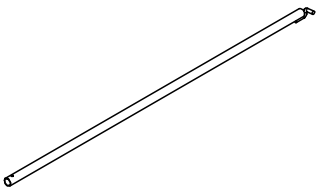


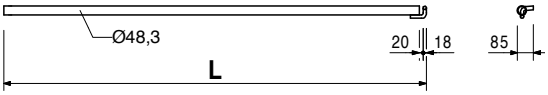
100719	0.060	**Bolt ISO 4014 M10 x 70-8.8** As tension-proof connection of standards at suspended scaffolds and lattice girders.





		Wall Tie UWT	**L**
100088	1.920	**Wall Tie UWT 45**	488
100093	5.870	**Wall Tie UWT 140**	1,438



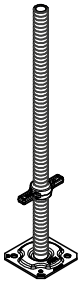


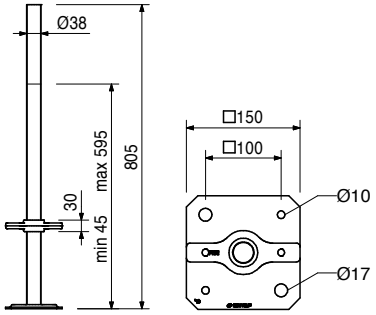
		Eyebolts UFE	**Note**
100693	0.169	**Eyebolt UFE 12/90**	With marking for screw-in depth.
100694	0.190	**Eyebolt UFE 12/120**	
100695	0.250	**Eyebolt UFE 12/190**	
		For assembly of the Wall Tie UWT. Required Wall Insert UFI 14.	

		Wall Insert UFI
100696	0.007	**Wall Insert UFI 14/70**
100697	0.009	**Wall Insert UFI 14/100**
100698	0.010	**Wall Insert UFI 14/135**

PERI UP Flex Staircase 100, 125

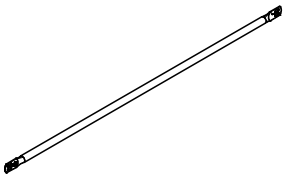
Item. no.	Weight kg		
100242	4.570	**Base Spindle UJB 38-80/55**	**Note** With captive yellow quick jack nut.

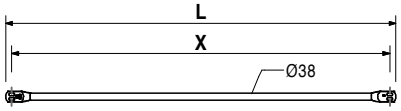




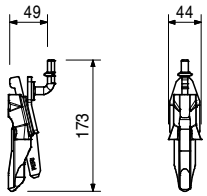
		Guardrails EPG	**L**	**X**
130195	2.480	**Guardrail EPG 150**	1,565	1,500
130197	3.280	**Guardrail EPG 200**	2,065	2,000
130199	4.090	**Guardrail EPG 250**	2,565	2,500
130201	4.890	**Guardrail EPG 300**	3,065	3,000

Note
With length marking for easier identification.





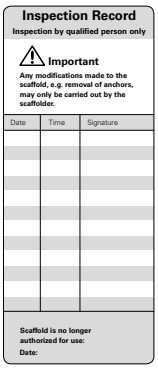
130562	0.623	**Guardrail Holder EPW** For mounting the Guardrails EPG to rosettes.

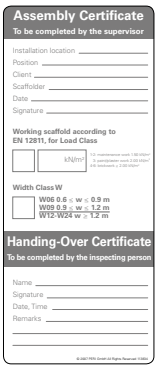


113832	0.035	**PERI UP Scaffold Tag** For cordoning off scaffolding areas not yet authorised for use. With the exception of inserting the PERI UP Assembly Certificates.

PERI UP Flex Staircase 100, 125

Item. no.	Weight kg		
		PERI UP Assembly Certificates	**Note**
113833	0.005	**PERI UP Assembly Certificate, D**	Front: Assembly certificate for the approval of scaffolding.
113834	0.005	**PERI UP Assembly Certificate, EX**	
113829	0.005	**PERI UP Assembly Certificate, F**	Back:
113835	0.005	**PERI UP Assembly Certificate, CDN**	Inspection record
113836	0.005	**PERI UP Assembly Certificate, ES**	
113837	0.005	**PERI UP Assembly Certificate, PT**	
113838	0.005	**PERI UP Assembly Certificate, PL**	
113839	0.005	**PERI UP Assembly Certificate, CZ**	
115739	0.005	**PERI UP Assembly Certificate, TR**	
115729	0.005	**PERI UP Assembly Certificate, SK**	
125180	0.005	**PERI UP Assembly Certificate, AUS/NZ**	
124052	0.005	**PERI UP Assembly Certificate, EST**	
124645	0.005	**PERI UP Assembly Certificate, FIN**	
117692	0.005	**PERI UP Assembly Certificate, LT**	
126647	0.005	**PERI UP Assembly Certificate, H**	
		Inserted into the PERI UP Scaffold Tag.	





PERI UP Flex – 2nd generation

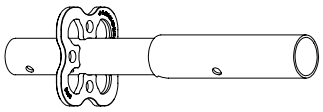
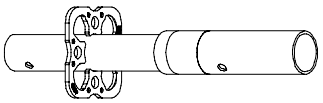
Comparison of components

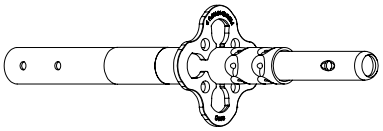
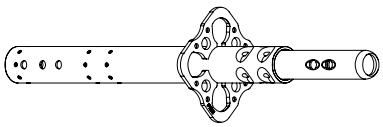
As part of ongoing product optimisation, the following components have been replaced by 2nd generation components.

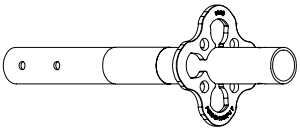
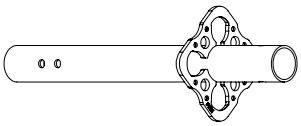
The following comparison tables describe the features of the 1st and 2nd generation.

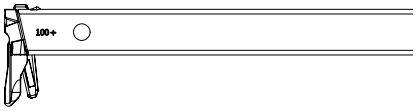
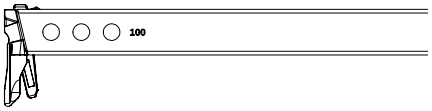
1st and 2nd generation components can be combined.

- The previous components are no longer available as new components.
- The optimised components are available under a new article number.
- There may be a difference between the load-bearing capacity of the individual components in the previous version and the new version.

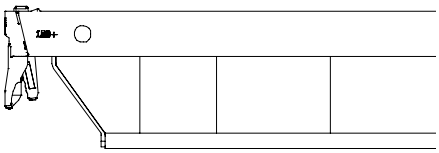
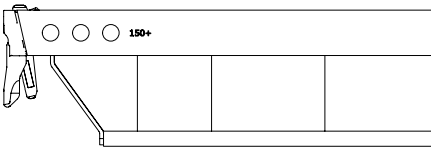
	Base Standard UVB 24 / 49	**Base Standard UVB 25 / 50**
		
Tube	RO 48.3 mm x **3.6 mm**	RO 48.3 mm x **3.6 mm**
Rosette	160 mm x 130 mm x 8 mm	152 mm x 120 mm x 6 mm
System height	24 / 49 cm	25 / 50 cm
Combinability	Geometrically and statically combinable in the system.	

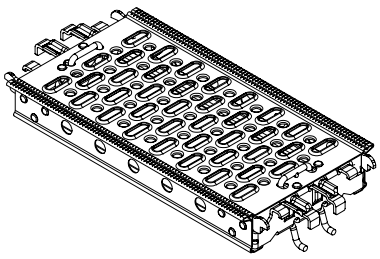
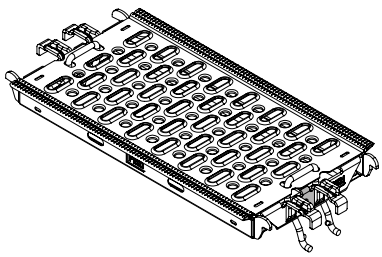
	Standard UVR	**Standard UVR-2**
		
Tube	RO 48.3 mm x **3.2 mm**	RO 48.3 mm x **2.7 mm**, embossed points on the bottom standard.
Tube-pin connection	2 rows, with 5 pinch points each	2 rows, with 4 pinch points each
Rosette	160 mm x 130 mm x 8 mm	152 mm x 120 mm x 6 mm
Hole for suspended scaffold (see "PERI UP components")	1 hole perm. F up to 20 kN when fixed 1x	2 holes perm. F up to 15 kN when fixed 1x perm. F up to 31 kN when fixed 2x
Marking	none	striped band at the top and bottom
Combinability	Geometrically and statically* combinable in the system. * The standard configurations in the Instructions for Assembly and Use only apply in conjunction with Horizontal Ledgers UH Plus / UH-2 and UHV Plus / UHV-2. * The load tables shown in the Instructions for Assembly and Use for the Heavy-Duty Prop HD and Shoring Tower Plus systems do not apply to use of the Standard UVR-2. Check the statics beforehand!	

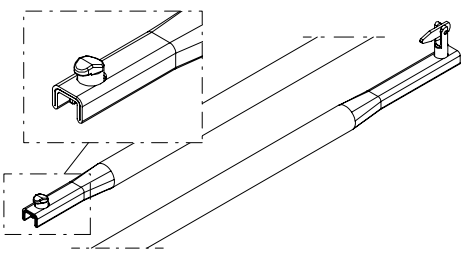
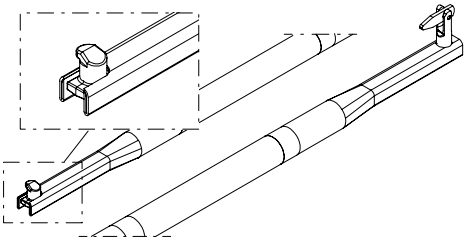
	Top Standard UVH	Top Standard UVH-2
		
Tube	RO 48.3 mm x **3.2 mm**	RO 48.3 mm x **3.2 mm**
Rosette	160 mm x 130 mm x 8 mm	152 mm x 120 mm x 6 mm
Hole for suspended scaffold (see "PERI UP components")	1 hole perm. F up to 20 kN when fixed 1x	2 holes perm. F up to 15 kN when fixed 1x perm. F up to 31 kN when fixed 2x
Combinability	Geometrically and statically combinable in the system.	

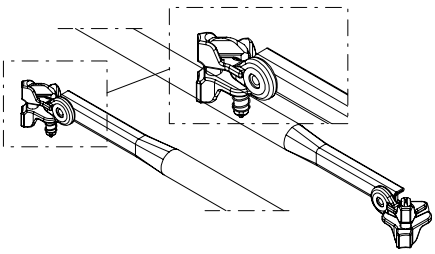
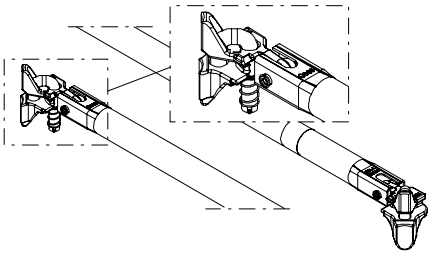
	Horizontal Ledger UH Plus	Horizontal Ledger UH-2
		
UBL assembly points	2 x 1, for assembly of a Ledger Brace UBL	2 x 3, for assembly of up to three Ledger Braces UBL When installing only one ledger brace preferably use the middle assembly point. Ledger Braces UBL can be mounted at very flat installation angles using the middle assembly point only. Check the geometry beforehand!
Combinability	Geometrically and statically combinable in the system.	

PERI UP Flex – 2nd generation

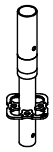
	Horizontal Ledger UHV Plus	Horizontal Ledger UHV-2
		
UBL assembly points	2 x 1, for assembly of a Ledger Brace UBL	2 x 3, for assembly of up to three Ledger Braces UBL When installing only one ledger brace preferably use the middle assembly point. Ledger Braces UBL can be mounted at very flat installation angles using the middle assembly point only. Check the geometry beforehand!
Combinability	Geometrically and statically combinable in the system.	

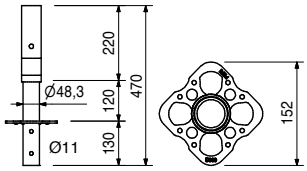
	Steel Deck UDG	Steel Deck UDG-2
		
Deck assembly	riveted and welded	welded
Profile height	65 mm, uniform	L 50 – 150: 45 mm L 200 – 250: 60 mm L 300 70 mm
Marking	without	coloured clip on the front side
Combinability	Geometrically and statically combinable in the system.	

	Ledger Brace UBL	Ledger Brace UBL-2
		
UBL Mounting Lug	points in the longitudinal direction	points in the transverse direction
Combinability	Geometrically and statically combinable in the system.	
Marking	none	Band at the top and bottom
Handling	Tilt in to install.	Swivel in to install (less lateral space required for installation).

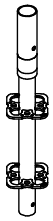
	Node Brace UBK	Node Brace UBK-2
		
Head piece connected to the diagonal tube	riveted to crimped tube	bolted to cast shaped component
Combinability	Geometrically and statically combinable in the system.	
Marking	none	Band at the top and bottom
Features	Galvanised heads	Yellow-coated heads

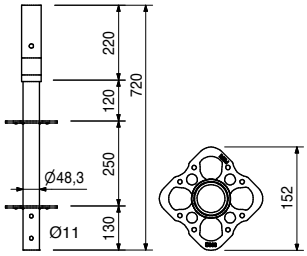
Article no.	Weight kg		
133499	2.270	**Base Standard UVB 25**	



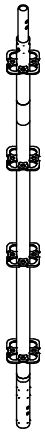


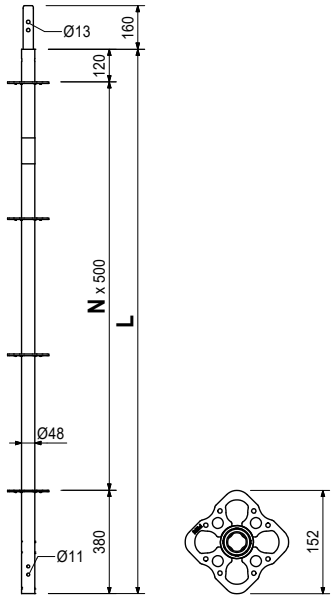
135187	3.590	**Base Standard UVB 50**	





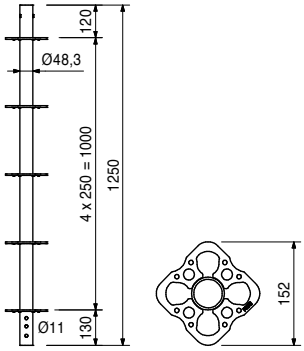
		Standard UVR-2	**L**
132219	2.480	**Standard UVR-2 50**	500
132224	4.340	**Standard UVR-2 100**	1,000
132229	6.180	**Standard UVR-2 150**	1,500
132234	8.030	**Standard UVR-2 200**	2,000
132239	11.700	**Standard UVR-2 300**	3,000





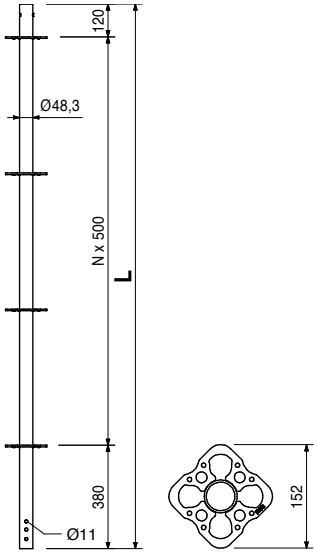
132196	6.060	**Top Standard UVH-2 125**	

Without pin for supporting head spindles. Reduces necessary spindle extensions with 25 cm rosette spacing.



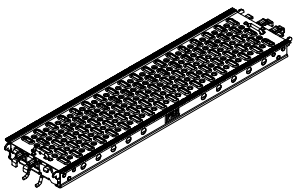
Article no.	Weight kg		L
		Top Standards UVH-2	
132123	2.090	**Top Standard UVH-2 50**	500
132194	4.210	**Top Standard UVH-2 100**	1,000
132198	6.310	**Top Standard UVH-2 150**	1,500
132200	8.420	**Top Standard UVH-2 200**	2,000
100002	10.500	**Top Standard UVH-2 250**	2,500

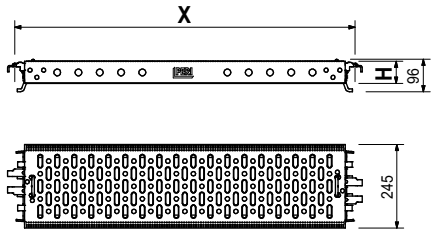
Without pin for supporting head spindles.



Article no.	Weight kg		X	perm. p [kN/m²]	H
		Steel Decks UDG-2 25			
132479	3.340	**Steel Deck UDG-2 25X 50**	500	6.0	45
132483	4.100	**Steel Deck UDG-2 25X 67**	670	6.0	45
132488	4.470	**Steel Deck UDG-2 25X 75**	750	6.0	45
132492	5.590	**Steel Deck UDG-2 25X100**	1,000	6.0	45
132502	6.730	**Steel Deck UDG-2 25X125**	1,250	6.0	45
132505	7.870	**Steel Deck UDG-2 25X150**	1,500	6.0	45
132508	10.500	**Steel Deck UDG-2 25X200**	2,000	6.0	60
132511	12.900	**Steel Deck UDG-2 25X250**	2,500	4.5	60
132515	15.800	**Steel Deck UDG-2 25X300**	3,000	3.0	70

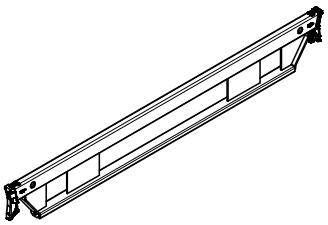
Note
Values correspond with EN 12811-1

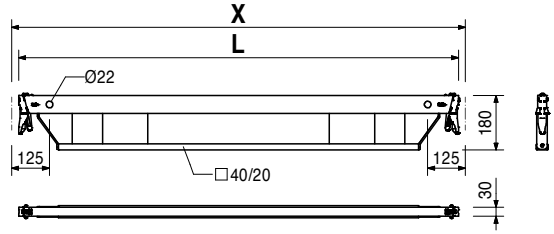




Article no.	Weight kg		L	X
		Horizontal Ledger UHV-2		
137020	9.410	**Horizontal Ledger UHV-2 150**	1,454	1,500
137025	12.700	**Horizontal Ledger UHV-2 200**	1,954	2,000
137030	15.200	**Horizontal Ledger UHV-2 250**	2,454	2,500
137035	18.500	**Horizontal Ledger UHV-2 300**	2,954	3,000

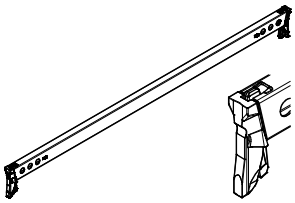
For high loads, e.g. in the case of material storage.

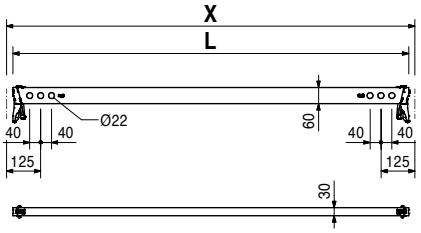




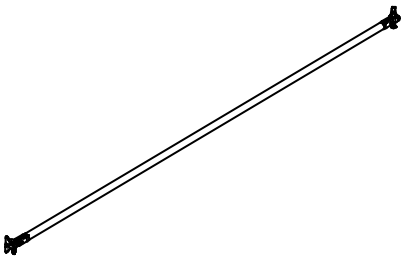
Article no.	Weight kg	Horizontal Ledger UH-2	L	X
131995	1.40	**Horizontal Ledger UH-2 25**	204	250
133900	1.50	**Horizontal Ledger UH-2 33**	284	330
131998	2.03	**Horizontal Ledger UH-2 50**	454	500
133903	2.48	**Horizontal Ledger UH-2 67**	624	670
132213	2.69	**Horizontal Ledger UH-2 75**	704	750
132004	3.79	**Horizontal Ledger UH-2 100**	954	1,000
132007	4.58	**Horizontal Ledger UH-2 125**	1,204	1,250
132010	4.68	**Horizontal Ledger UH-2 150**	1,454	1,500
132013	5.34	**Horizontal Ledger UH-2 175**	1,704	1,750
132016	6.00	**Horizontal Ledger UH-2 200**	1,954	2,000
132019	6.66	**Horizontal Ledger UH-2 225**	2,204	2,250
132025	7.32	**Horizontal Ledger UH-2 250**	2,454	2,500
132022	8.65	**Horizontal Ledger UH-2 300**	2,954	3,000

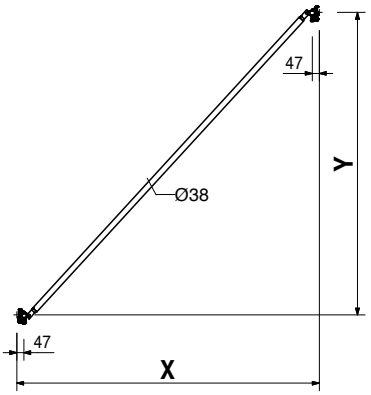
Note
With length marking for easier identification.





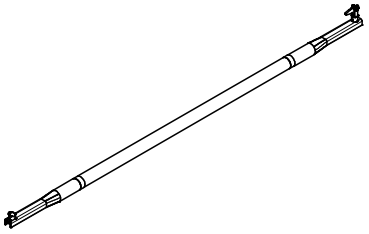
Article no.	Weight kg	Node Brace UBK-2	L	X	Y
133418	4.96	**Node Brace UBK-2 75/200**	2,190	750	2,000
133421	5.11	**Node Brace UBK-2 100/200**	2,285	1,000	2,000
133424	3.88	**Node Brace UBK-2 125/100**	1,625	1,250	1,000
133427	5.30	**Node Brace UBK-2 125/200**	2,401	1,250	2,000
133430	4.22	**Node Brace UBK-2 150/100**	1,821	1,500	1,000
133433	4.82	**Node Brace UBK-2 150/150**	2,152	1,500	1,500
133436	5.53	**Node Brace UBK-2 150/200**	2,539	1,500	2,000
133439	4.97	**Node Brace UBK-2 200/100**	2,246	2,000	1,000
133442	5.47	**Node Brace UBK-2 200/150**	2,521	2,000	1,500
133445	6.08	**Node Brace UBK-2 200/200**	2,860	2,000	2,000
133448	5.77	**Node Brace UBK-2 250/100**	2,696	2,500	1,000
133451	6.19	**Node Brace UBK-2 250/150**	2,930	2,500	1,500
133454	6.72	**Node Brace UBK-2 250/200**	3,226	2,500	2,000
133457	6.60	**Node Brace UBK-2 300/100**	3,131	3,000	1,000
133460	6.96	**Node Brace UBK-2 300/150**	3,356	3,000	1,500
133463	7.42	**Node Brace UBK-2 300/200**	3,625	3,000	2,000

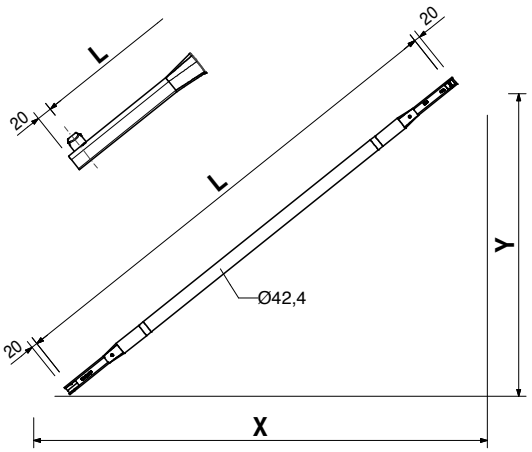




PERI UP Flex Core Components

Article no.	Weight kg	Ledger Braces UBL-2	L	X	Y
132771	2.12	**Ledger Brace UBL-2 100/ 50**	901	1,000	500
132773	2.81	**Ledger Brace UBL-2 100/100**	1,250	1,000	1,000
132775	3.66	**Ledger Brace UBL-2 100/150**	1,677	1,000	1,500
132777	4.58	**Ledger Brace UBL-2 100/200**	2,136	1,000	2,000
132779	3.01	**Ledger Brace UBL-2 150/ 50**	1,347	1,500	500
132781	3.51	**Ledger Brace UBL-2 150/100**	1,601	1,500	1,000
132783	4.21	**Ledger Brace UBL-2 150/150**	1,953	1,500	1,500
132785	5.02	**Ledger Brace UBL-2 150/200**	2,358	1,500	2,000
132787	5.31	**Ledger Brace UBL-2 175/200**	2,500	1,750	2,000
132789	3.95	**Ledger Brace UBL-2 200/ 50**	1,820	2,000	500
132791	4.34	**Ledger Brace UBL-2 200/100**	2,016	2,000	1,000
132793	4.92	**Ledger Brace UBL-2 200/150**	2,305	2,000	1,500
132795	5.62	**Ledger Brace UBL-2 200/200**	2,658	2,000	2,000
132797	4.43	**Ledger Brace UBL-2 225/ 50**	2,062	2,250	500
132808	4.78	**Ledger Brace UBL-2 225/100**	2,236	2,250	1,000
132810	5.96	**Ledger Brace UBL-2 225/200**	2,829	2,250	2,000
132812	5.23	**Ledger Brace UBL-2 250/100**	2,462	2,500	1,000
132814	5.71	**Ledger Brace UBL-2 250/150**	2,705	2,500	1,500
132816	6.32	**Ledger Brace UBL-2 250/200**	3,010	2,500	2,000
132827	5.90	**Ledger Brace UBL-2 300/ 50**	2,795	3,000	500
132829	6.16	**Ledger Brace UBL-2 300/100**	2,926	3,000	1,000
132831	6.57	**Ledger Brace UBL-2 300/150**	3,133	3,000	1,500
132833	7.10	**Ledger Brace UBL-2 300/200**	3,400	3,000	2,000

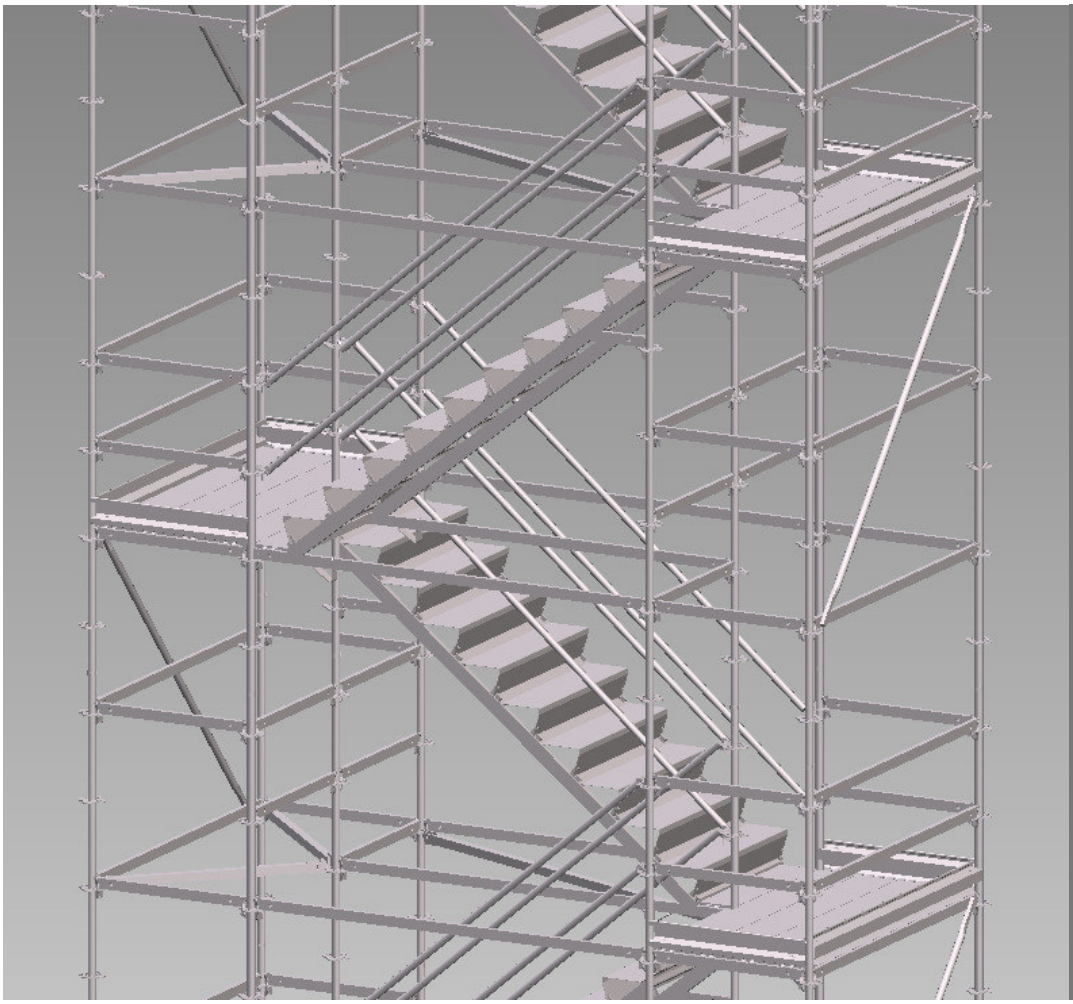


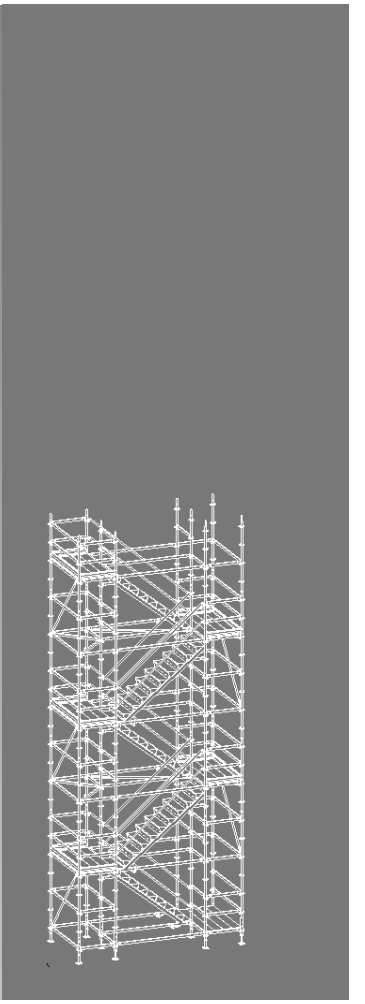


PERI UP Flex

Staircase 100 and 125 with Deck UDG

Instructions for Assembly and Dismantling – Short lift system to NASC SG4:15 – Edition 01 | 2019





Amendment Log		
Version	Details	Issue Date
0	First Issue	Jan. 2019

Content

Overview

Key

Pictogram | Definition


Safety Instructions


Note


Visual check


Tip

Dimensional specifications

Dimensions are specified in mm. Other units of measurement (cm) are used in product descriptions.

Conventions

- Instructions are numbered in sequence: 1. 2. 3. etc.
- Components are labelled with numbers corresponding to the overview drawing and are referenced within the text in brackets thus (1).
- Multiple component numbers indicating alternatives are represented with a slash: 1 / 2 etc.

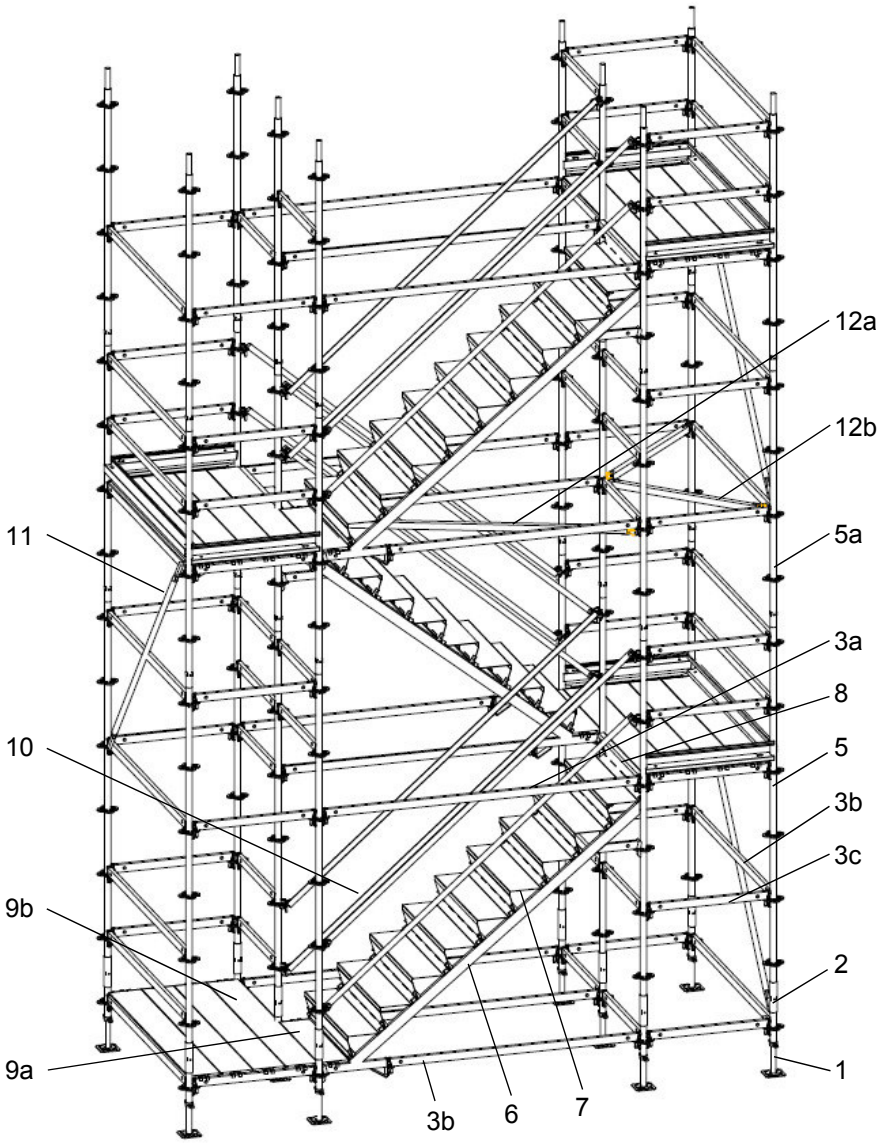
Arrows

→ Arrows represent an action

Presentational reference:

The illustrations on the front cover of these instructions are intended to be system representations only. The assembly steps presented are examples using the illustrated component sizes. They are also valid for alternative component sizes.

Overview



Components:

1. Adjustable Base Plate UJB
2. Base Standard UVB 24
3a. Ledger UH 250, UH 250 Plus*
3b. Ledger UH 200, UH 200 Plus*
3c. Ledger UH 100, UH 100 Plus*
4. Ledger UH 125, UH 125 Plus* (for Stair Tower 125)
5. Standard UVR 300
5a. Standard UVR 200
6. Stair Stringer UA 250/100
7. Stair Step UAR 100
7a. Stair Step UAR 125 (for Stair Tower 125)
8. End Step UAE 100

*Ledger UH may be replaced by Ledger UH Plus
**Steel Deck UDG may be replaced by Industrial Deck UDI

8a. End Step UAE 125
9a. Industrial Deck UDG 25x100
9b. Industrial Deck UDG 25x200
9c. Industrial Deck UDG 25x125 (for Stair Tower 125)
9d. Industrial Deck UDG 25x250 (for Stair Tower 125)
10. Node Brace UBK 250/200
11a. Ledger Brace UBL 200/200
11b. Ledger Brace UBL 250/200 (for Stair Tower 125)
12a. H-Brace UBH Flex 250/100
12b. H-Brace UBH Flex 100/100
12c. H-Brace UBH Flex 250/125 (for Stair Tower 125)
12d. H-Brace UBH Flex 125/125 (for Stair Tower 125)
13. Toeboard UPY 100
14. Toeboard UPY 200

Introduction

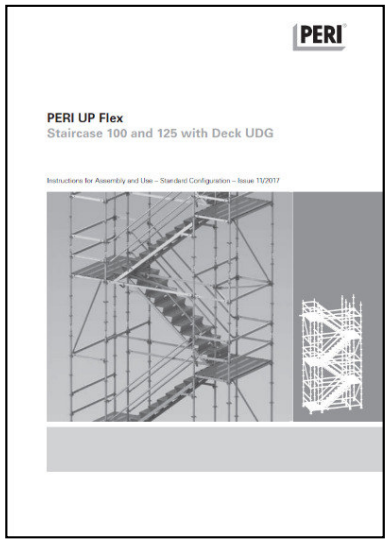
Intended use

Product description

These Instructions for Assembly and Dismantling are supplementary to the PERI UP Flex Staircase 100 and 125 with Deck UDG Assembly Instructions for Standard Configuration. All notes and data contained therein remain valid.

They describe the configuration for stair towers as a means of access for temporary work to be carried out on working areas situated above ground level.

The assembly and dismantling sequences describe a short-lift system of work in compliance with NASC SG4:15 Preventing Falls in Scaffolding Operations.



Presentational reference

The illustrations indicate the sequences for one bay size option. They are valid for both 1.00m. and 1.25m. bay options.

Components highlighted in red indicate temporary installed components removed before completion of the tower.

Safety considerations

Personal Protection

Ensure persons are clipped to suitable anchor point before moving on and off temporary platforms.

For the scaffolds in this manual, safe connection points are:

- Any Rosette within a completed scaffold lift.
- Any Rosette up to 1m above a top platform level.
- Any Ledger connected between two uprights within a completed scaffold lift.
- Any Ledger connected between two uprights up to 1m above a top platform level.

Inspecting the anchoring

All anchor connections to the supporting structure should be tested in accordance with NASC TG4:17 Anchoring Systems for Scaffolding.

A – Assembly and Dismantling

A1 Assembling the base

Erecting the scaffold must follow the sequence described below!

A1.1 Load distributing base area

Always begin erecting at the highest point, preferably at an internal corner.

Settlement must be avoided! The scaffold must only be erected on suitable distribution plates on ground or structure capable of withstanding all imposed loads!

Lay the Ledgers UH 250 (**3a**), Ledgers UH 200 (**3b**) and Ledgers UH 100 (**3c**) down to determine the length of the surface to be scaffolded. This will fix the distance between the Adjustable Base Plates UJB (**1**)

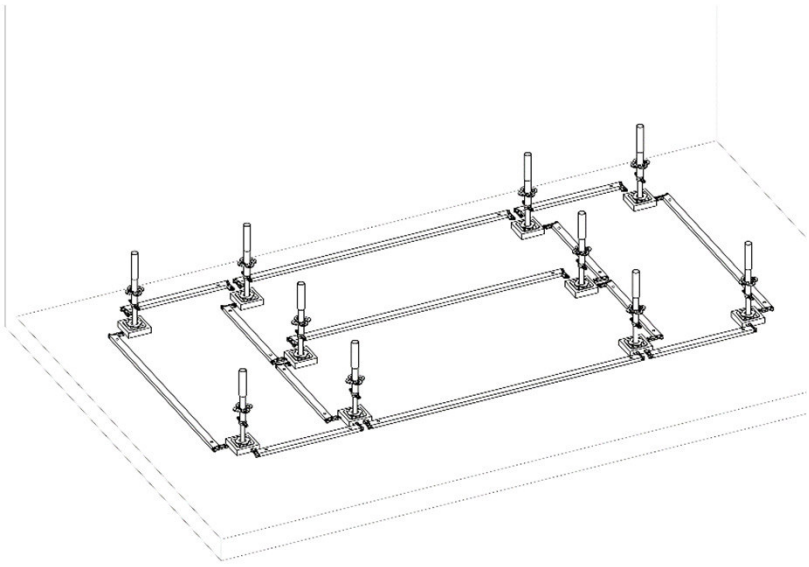


Fig.A1-1

A1.2 Adjustable Base Plates UJB

Position Adjustable Base Plates (**1**) at the ends of the Ledgers UH 250 (**3a**), Ledgers UH 200 (**3b**) & Ledgers UH 100 (**3c**).

Adjustable Base Plates UJB 38-50/30 with red handles have a maximum extension of 355mm to top of collar handle. Adjustable Base Plates UJB 38-80/55 with yellow handles have a maximum extension of 595 mm. to top of collar handle. Check with PERI for suitability of use.

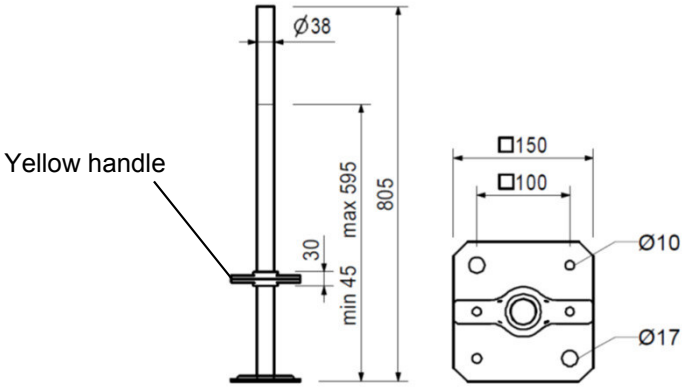


Fig.A1-2 **UJB 38-80/55**

Base Spindles TR 38-70/50, without coloured handles, may be used instead of Adjustable Base Plates UJB (**1**). Extension range = 47mm – 535mm to top of collar handle.

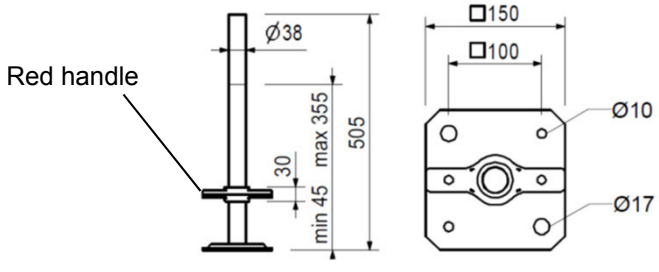


Fig.A1-3 **UJB 38-50/30**

A1.3 Changes in base level

Steps, slopes and changes in level can be accommodated using adjustment of the Adjustable Base Plates / Base Spindles.

A1.4 Base Standard UVB

Place Base Standards UVB 24 (**2**) over the Adjustable Base Plates UJB (**1**) and position at the required distance from the wall. Ensure all UVB Ø11 holes are aligned in same direction.

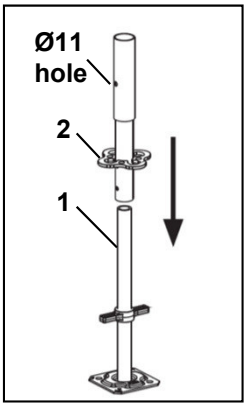


Fig.A1-4

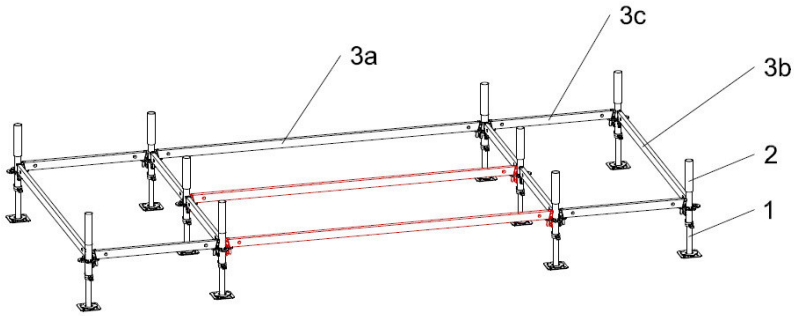


Fig.A1-5

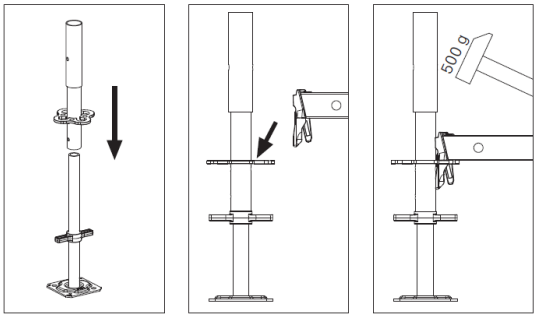


Fig.A1-6

A1.5 Ledger UH & Base Decks

Form a base frame by connecting the Base Standard UVB 24 (**2**) with the Ledger UH 250 (**3a**), Ledger UH 200 (**3b**) and the Ledger UH 100 (**3c**).

Two red Ledgers UH 250 (**3a**) are Temporary, they will be removed later.

Ensure all Ledgers UH are level by adjusting the Adjustable Base Plates (**1**).

Place Steel Decks UDG 200 (**9b**) on the Ledgers UH 100 (**3c**) as an assembly aid to check squareness.

Four red Decks UDG 25x200 (**9b**) are Temporary, they will be removed later.

Do not secure Ledger wedges at this stage

The decks used at the base are an aid to erection only, they may be removed later.

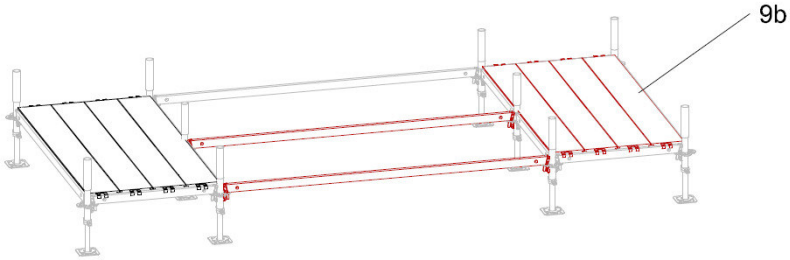


Fig.A1-7

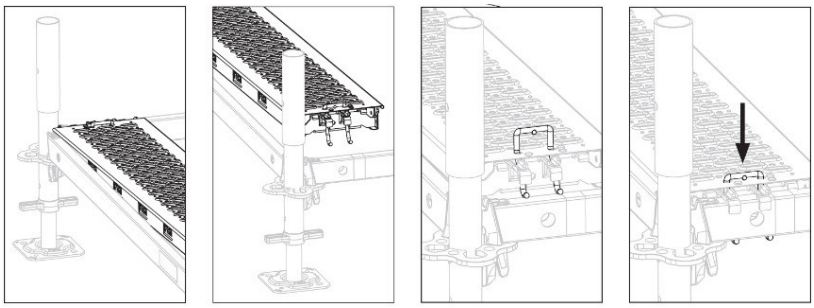


Fig.A1-8

A2 Assembling the first level

A2.1 Vertical Standards UVR

PERI recommend using UVR 300 (**5**) at the first level.

Other combinations of standards (e.g. UVR 200 inside with UVR 300 outside) are structurally acceptable, but the customer must ensure safe method of erection & striking.

Fix UBK 250/200 (**10**) to the uppermost Rosette of 2 No UVR 300 (**5**) shown as pre-assembly.

Insert Vertical Standards UVR 300 (**5**) into the Base Standards UVB (**2**) ensuring alignment of the Ø11 holes.

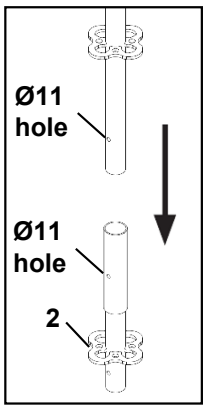


Fig.A2-1

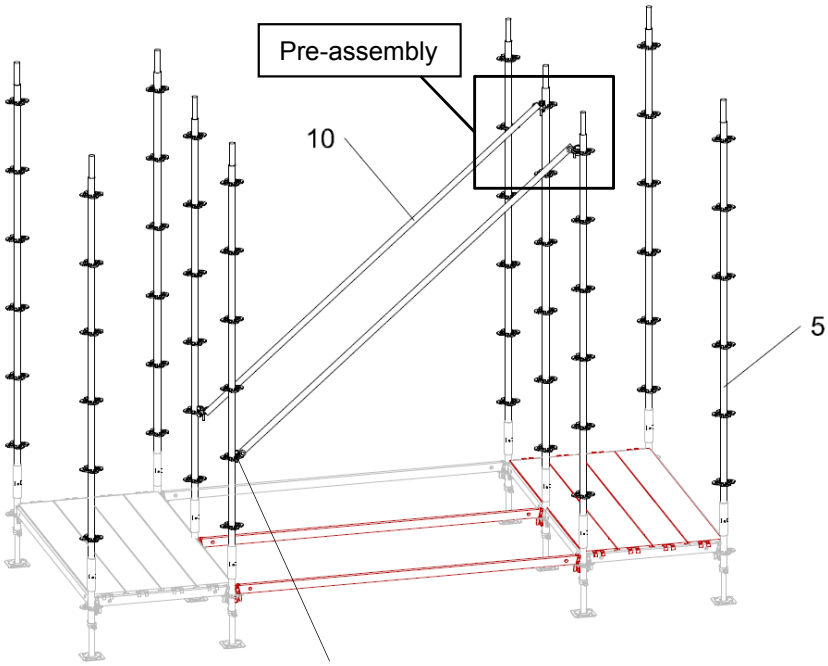


Fig.A2-2

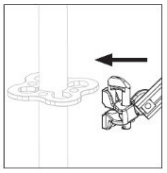


Fig.A2-2a

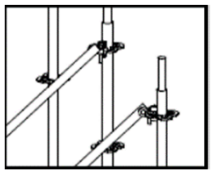


Fig.A2-2b

A2.2 First level Ledgers UH

Attach UH Ledgers (**3b, 3c**) to the Rosette on the Vertical Standards UVR (**5**), then securely fix all wedges at UVB level using a 500g hammer.

Place provisional Ledgers UH 100 (**3c**) shown in red, they will be removed later.

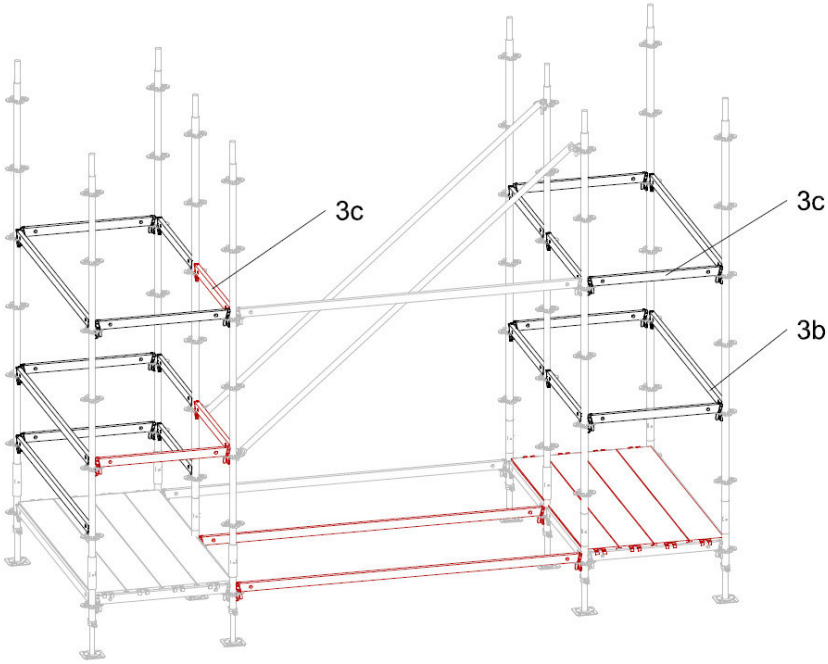


Fig.A2-3

A2.3 Second level Ledgers UH and guardrails

Place Steel Decks UDG 200 (**9b**) on Ledgers 100 (**3c**).

Attach UH Ledgers (3b, 3c) to the Rosett on the Vertical Standards UVR (5), then securely fix all wedges at UVB level using a 500g hammer.

Place provisional Ledgers UH 100 (3c) shown in red, they will be removed later.

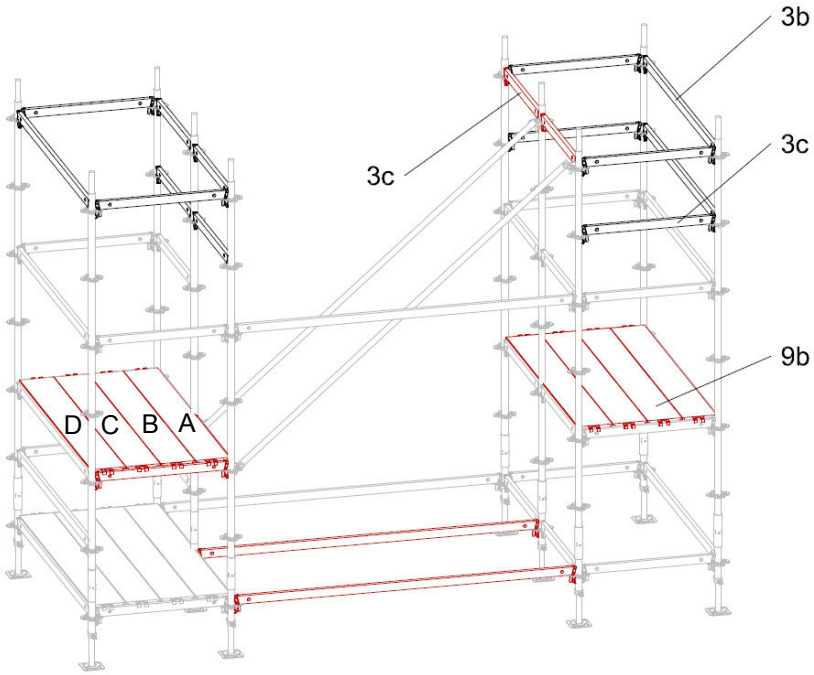


Fig.A2-4

A2.4 Stair Stringers & Decks

Remove provisional red Ledger UH 250 (**3a**) and attach Stair Stringer UA (**6**) and UH 200 (**3b**). (Fig A2-5)

Install Steel Deck UDG 100 (**9a**) onto stair stringers UA.

Insert UBL 200/200 (**11a**) into the Ledgers UH 200 (**3b**).

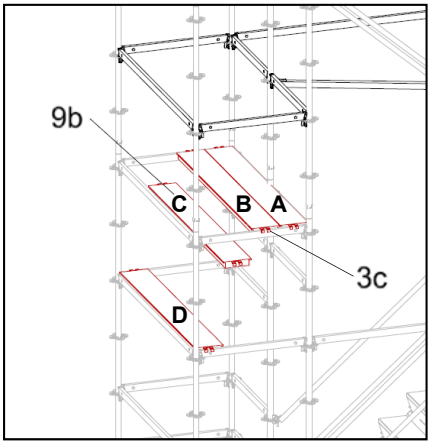


Fig.A2-5a

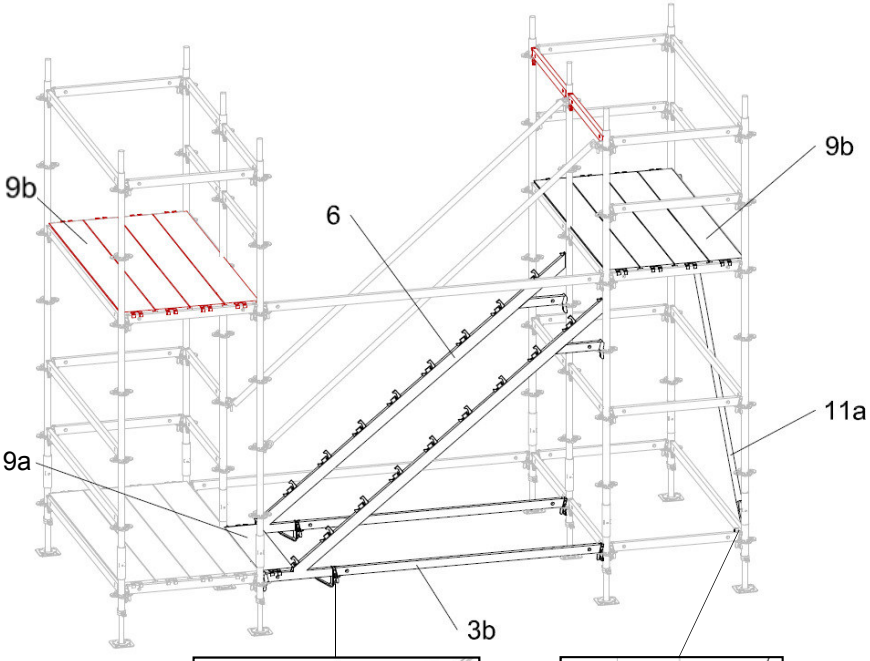


Fig.A2-5

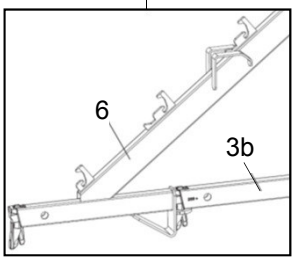


Fig.A2-5b

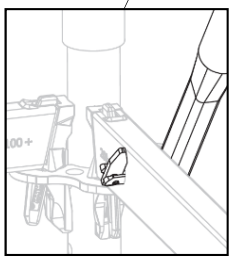


Fig.A2-5c

Wear a harness clipped to an approved attachment point at all stages. From a standing position on Decks D & C, reposition Steel Decks UDG 200 (**9b**) A & B up 1m on Ledgers 100 (**3c**). From a seating position on Decks A & B, place Deck C at the opposite end of the Ledger 100 (**3c**). Then from a standing position insert Deck D.

A2.5 Stairs Steps

Place first stair step UAR (**7**) with the riser on the deck.

Move step forward to the pins on the stringer. Rotate stair step towards the stringer.

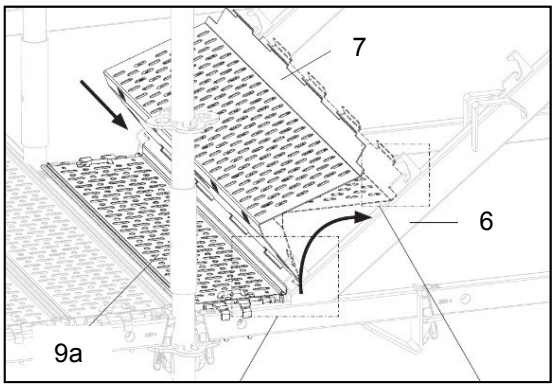


Fig.A2-7a

Position the second step (7) with the front side on the first step. Push the step forwards into the support of the Stair Stringers UA (6). The upturned edges engage in the slits. (Fig. A2.7b)

Turn the step upwards. The slits support the upturned edges and connect both steps. The top of the step rests against the Stair Stringers UA. (Fig. A2.7c)

Repeat procedure up to the last step.

Lift the last step (**7**) slightly out of the holder. Horizontally position End Step UAE (**8**) on the last step (**7**). (Fig. A2.7d)

The upturned edges engage in the slits. The End Step UAE (8) and the last step are wedged together.

Pull back the End Step UAE (**8**) together with the last step, and then swivel up. End Step UAE (**8**) engages on the Ledger. Last step engages in the Stair Stringers UA (**6**).

Last stair step is secured by tightening of the bolts on the stringer (**8**).

A2.6 Guardrails

Attach UBK 250/200 (**10**) as intermediate guardrails and remove temporary Ledger UH 100 (**3c**) above stairs.

First lift completed.

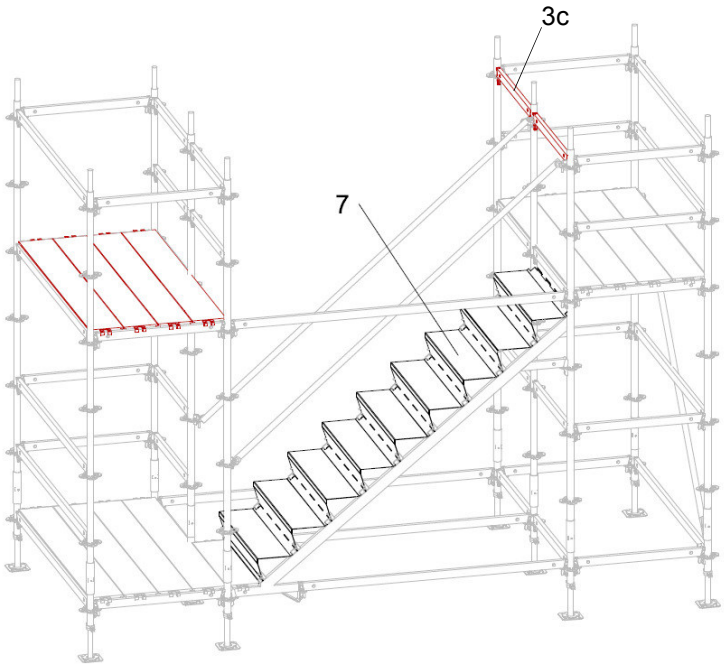


Fig.A2-7

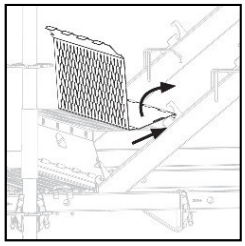


Fig.A2-7b

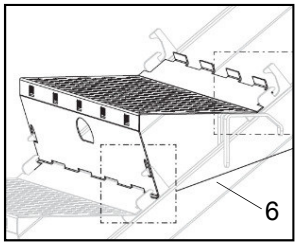


Fig.A2-7c

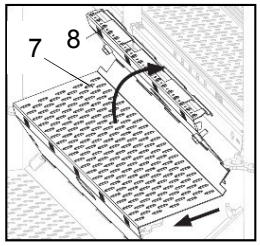


Fig.A2-7d

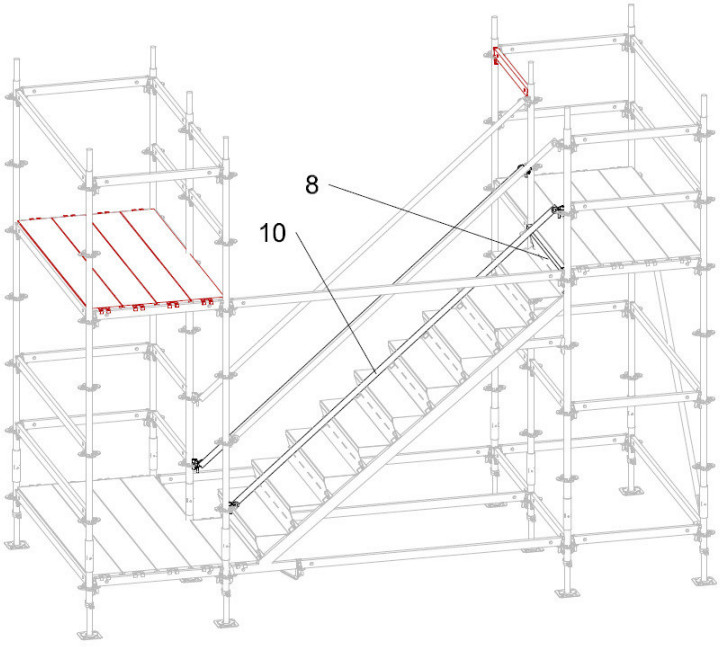


Fig.A2-8

A3 Assembling additional levels

All additional levels, except for the top level repeat the following steps.

A3.1 Vertical Standards UVR

PERI recommend using UVR 200 (**5a**) at the additional levels.

Other combinations of standards (e.g. UVR 200 inside with UVR 300 outside) are structurally acceptable, but the customer must ensure safe method of erection & striking.

Fix UBK 250/200 (**10**) to the uppermost Rosette of 2 No UVR 200 (**5a**) shown as pre-assembly.

Insert Vertical Standards UVR 200 (**5a**) into the lower Standards UVR ensuring alignment of the Ø11 holes.

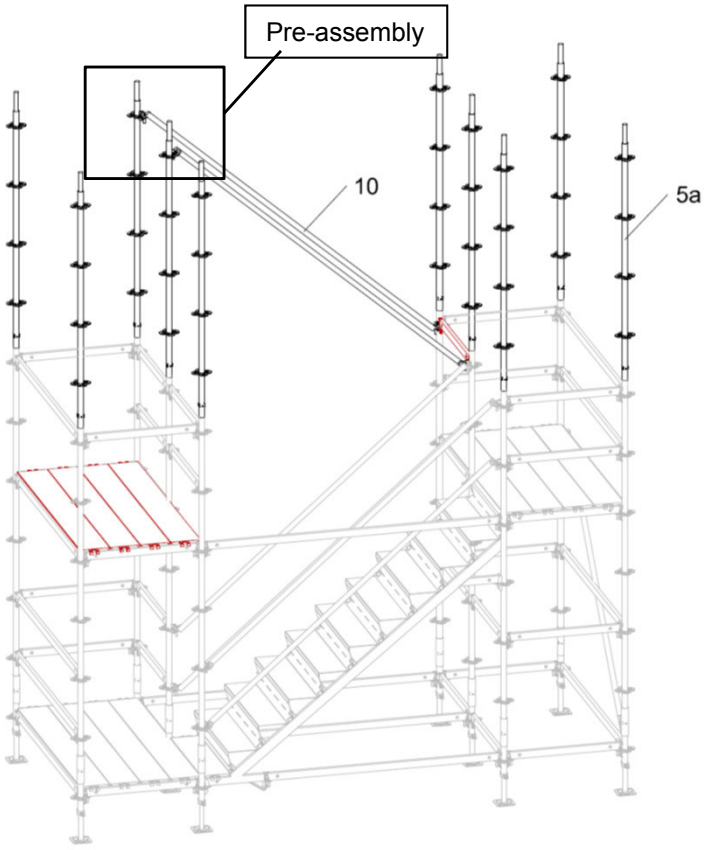


Fig.A3-1

A3.2 First level Ledgers UH and UBH

Attach UH Ledgers (**3b, 3c**) to the Rosett on the Vertical Standards UVR (**5**), then securely fix all wedges at UVB level using a 500g hammer.

Place provisional Ledgers UH 100 (**3c**) shown in red, it will be removed later.

Place Horizontal Brace UBH 250/200 (**12a**):

Attach hook in the round hole of the rosette. (Fig. A3.2a)

On the opposite side of the Horizontal Brace, unlock the lock and pull back the slider. Attach the hook from below.

When pushing the slider forward, the securing device drops down and holds the Horizontal Brace UBH. (Fig. A3.2b)

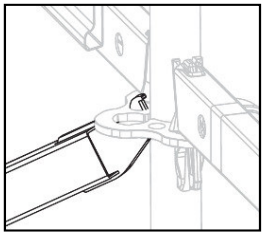


Fig.A3-2a

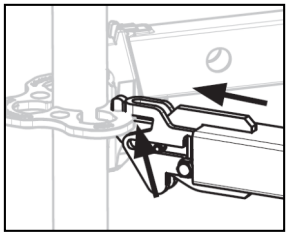


Fig.A3-2b

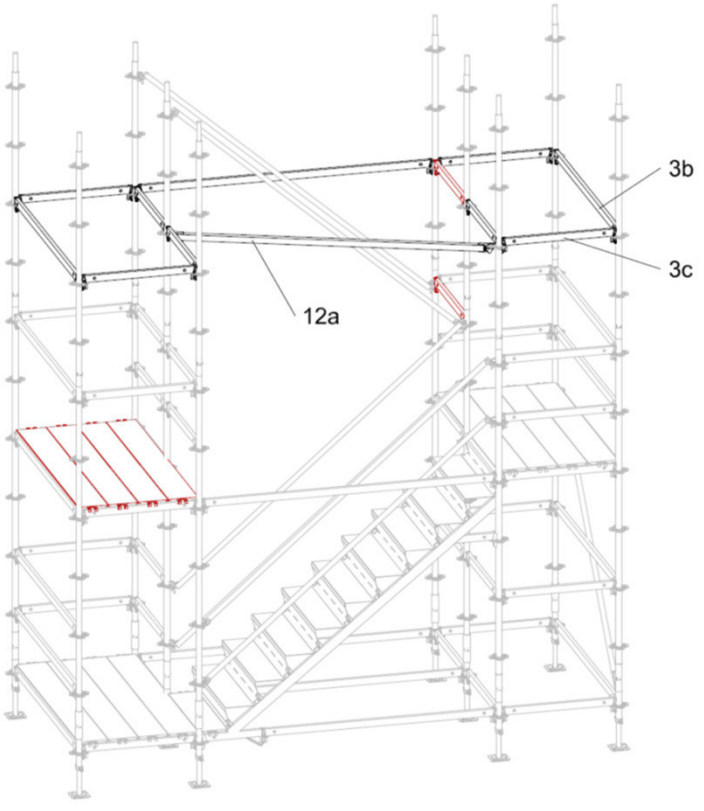


Fig.A3-2

A3.3 Second level Ledgers UH and guardrails

Place Steel Decks UDG 200 (**9b**) on Ledgers 100 (**3c**).

Attach UH Ledgers (**3b, 3c**) to the Rosette on the Vertical Standards UVR (**5**), then securely fix all wedges at UVB level using a 500g hammer.

Place provisional Ledgers UH 100 (**3c**) shown in red, they will be removed later.

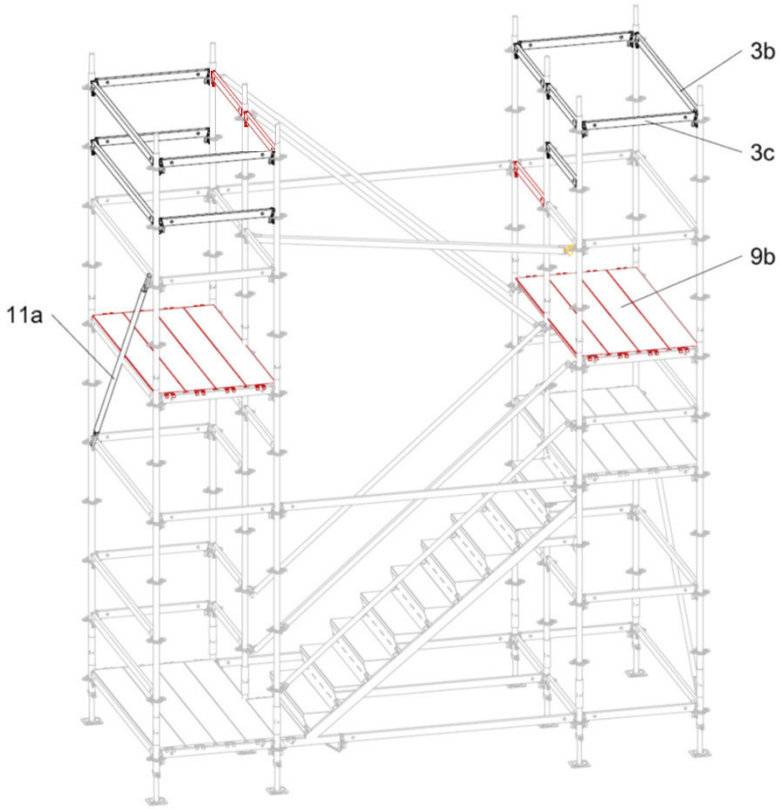


Fig.A3-3

A3.4 H-Braces UBH

Attach Horizontal Braces UBH 100/100 (**12b**) before next stage.

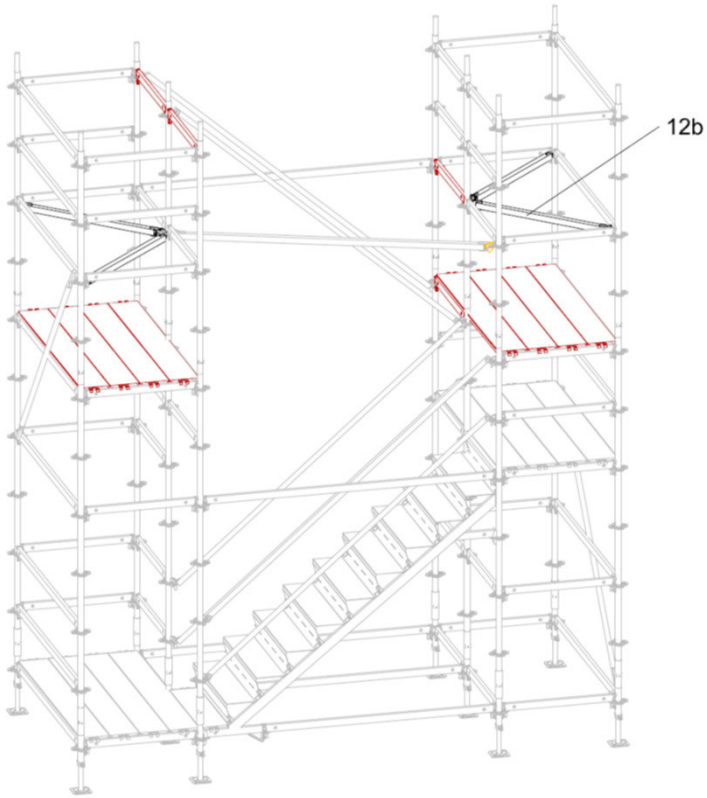


Fig.A3-4

A3.5 Decks level

Reposition Steel Decks UDG 300 (**9b**) to position shown over UBH 100/100 (**12b**).

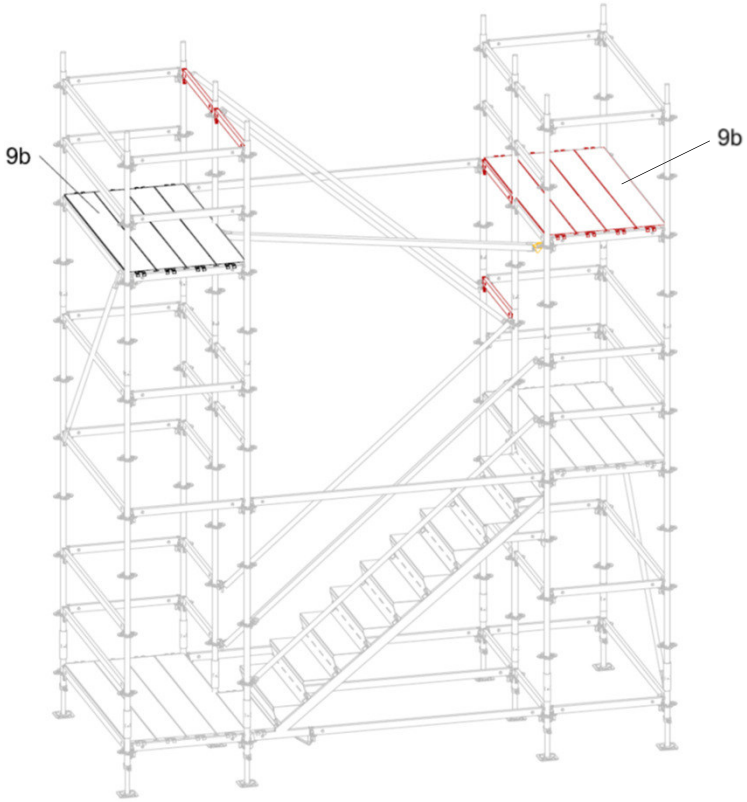


Fig.A3-6

A3.6 Stair Stringers. Steps and Stop

Attach Stair Stringer UA (**6**) and UH 200 (**3b**). (Fig A3-7)

Install industrial deck UDG 100 (**9a**) onto stair stringers UA.

Assemble Stair Steps repeating the detailed sequence in section A2.5

A3.7 Guardrails

Attach UBK 250/200 (**10**) as intermediate guardrails and remove temporary Ledger UH 100 (**3c**) above stairs.

Additional lift completed.

Repeat steps as required according to tower height.

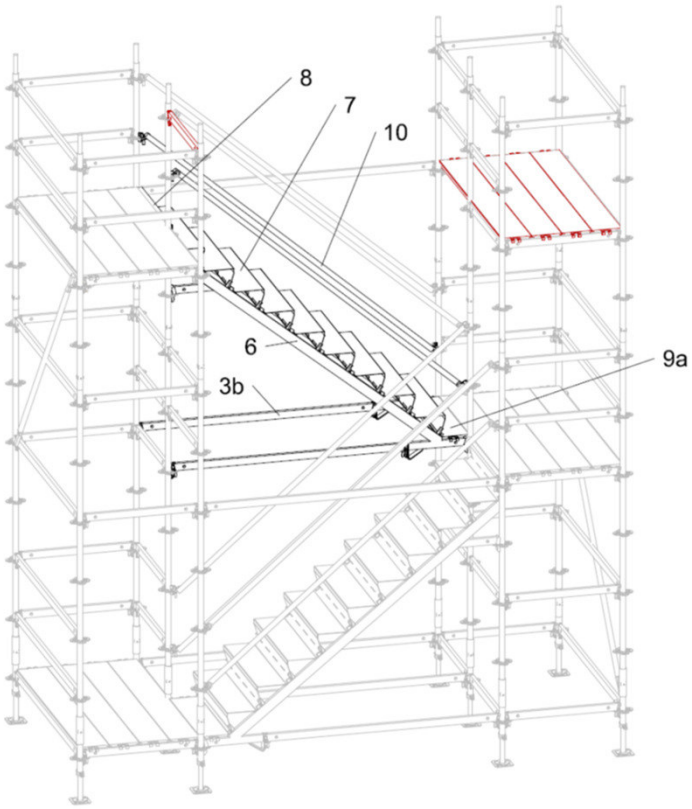


Fig.A3-7

A4 Assembling the top level

A4.1 Vertical Standards UVR & Ledgers

Fix UBK 250/200 (**10**) to the uppermost Rosette of 2 No UVR 200 (**5a**) shown as pre-assembly.

Insert Vertical Standards UVR 200 (**5a**) into the lower Standards UVR ensuring alignment of the Ø11 holes.

Attach UH Ledgers (**3b, 3c**) to the Rosette on the Vertical Standards UVR (**5a**), then securely fix all wedges at UVB level using a 500g hammer.

Place provisional Ledger UH 100 (**3c**) shown in red, it will be removed later.

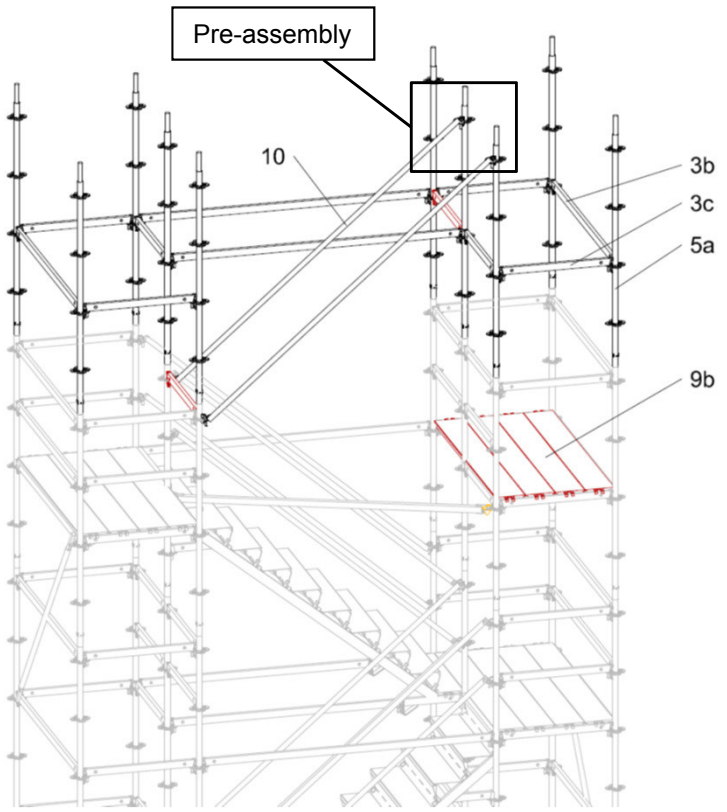


Fig.A4-1

A4.2 Guardrail

Move Steel Decks UDG 200 (**9b**) on Ledgers 100 (**3c**).

Attach UH Ledgers (**3b, 3c**) to the Rosett on the Vertical Standards UVR (**5**), then securely fix all wedges at UVB level using a 500g hammer.

Place UBL 200/200 (**11a**).

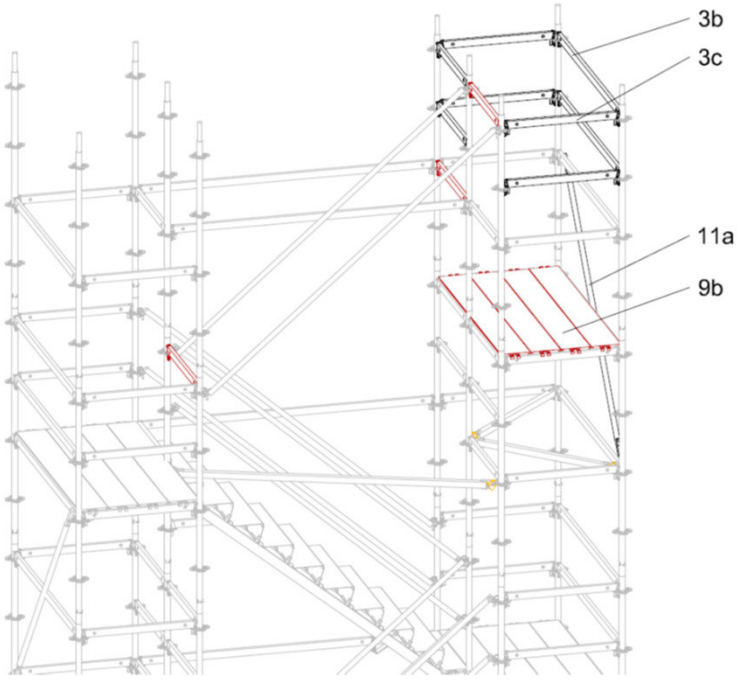


Fig.A4-2

A4.3 Decks level

Reposition Steel Decks UDG 200 (**9b**) to position shown.

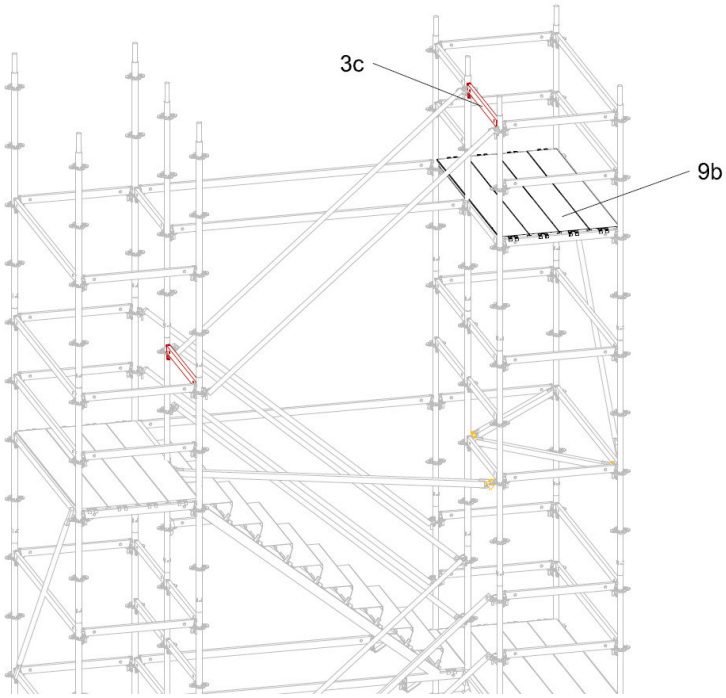


Fig A4-3

A4.4 Stair Stringers. Steps and Stop

Attach Stair Stringer UA (**6**) and UH 200 (**3b**). (Fig A4-4)

Install industrial deck UDG 100 (**9a**) onto stair stringers UA.

Assemble Stair Steps repeating the detailed sequence in section A2.5

A3.7 Guardrails

Attach UBK 250/200 (**10**) as intermediate guardrails and remove temporary Ledger UH 100 (**3c**) above stairs.

Top lift completed.

Install Toeboards UPY 200 (**14**) and Toeboards UPY 100 (**13**) to all platforms if required

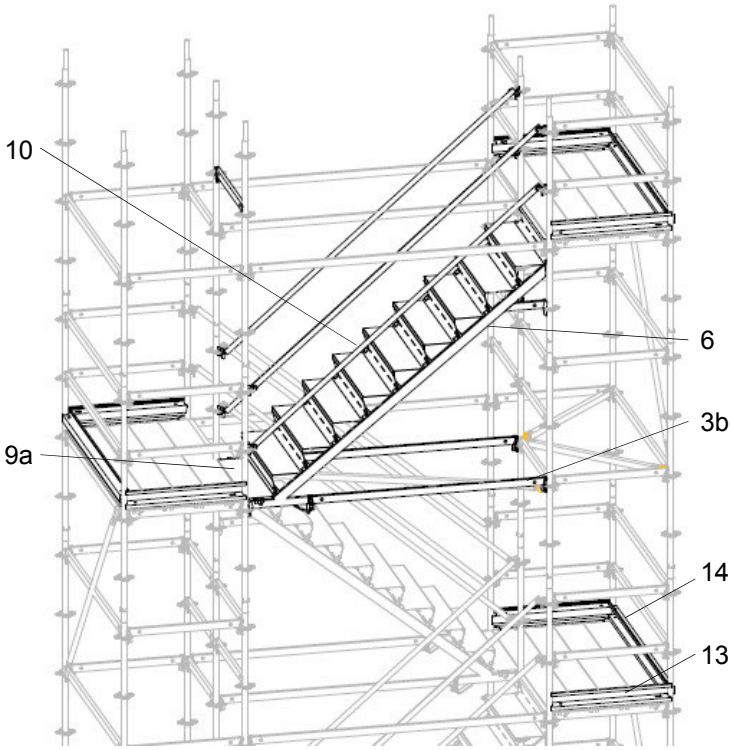


Fig.A4-4

Anchors are not designed to carry vertical loads!

- Anchors should be installed progressively along with the erection of the scaffolding.
- Fix with suitable fixings in accordance with NASC TG4:17.
- The load-bearing capacity of the connecting components between the Wall Ties and anchoring base must be verified by the contractor.
- Install the first row of anchors at a height of 8.0 m. The position of the other anchors is given in PERI UP Flex Staircase 100 and 125 with Deck UDG Assembly Instructions for Standard Configuration.
- Install anchors only in the levels which have been braced with Horizontal Braces..

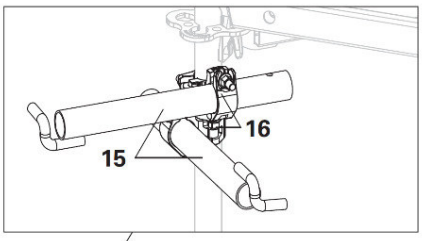


Fig.A5-1a

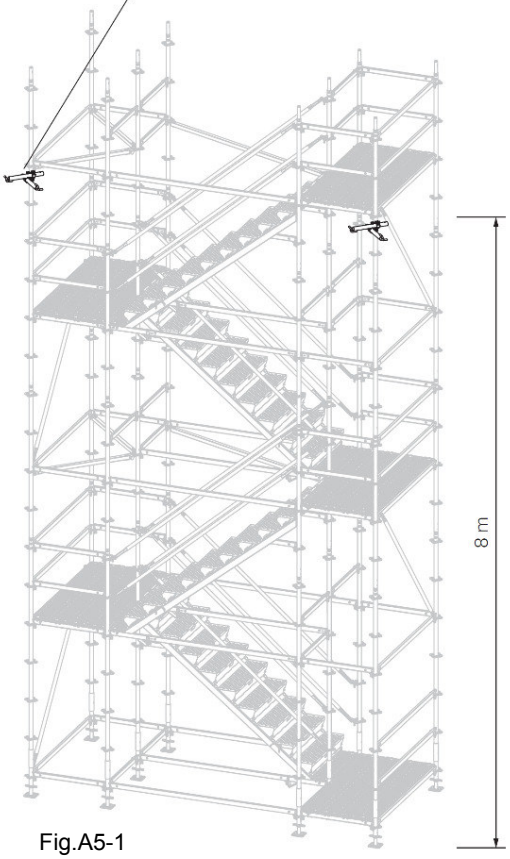


Fig.A5-1

A5.1Triangulated anchors

For shorter wall spacing, both corner standards must be connected with triangular anchors at 45°.

Fix the Standard Couplers (**16**) to the Corner Standards with Wall Ties UWT 45 or scaffold tube (**15**). (Fig.A5-1a)

Fix Wall Ties or scaffold tubes to the wall.

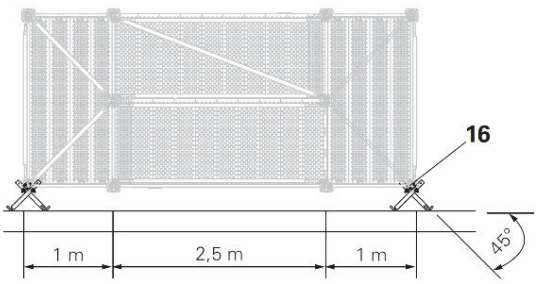


Fig.A5-2

A5.3 Single Wall Ties with bracing

For large wall spacing up to max. 200 cm, single Wall Ties and crossed diagonals are to be used.

Fix Wall Ties, UWT 140 or scaffold tube (**15a**), to the Corner Standards using Standard Couplers (**16**).

Fix Wall Ties UWT 140 or scaffold tube to the wall

Fix Scaffold Tubes (**18**) to the Wall Ties UWT 140 or scaffold tube using Swivel Couplings (**17**). (Fig. A5-3a and Fig. A5-4)

At the intersection point of the diagonal Scaffold Tubes, use Swivel Couplers to connect both Scaffold Tubes.

(Fig. A5-3 and Fig. A5-4)

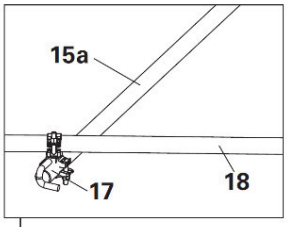


Fig.A5-3a

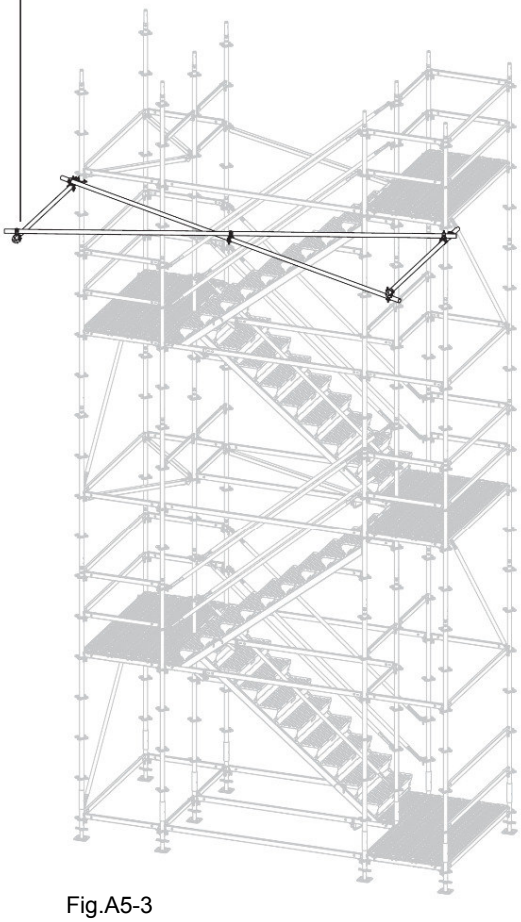


Fig.A5-3

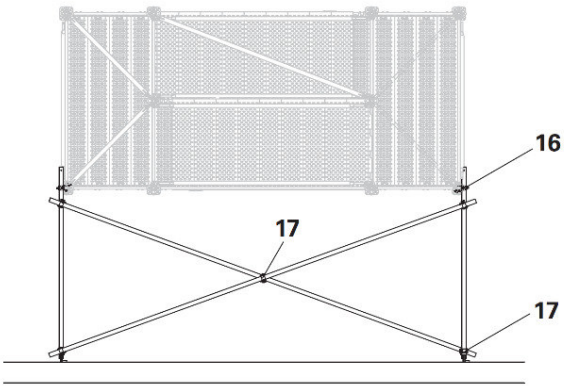


Fig.A5-4

A6 Dismantling

Dismantle in reverse order from top to bottom as shown in the assembly procedure.

A6.1 Anchors

- Remove the anchors progressively with the staircase from top to bottom.
- In the event of work disruptions, the top level must not be extended more than 3.0m. beyond the last anchor position.

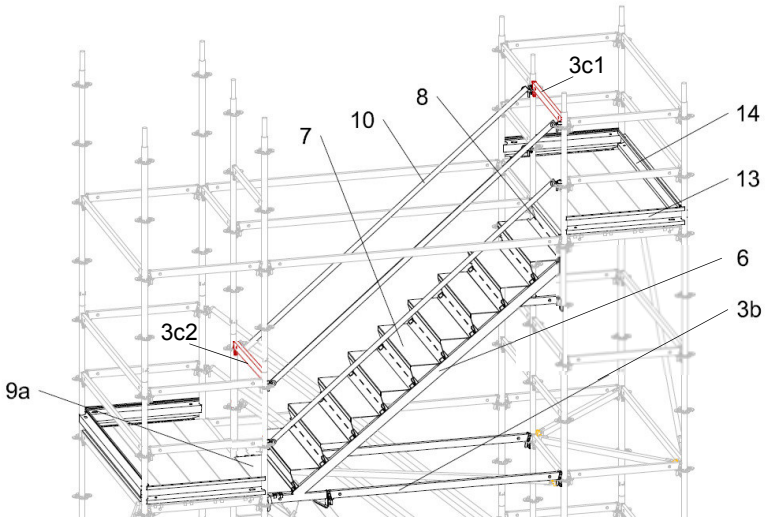


Fig.A6-1

A6.2 Top level

Remove all toeboards UPY 100 (**13**) and UPY 200 (**14**).

Attach Ledger UH 100 (**3c1**) as guardrail at top of stairs and from within the UBK Guardrails (**10**) remove the End Step UAE (**8**) and progressively remove the Stair Steps UAR (**7**) and lower Deck UDG (**9a**). Attach Ledger UH 100 (**3c2**) as guardrail at bottom of stairs

Remove intermediate level UBK 250/200 (**10**).

Attach Ledger UH 100 (**3c**) as guardrail at bottom of stairs

Progressively move down by 1m Steel Decks UDG 200 (**9b**) on to Ledgers 100 (**3c**). In a reverse to the assembly sequence described in section A2.4.

Remove highlighted Ledgers UH 200 (**3b**) and UH 100 (**3c**). (Fig.A6-2).

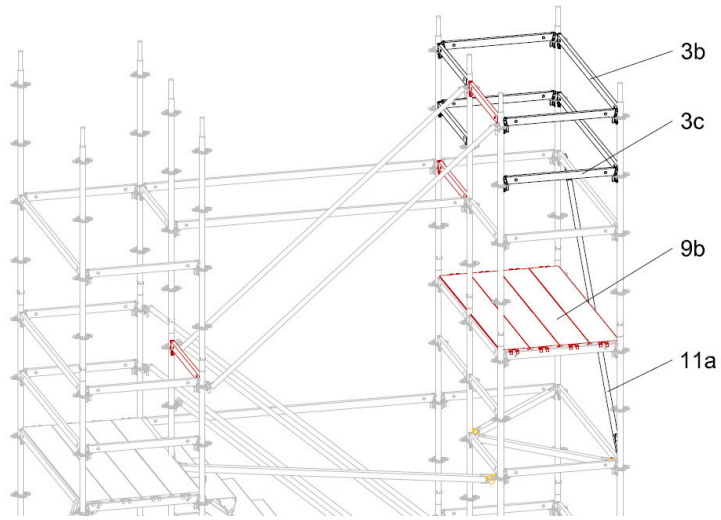


Fig.A6-2

Progressively move down by 1m Steel Decks UDG 200 (**9b**) on to Ledgers 100 (**3c**) once more.

Remove Ledgers UH 250 (**3a**), UH 200 (**3b**) and UH 100 (**3c**).

Remove UVR 200 (**5a**) and UBK 250/200 (**10**). (Fig.A6-3)

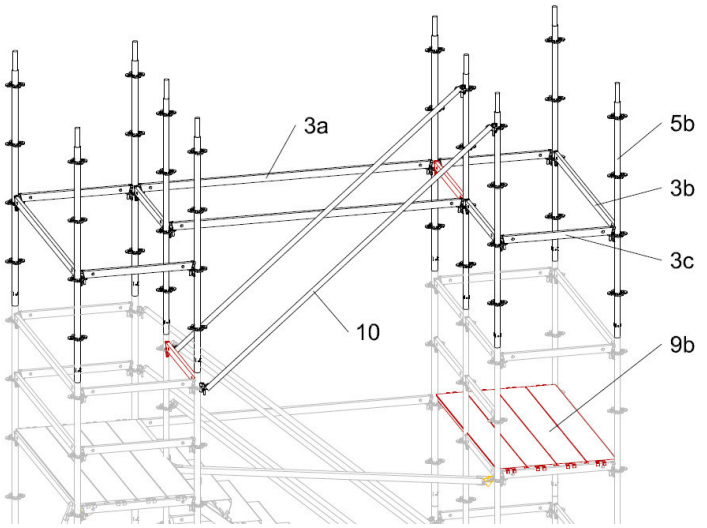


Fig.A6-3

Top lift removed

A6.3 Intermediate level

All intermediate levels repeat the following steps.

Reposition Steel Decks UDG 200 (**9b**) to position shown. (Fig. A6-4)

Remove Ledgers UH 250 (**3a**), UH 200 (**3b**) and UH 100 (**3c**).

Remove UBH 100/100 (**12b**).

From within the Guardrail UBK 250/200 (**10**) progressively remove the stair components repeating the detailed sequence in section A6.2.

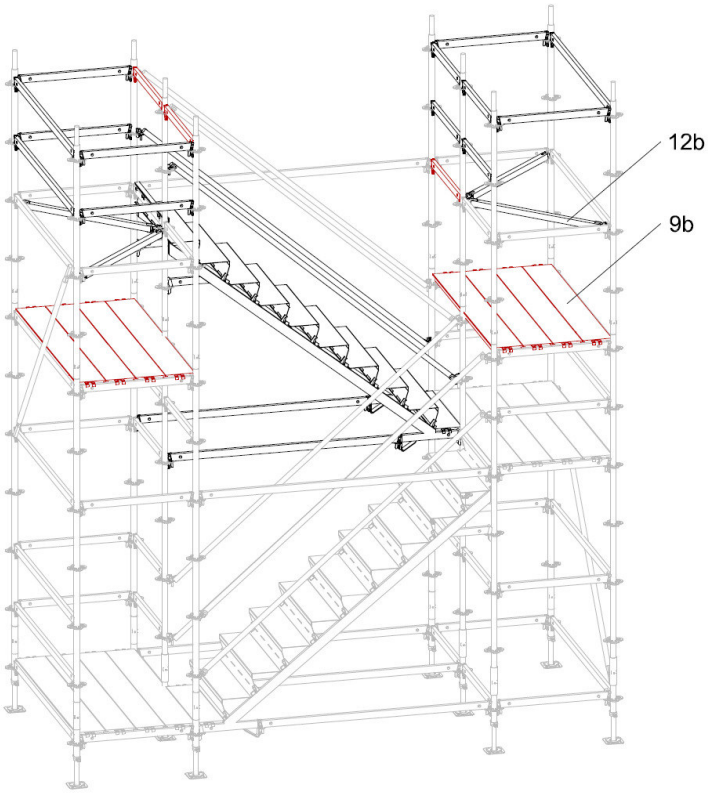


Fig.A6-4

Remove Decks UDG 200 (**9b**) at the top of the stair flight and move down the other Decks UDG 200 (**9b**).

Remove Ledgers UH 250 (**3a**), Ledgers UH 200 (**3b**), UH 100 (**3c**) and UBH 250/200 (**12a**).

Remove UVR 200 (**5a**) and UBK 250/200 (**10**).

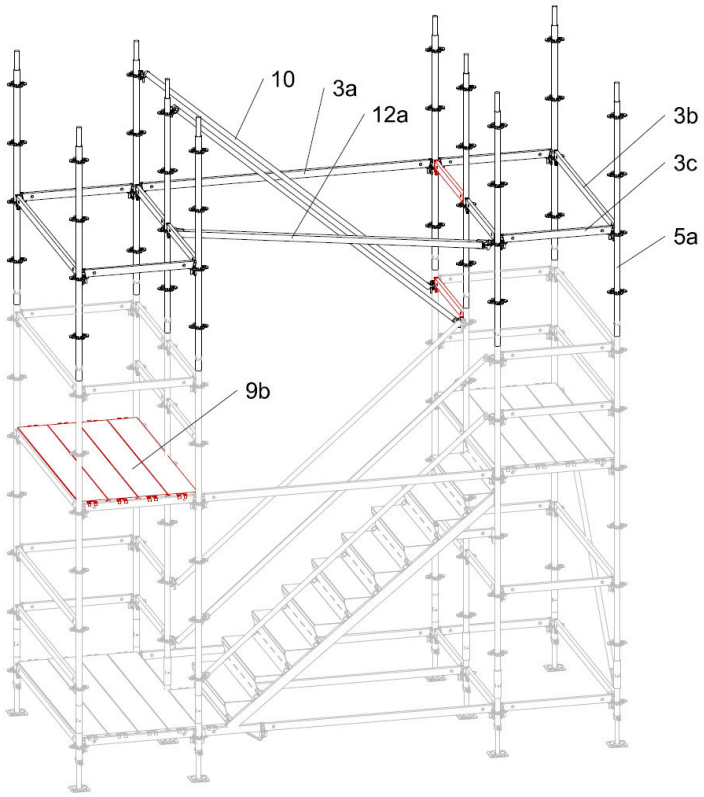


Fig.A6-5

Intermediate lift removed

Repeat steps as required according to tower height.

A6.4 Base level

Attach internal Ledgers UH 100 as guardrail,

From within the Guardrail UBK 250/200 (**10**) progressively remove the stair components repeating the detailed sequence in section A6.2.

Remove intermediate level UBK 250/200 (**10**)l.

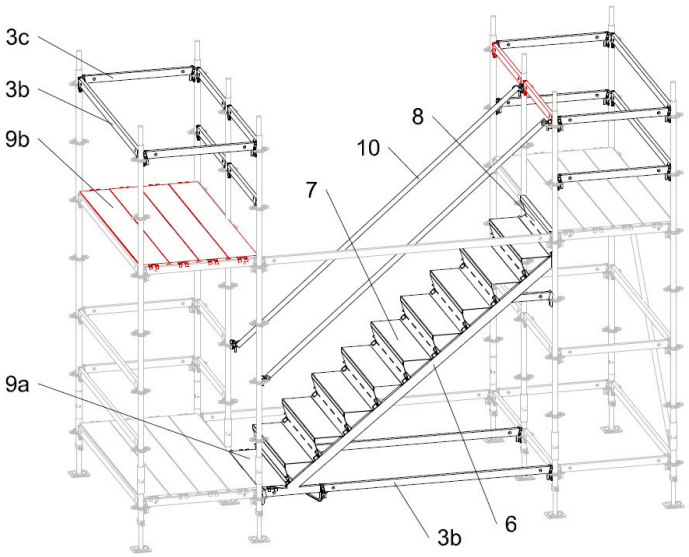


Fig.A6-6

Reposition Steel Decks UDG 10 (**9b**) to position shown (Fig. A6-7).

Remove Ledgers UH 200 (**3b**) and UH 100 (**3c**).

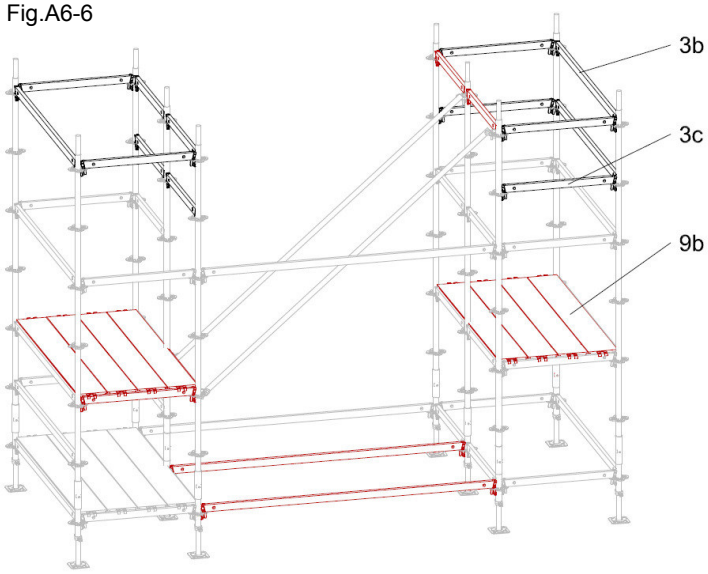


Fig.A6-7

Remove Decks UDG 200 (**9b**) in one side and move down Decks UDG 200 (**9b**) in the other side. (Fig. A6-8).

Remove Ledgers UH 200 (**3b**) and UH 100 (**3c**).

Remove UVR 300 (**5**) and UBK 250/200 (**10**).

From the ground, remove final base components.

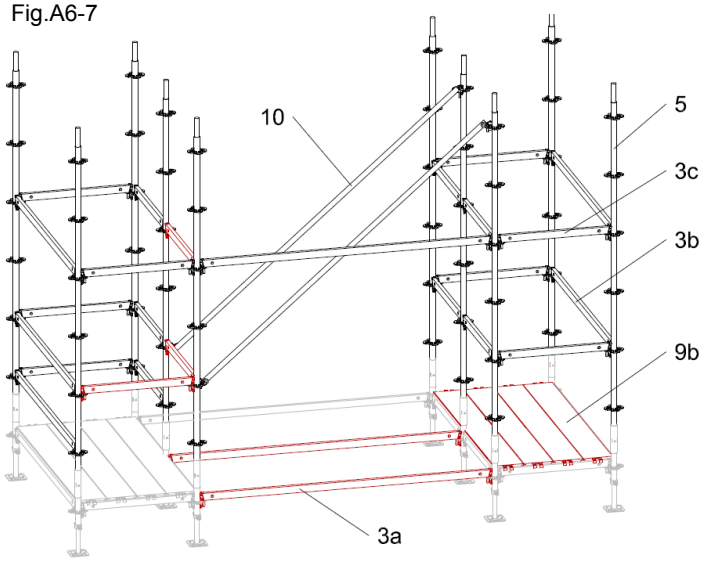


Fig.A6-8

Dismantling completed

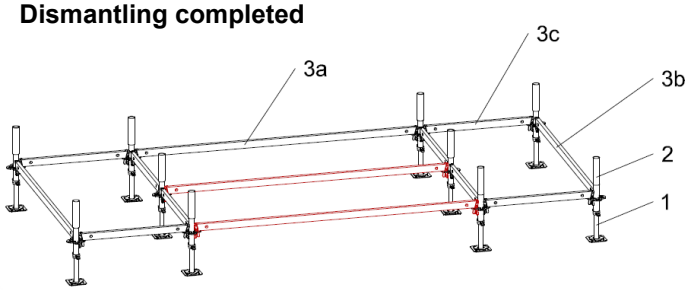


Fig.A6-9

A7.1 Reaction forces for legs with tread width = 1.0m

The reaction forces for the stair towers with in line staircase units are given in Table 1 and are dependant on the height of the tower, tread width and applied live load.

Maximum leg loads allow for the total live load with a 75/25 distribution on plan.

The live load assumption for the stair tower leg loads indicated is 2kN/m² for a maximum of 20 linear metres. The equivalent number of persons indicated is based on an allowance of 100kg per person allowing for person self weight plus small tools in accordance with BS 5975.

PERI recommend that the user displays clear signage indicating the permissible limits for personnel numbers thus:

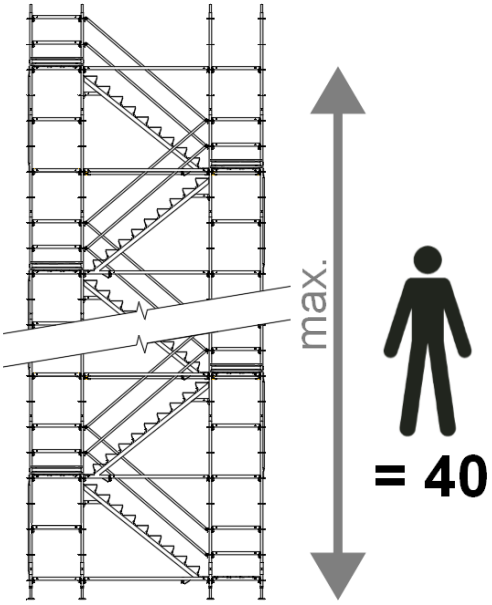
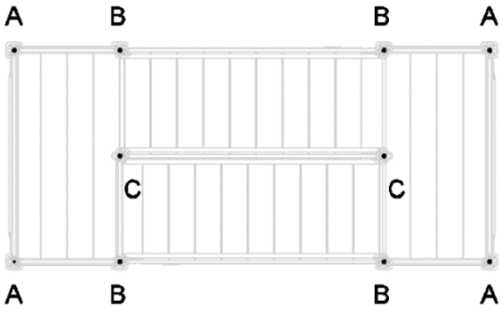


Fig.A7-1

Table 1	Tread width = 1.0m			
Tower height (m)	Max. Leg Load A	Max. Leg Load B	Max. Leg Load C	Equiv. No. of persons:
2.3	2.1	4.3	2.7	13
4.3	4.0	6.3	5.3	22
6.3	4.3	8.7	7.6	31
8.3	6.2	10.7	10.2	40
10.3	6.4	11.2	10.7	40
12.3	6.9	11.7	11.4	40
14.3	7.1	12.3	11.9	40
16.3	7.6	12.7	12.6	40
18.3	7.8	13.3	13.1	40
20.3	8.2	13.7	13.9	40
22.3	8.4	14.3	14.3	40
24.3	8.9	14.7	15.1	40
26.3	9.1	15.4	15.5	40
28.3	9.6	15.8	16.3	40
30.3	9.8	16.4	16.8	40
32.3	10.2	16.8	17.5	40
34.3	10.4	17.4	18.0	40
36.3	10.9	17.8	18.7	40
38.3	11.1	18.4	19.2	40
40.3	11.6	18.8	19.9	40
42.3	11.8	19.5	20.4	40
44.3	12.2	19.8	21.1	40



A7.2 Reaction forces for legs with tread width = 1.25m

The reaction forces for the stair towers with in line staircase units are given in Table 2 and are dependant on the height of the tower, tread width and applied live load.

Maximum leg loads allow for the total live load with a 75/25 distribution on plan.

The live load assumption for the stair tower leg loads indicated is 2kN/m² for a maximum of 20 linear metres. The equivalent number of persons indicated is based on an allowance of 100kg per person allowing for person self weight plus small tools in accordance with BS 5975.

PERI recommend that the user displays clear signage indicating the permissible limits for personnel numbers thus:

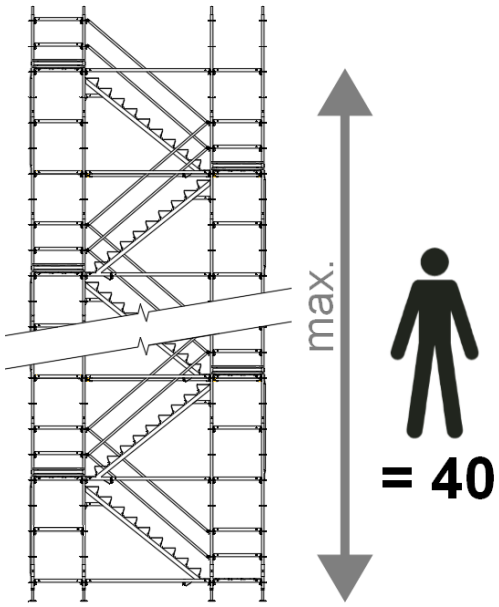
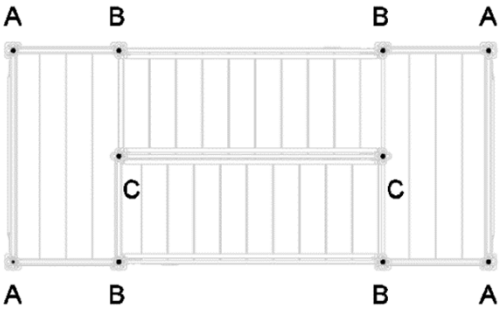


Fig.A7-2

Table 2	Tread width = 1.25m			
Tower height (m)	Max. Leg Load A	Max. Leg Load B	Max. Leg Load C	Equiv. No. of persons:
2.3	3.0	5.7	3.2	19
4.3	5.9	8.6	6.4	31
6.3	6.2	11.6	9.2	40
8.3	6.7	11.8	10.1	40
10.3	6.9	12.7	10.6	40
12.3	7.4	13.0	11.4	40
14.3	7.7	13.9	12.0	40
16.3	8.2	14.2	12.8	40
18.3	8.5	15.1	13.3	40
20.3	9.0	15.3	14.1	40
22.3	9.2	16.2	14.7	40
24.3	9.7	16.5	15.5	40
26.3	10.0	17.4	16.0	40
28.3	10.5	17.7	16.8	40
30.3	10.7	18.5	17.4	40
32.3	11.3	18.8	18.2	40
34.3	11.5	19.7	18.7	40
36.3	12.0	20.0	19.6	40



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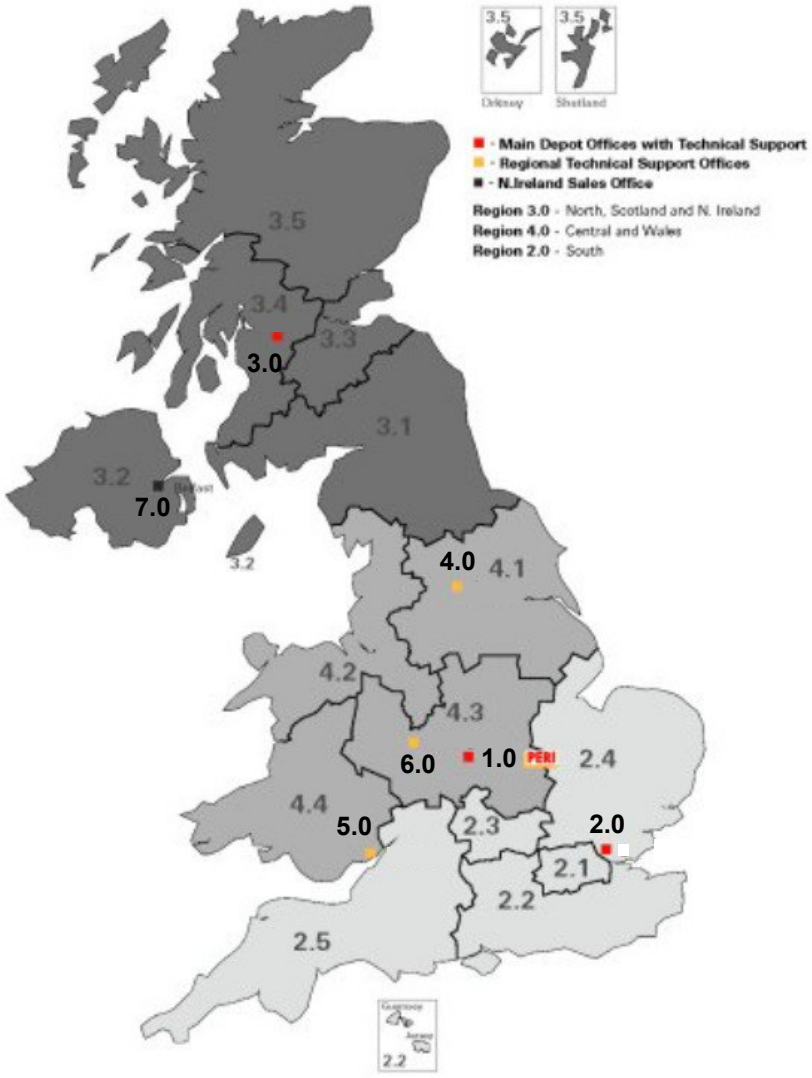

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