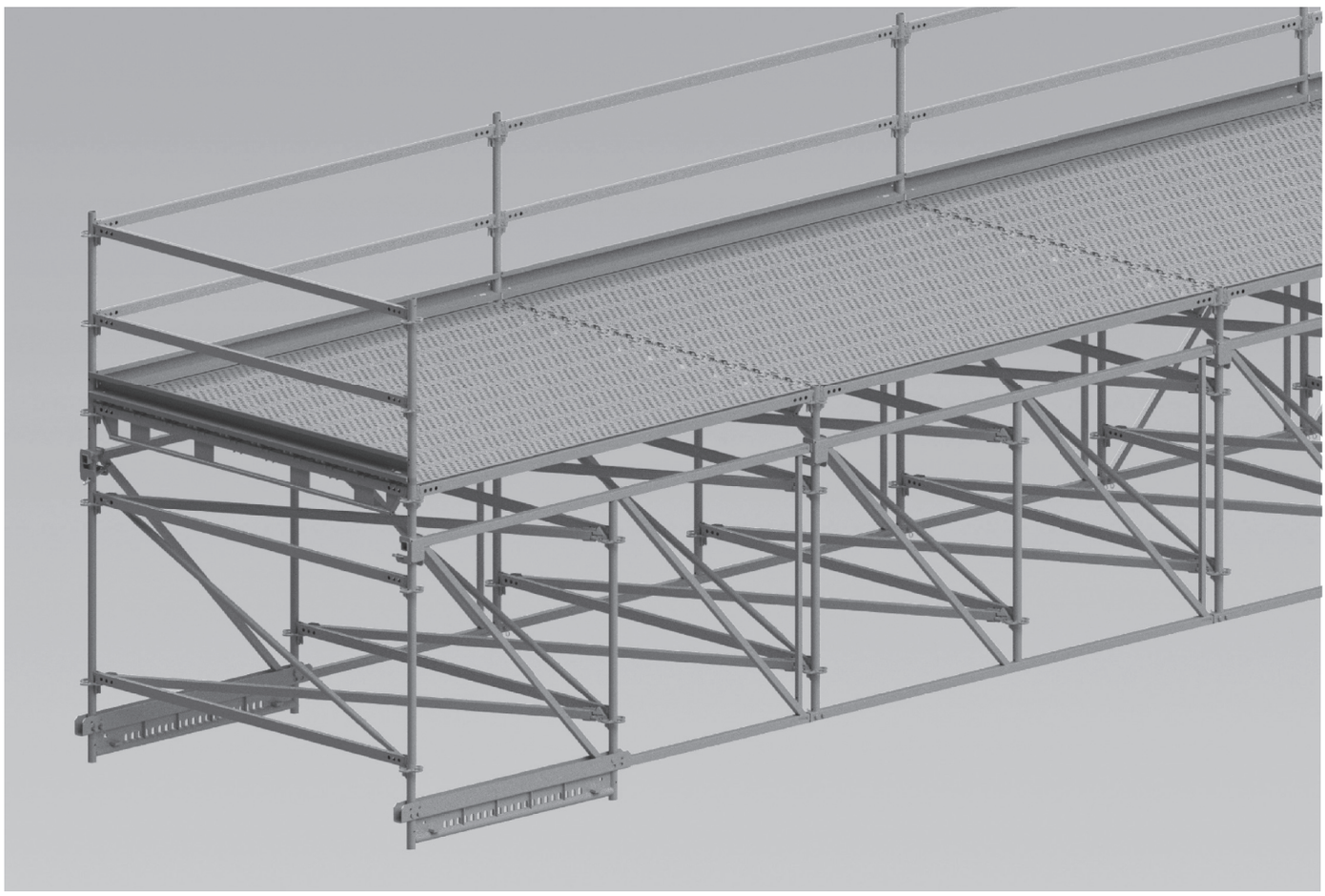
PERI UP Flex
Working Platform LGS 150

Instructions for Assembly and Use – Standard Configuration – Version 2.0



Content

Content

Overview
- Main components 4
- Key 5

Introduction
- Target groups 6
- Product description 7
- Cleaning and maintenance instructions 8
- Disposal 8
- Identification marking of the Tension Belt PTB 12 8
- Additional technical documentation 9
- Instructions for Use 9

Safety instructions
- Cross–system 10
- System–specific 12
- Supports 12
- Inspecting the anchoring 12
- Storage and transportation 13
- Identification marking 14
- Laws and regulations 14
- Inspection, handover and use 15

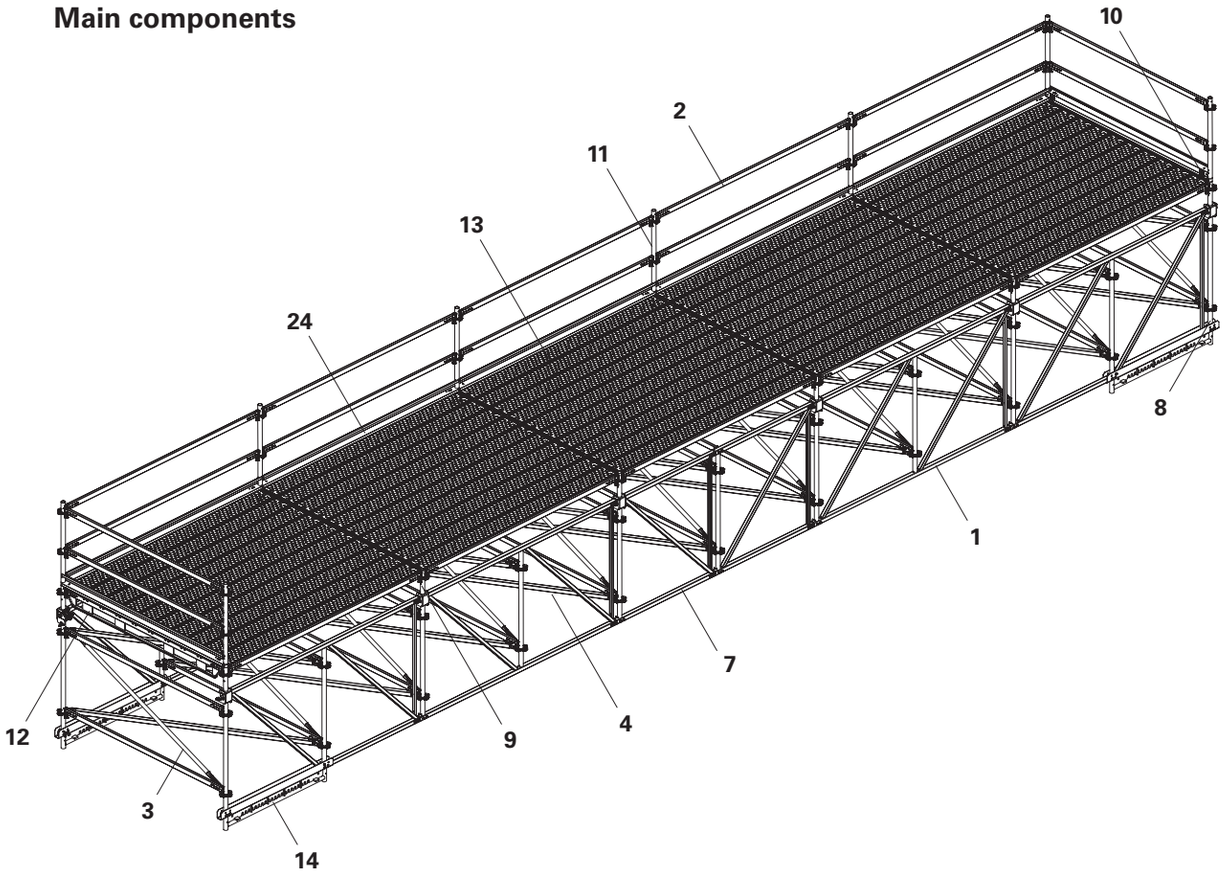
Assembly
- A1 Girder package 16
  - Mounting the standard element 16
  - Bracing the standard elements 18
  - Mounting additional elements 19
  - Bracing the elements 19
  - Mounting an intermediate element 20
  - Mounting a second intermediate element 21
  - Bracing the intermediate elements 22
  - Completing the girder package 23
- A2 External platforms 26
  - Top standards 26
  - Decks 27
  - Guardrails and toe boards 29
- A3 Internal platforms 30
  - Top standards and decks 30
  - Guardrails and toe boards 32
- A4 LGS Support URS 0° 34
- A5 Ledgers 36
- A6 Mobile girder package 37
  - Fitting the rail support 37
  - Fitting the rail 38
  - Fitting stoppers 40
  - Fitting the carriage 41
  - Positioning the girder package on the carriage 42
- A7 Fixed girder package 44
  - Fitting the bearer 44
  - Positioning the girder package on the bearer 46
- A8 Disassembly 47

Planning
- B1 Bridge 48
  - Span 10.50 m 48
  - Span 13.50 m 49
  - Span 16.50 m 50
  - Span 19.50 m 51
  - Weights 52
- B2 platform 53
  - Span 10.50 m 53
  - Span 13.50 m 54
  - Span 16.50 m 55
  - Span 19.50 m 56
  - Weights 57
- B3 Support forces 58
  - Bridge 58
  - platform 60

Program overview
- PERI UP Flex Platform LGS 62

Overview

Main components



1	LGS Standard Element URB 300/150	10	Spigot w. Spacer Tube URE 4/42
2	Horizontal Ledger UH–2[1)]	11	Top Standard UVH 100
3	Ledger Brace UBL–2	12	Horizontal Ledger UHV–2 250
4	Horizontal Brace UBH Flex 250/150	13	Steel Deck UDG–2 25 x 300 [2)]
7	Intermediate Element URB 150/150	14	LGS Support URS 0°
8	End Element URB 150	24	Steel Toe Board UPY [3)]
9	Collar URP		

[1)] Alternatively, the Horizontal Ledger UH–Plus can be used instead of the Horizontal Ledger UH–2.
[2)] Alternatively, the Steel Deck UDG can be used instead of Steel Deck UDG–2.
[3)] Alternatively, Wood Toe Boards UPF can be used instead of Steel Toe Boards UPY.

Overview

Key

Pictogram | Definition

 Danger/Warning/Caution

 Note

 To be complied with

 Load–bearing point

 Visual inspection

 Tip

 Incorrect use

 Safety helmet

 Safety shoes

 Safety gloves

 Safety goggles

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

Arrows

→ 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 can be found at the beginning of the section or before instructions for action and are highlighted as follows:

Danger
This sign indicates an extremely hazardous situation which could result in death or serious, irreversible injury if the safety instructions are not followed.

Warning
This sign indicates a hazardous situation which could result in death or serious, irreversible injury if the safety instructions are not followed.

Caution
This sign indicates a hazardous situation which could result in minor or moderate injury if the safety instructions are not followed.

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.

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

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

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 equipment that may not have been shown in these detailed illustrations must nevertheless be available.

Target groups

Scaffolding contractors/contractors
These assembly instructions are intended for contractors who either
- assemble, modify and dismantle the scaffolds, or
- use them, e.g. for concreting, or
- allow them to be used for other operations, e.g. carpentry or electrical work.

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 person
- is appointed by the scaffolding contractor,
- must be on site for all scaffolding work,
- prepares and updates the plan for assembly, modification and dismantling,
- prepares and updates the plan for use of the scaffold by the scaffold user,
- supervises the assembly, modification and dismantling work (supervisor).

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
Scaffolds 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 scaffold in an understandable form and language.
- Description of the measures for safely assembling, modifying or dismantling the scaffold.
- Designation 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 scaffold, as well as the personnel concerned.
- Details regarding permissible loads.
- Description of all other risks and dangers associated with assembly, modification or dismantling operations.



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

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

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

Introduction

Product description

Purpose of these assembly instructions
These Instructions for Assembly and Use describe the processes of assembling and disassembling the standard configuration and are based on the approval for the PERI UP Scaffolding System Z–8.1–863.

These Instructions for Assembly and Use describe the standard configuration for a working platform as a temporary construction corresponding to the provisions of DIN EN 12811.

Features
The working platform provides a safe working position for carrying out work on buildings and structures.

The working platform is based on the PERI UP Flex Frame Scaffold with supplementary components.

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

Technical data
- Span L_{sp}
  from 10.50 m to 19.50 m.
- Width B
  from 1.50 m to 3.00 m in 50 cm increments
- Wind loads q according to DIN EN 1991–1–4
  – q_1 = 0.0 kN/m²
  – q_2 = 0.35 kN/m²
  – q_3 = 0.56 kN/m²
  – q_4 = 0.77 kN/m²
- Load classes are determined according to DIN EN 12811–1
  – Load Class 1 = 0.75 kN/m²
  – Load Class 3 = 2.00 kN/m²
  – Load Class 4 = 3.00 kN/m²
  – Load Class 5 = 4.50 kN/m²
  Load application area of 6.0 m² with uniformly distributed load of 3.0 kN/m² (Load Class 4) and a load of 0.75 kN/m² on the remaining area (see DIN EN 12811–1 point 6.2.2.6)
  Wind loads only at the height of the girder + working platform with guardrails 1.00 m to be taken into consideration.

Standard configuration
is shown in Section A:
- Width of girder package B = 2.50 m
- Span L_{sp} = 13.50 m
- Mobile or fixed girder package
- Assembly
  – with bolts and cotter pins
  – alternatively with bolts and nuts – not shown.

The supporting structure and access to the platform area are not part of these Instructions for Assembly and Use. Refer to the project–specific details in the project drawings. The supporting structures shown are indicated and incomplete.
The stability of the overall construction consisting of the working platform and supporting structure is to be verified for each project – also for assembly conditions.

Cleaning and maintenance instructions

Clean the scaffolding components after each use to maintain the value and operational readiness of the PERI products over the long term.

Some repair work may also be inevitable due to the tough working conditions.



The contractor must ensure that the personal protective equipment required for cleaning, maintenance and repair work, e.g.
- safety helmet,
- safety shoes,
- safety gloves,
- safety goggles,

is available and used as intended.

The following instructions should help to keep cleaning and maintenance costs as low as possible.

Cleaning tools must be adapted to the respective surfaces of the components so that they are not damaged.

Clean mechanical components to remove dirt or concrete residues before and after use and grease them with suitable lubricants.

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.

Tension Belts PTB 12
Ensure that tension belts are stored tidily and in dry conditions.

Clean the tension belts with cold water without detergent and air dry.

Moving parts of the ratchet are to be lightly oiled on a regular basis.

Disposal

Carry out disposal in accordance with the relevant national regulations.

Identification marking of the Tension Belt PTB 12

Belt label
(Fig. 02a + Fig. 02b)

Warning
Without a belt label, the tension belt cannot be used as intended!
Belt can tear or be overloaded.
⇒ If the belt label is missing or illegible, do not use the Tension Belt PTB 12.
⇒ Use a new tension belt.

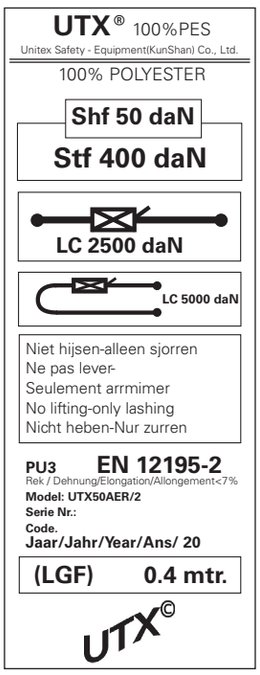


Fig. 02a

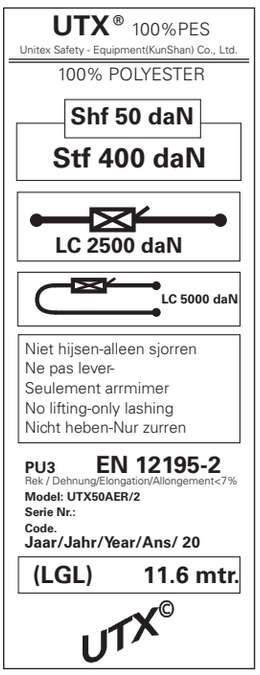


Fig. 02b

Additional technical documentation

- Approvals:
  - Approval Z–8.22–863 PERI UP Flex module system
  - Approval Z–8.1–957 PERI UP Easy module system
  - Approval Z–8.1–970 PERI UP Easy 100 module system
- User information – pallets and stacking devices
- Instructions for Assembly and Use:
  - PERI UP Scaffolding Kit core components
  - PERI UP Easy Facade Scaffold 67
  - PERI UP Easy Facade Scaffold 100
  - PERI UP Flex Stair 75
  - PERI UP Flex Stair 100 and 125 with Deck UDG

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 an application 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 and explicitly reflected in the assembly instructions.

All components listed in the program overview may be used for assembly. Other components are not permitted. Exceptions are named, or must be planned and verified on a project–specific basis.

The use of other products and spare parts is not allowed.
Changes to PERI components are not permitted.

The system described in these Instructions for Assembly and Use may contain patented components. Modifications to PERI components are not permitted.

Cross–system

Safety instructions apply to all service life phases of the system.

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

These Instructions for Assembly and Use can be used as the basis for creating a risk assessment. The risk assessment is compiled by the contractor. The Instruction for Assembly and Use are not a substitute for a risk assessment!

Observe and comply with the safety instructions and permissible loads.

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

Materials and working areas are to be inspected before each use and assembly, for:
- damage,
- stability and
- function.

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

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

When on slab formwork, scaffolds and working platforms:
- do not jump,
- do not run,
- do not drop anything from or onto it.

Components provided by the contractor must comply with the characteristics stipulated in these Instructions for Assembly and Use and all applicable laws and standards. Unless otherwise indicated, the following applies in particular:
- Timber components: strength class C24 for solid wood according to EN 338.
- Scaffolding tubes: galvanised steel tubing with minimum dimensions Ø 48.3 x 3.2 mm according to EN 12811–1 2004–3 4.2.1.2.
- Scaffolding tube couplings according to EN 74–1 and EN 74–2.

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

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

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

Before and after exceptional occurrences that may have an adverse effect on the safety of the scaffolding system, the contractor must immediately
- produce another risk assessment and make use of its results to take suitable steps to guarantee the stability of the scaffolding system,
- arrange for an extraordinary inspection to be carried out by a competent person qualified to do so. The aim of this inspection is to identify and rectify any damage in good time in order to guarantee safe use of the scaffolding system.

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

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

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

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 log.



The contractor must ensure that the personal protective equipment required for the assembly, modification or dismantling of the scaffolding system, e.g.
- safety helmet,
- safety shoes,
- safety gloves,
- safety goggles,

is available and used as intended.

The scaffolding is disassembled by reversing the assembly sequence as described in these Instructions for Assembly and Use.
Comply with the respective assembly descriptions and safety instructions when making modifications or additions to the scaffold.



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

The PPE to be used to prevent falling 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. Danger zones must be cordoned off and clearly marked.
- guarantee stability during all stages of construction, in particular during assembly, modification and dismantling operations.
- ensure and demonstrate that all loads that occur are safely transferred.

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

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

When scaffolds are used in publicly accessible areas,
- measures to prevent unauthorised use, e.g. enclosure of access areas, must be taken.
- Measures are taken against injuries caused by bumping against protruding components, e.g. assembly of protective components.

Always keep the contact surfaces of the scaffold free of dirt, objects, snow and ice.
Close off the scaffold in extreme weather conditions.

System–specific

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

Secure the wedges with a jarring blow using a 500 g hammer.

Tension Belt PTB 12
- is to be checked during use and, if necessary, re–tensioned,
- is not to be used on sharp edges or cracked surfaces without protection; use edge protection,
- protect against heat and chemical influences,
- avoid twisting and keep free of knots,
- do not use for pulling or lifting loads.

Do not set down any loads on the tension belt.

Ensure that the ratchet is not positioned on an edge when the belt is tensioned.

At least 1.5 winds of the belt on the ratchet, maximum of 3 winds.

Do not load belt hooks on the tips.

Discard state of Tension Belt PTB 12
Tension belts are to be replaced if
- the belt label is illegible or missing,
- the belt has cuts, holes or abrasion marks,
- the tension belt shows signs of deformations.
- the hooks or ratchet are twisted or badly corroded,
- the hook aperture is open by more than 10 %.

Supports

The load–bearing capacity of the supports must be verified on site for the respective weights of the system. The respective weights can be found in the section on support reactions.

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

The assembly of the supports must be carried out from a safe workplace.

Inspecting the anchoring

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

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

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

The test load must be 1.2 times 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 %).

Ensure that the relevant national guidelines and regulations are complied with!

Storage and transportation

Store and transport components in such a way that no unintentional change in their position is possible. Detach lifting accessories and gear 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 lifting gear and only those load–bearing points provided on the component.

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

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

The access areas on the construction site must be free of obstacles and tripping hazards and must also be slip–resistant.

For transportation, the substrate must have sufficient load–bearing capacity.

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

Identification marking

When carrying out the work the following signs must be observed:
If certain parts of the scaffold 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.

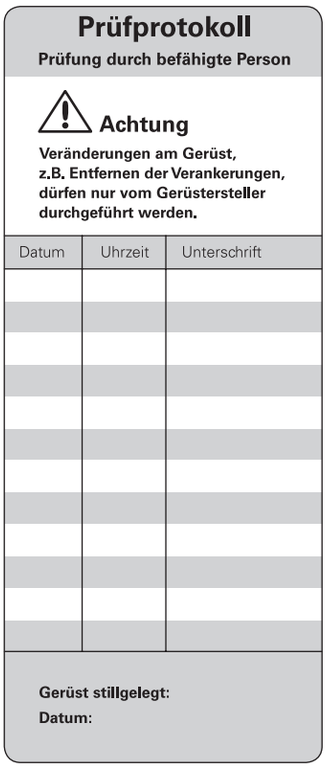
After assembly has been completed, all scaffold entry points must clearly display the designated sign. (Sign 2)
The identification marking does not replace the inspection log! (Sign 2, rear side)



Sign 1



Sign 2



Sign 2, rear side

Laws and regulations

When assembling, modifying, dismantling and using the scaffolds 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:
– German 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.

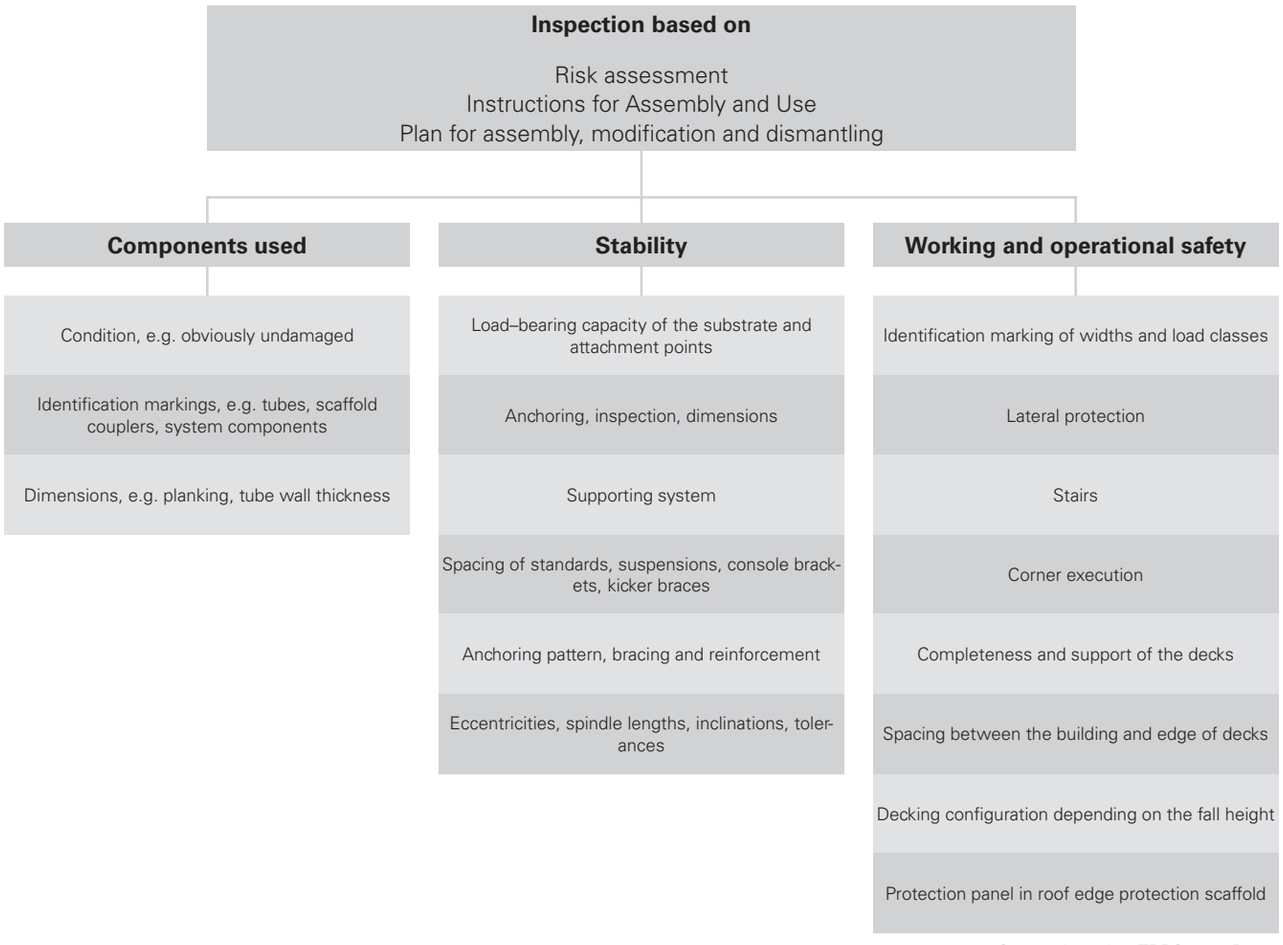
Ensure that the relevant national guidelines and regulations in the respective current version are complied with!

Inspection, handover and use

The erected scaffold 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 scaffold has been correctly erected, it can then be handed over to the user.
It is advisable to carry out the handover with the user and, for example, to document this in a written report.

During the handover, the scaffolding 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.**

The contractor who uses scaffolding, must ensure that the scaffolds are 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

A1 Girder package

Mounting the standard element

Warning

Risk of injury!

⇒ Secure the standard element in order to prevent tipping.

- During the assembly process, ensure that the element bracing is correctly arranged (**1.1**).
- Check the perpendicularity, otherwise problems will arise later in the assembly process.
- Width "B" is variable
  - in 50 cm increments,
  - from 1.50 m to 3.00 m,
  - 2.50 m is shown here.

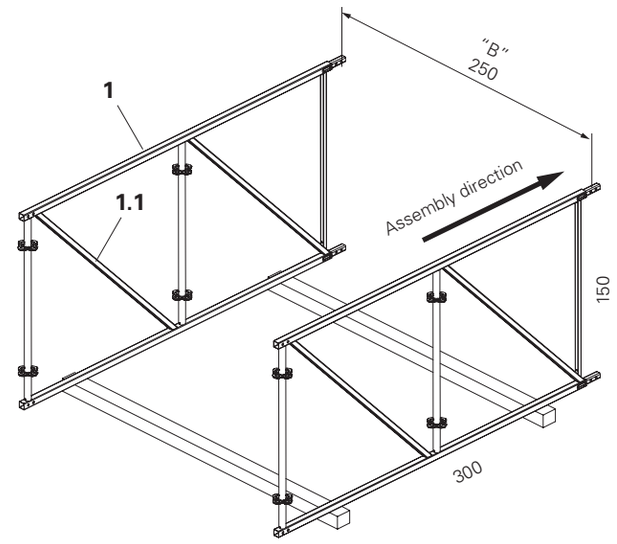


Fig. A1.01

Components

1	LGS Standard Element URB 300/150	2x
2	Horizontal Ledger UH–2 250	4x
4	Ledger Brace UBL–2 250/100	2x

Connecting the standard elements

1. Place Standard Elements URB (**1**) on two squared timbers. (Fig. A1.01)
2. Attach Horizontal Ledgers UH–2 (**2**) to the rosette (**1.1**) on both sides using the ledger heads and wedges (**2.1**), and secure with hammer blows. (Fig. A1.02 + A1.02a)

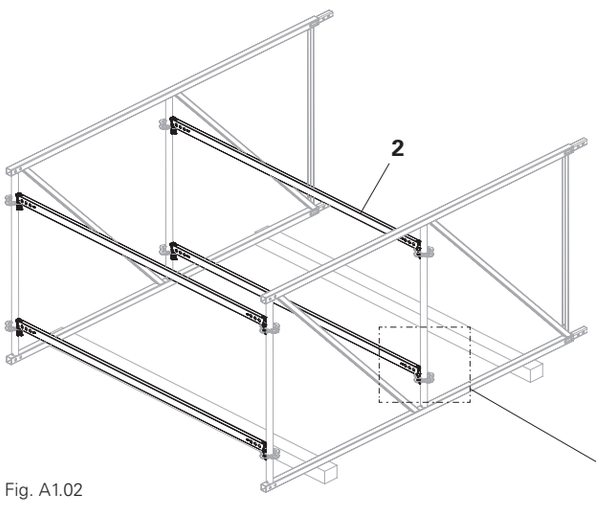


Fig. A1.02

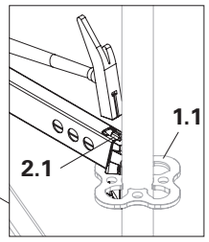


Fig. A1.02a

3. Fit Ledger Braces UBL–2 (**4**):
   – Insert the mounting finger (**4.2**) at an angle into the hole of the bottom Horizontal Ledger UH–2. (Fig. A1.03c + A1.03d)
   – Insert the gravity pin (**4.1**) through the holes of the top Horizontal Ledger UH–2, and then turn sideways. (Fig. A1.03a + A1.03b)
   → Ledger brace is now secured.
(Fig. A1.03)

Are all gravity pins (**4.1**) transversely positioned and on both sides of the hole? (Fig. A1.03b)

Gravity pin – above

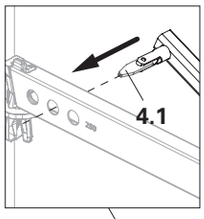


Fig. A1.03a

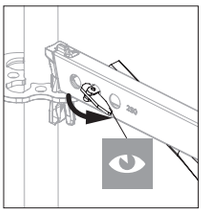


Fig. A1.03b

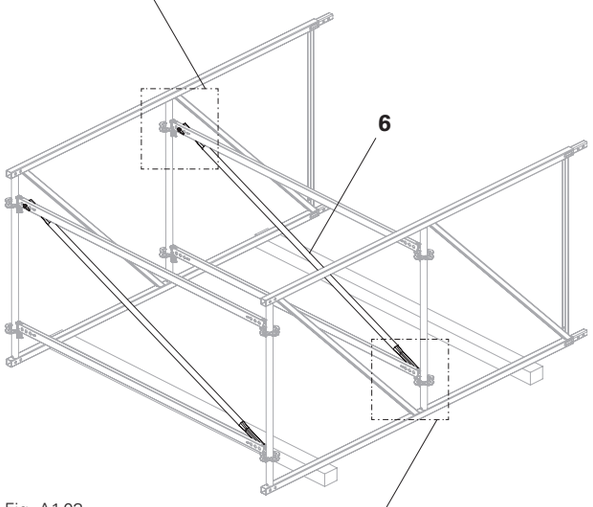


Fig. A1.03

Mounting finger – below

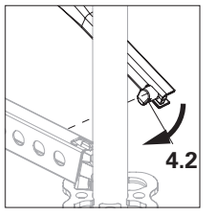


Fig. A1.03c

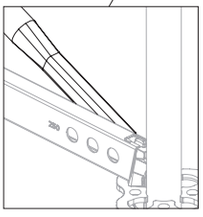


Fig. A1.03d

Bracing the standard elements

Components

6	Horizontal Brace UBH Flex 250/150	2x

Assembly

1. Install the first side:
   Attach hook without slider (**6.1**) to the rosette and push downwards. (Fig. A1.04a + A1.04b)
2. Install the second side:
   – Attach hook with slider (**6.2**) to the rosette. (Fig. A1.04c)
   – Push the slider towards the rosette until the bolt (**6.3**) falls into the longitudinal groove. (Fig. A1.04d)
   → Slider is secured.

(Fig. A1.04)

Is each bolt (**6.3**) positioned in the longitudinal groove and does it secure the slider?

- Horizontal Braces UBH Flex can be installed from above or below.

Install first side
(Shown without horizontal ledger.)

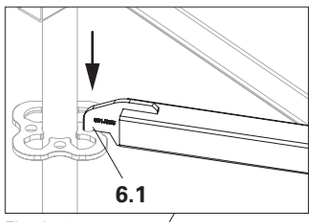


Fig. A1.04a

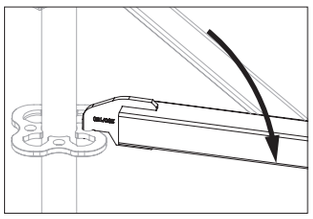


Fig. A1.04b

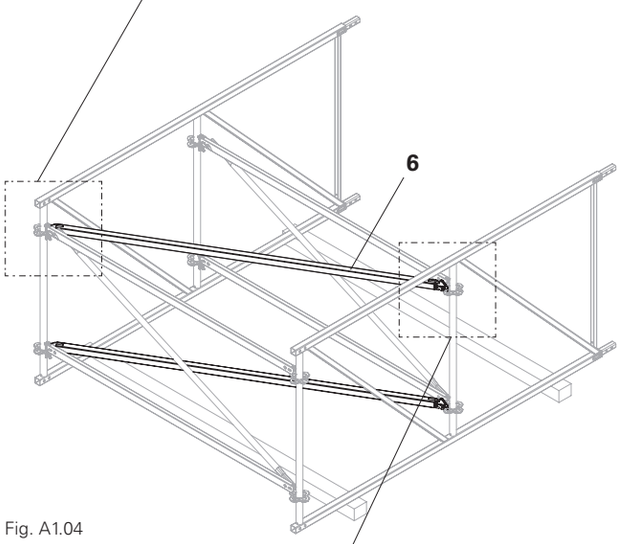


Fig. A1.04

Install second side

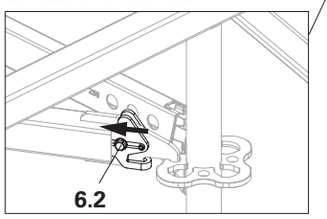


Fig. A1.04c

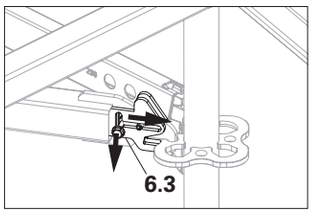


Fig. A1.04d

Mounting additional elements

Components

1	LGS Standard Element URB 300/150	2x
27	Bolt Ø 16 x 70	8x
28	Cotter pin 4/1	8x

Assembly

1. Slide the tube of the Standard Element URB (**1**) into the pin of the Standard Element URB. (Fig. A1.05)
2. Insert 4x bolts Ø 16 x 70 (**27**) from the outside through the Standard Element URB (**1**) and Standard Element URB on the top and bottom chords.
3. Secure bolt Ø 16 x 70 (**27**) with cotter pin 4/1 (**28**). (Fig. A1.05a)

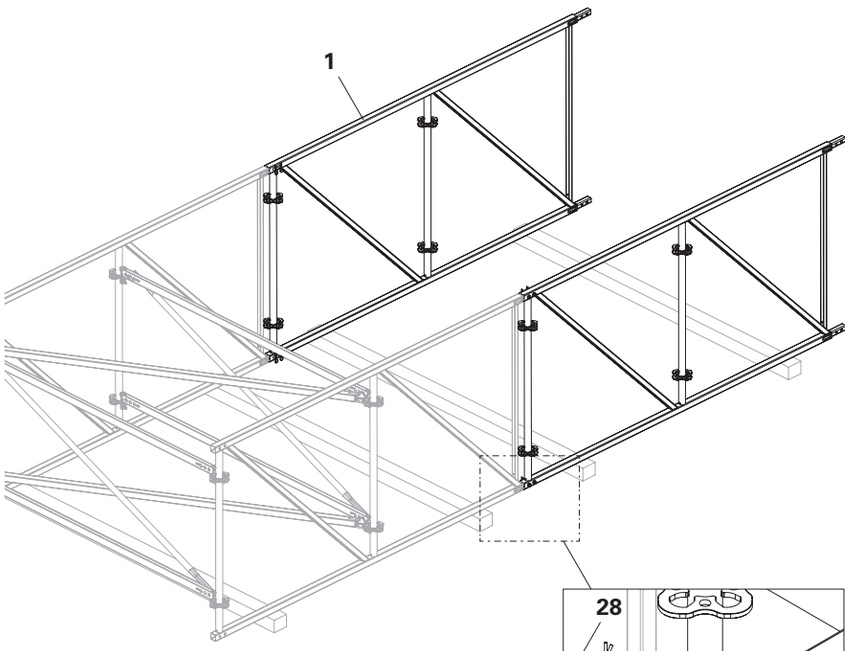


Fig. A1.05

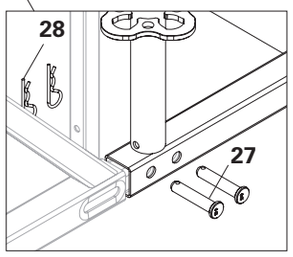


Fig. A1.05a

Bracing the elements

Components

2	Horizontal Ledger UH–2 250	4x
4	Ledger Brace UBL–2 250/100	2x
6	Horizontal Brace UBH Flex 250/150	4x

Assembly

1. Attach Horizontal Ledgers UH–2 (**2**) to the rosette on both sides using the ledger heads and wedges, and secure with hammer blows.
2. Fit Ledger Brace UBL–2 (**4**).
3. Fit Horizontal Brace UBH (**6**).

(Fig. A1.06)

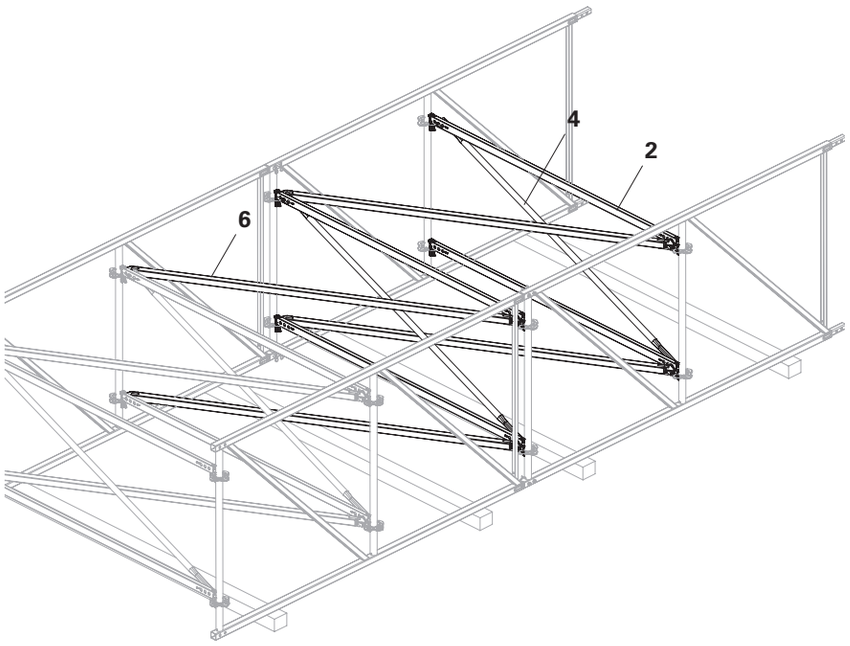


Fig. A1.06

Mounting an intermediate element

Intermediate elements allow the length of the girder packages to be adjusted to the required length in three–metre increments. They are therefore not always required. See Section B – Planning.
The intermediate elements must be mounted in the middle of a girder package.

Components

7	LGS Intermediate Element URB 150/150	2x
27	Bolt Ø 16 x 70	8x
28	Cotter pin 4/1	8x

Assembly

1. Insert the tubes of the Intermediate Elements URB (**7**) into the spigots of the Standard Element URB (**1**).
2. Insert 4x bolts Ø 16 x 70 (**27**) from the outside through the Intermediate Element URB (**7**) and Standard Element URB (**1**).
3. Secure bolt Ø 16 x 70 (**27**) with cotter pin 4/1 (**28**).

(Fig. A1.07)

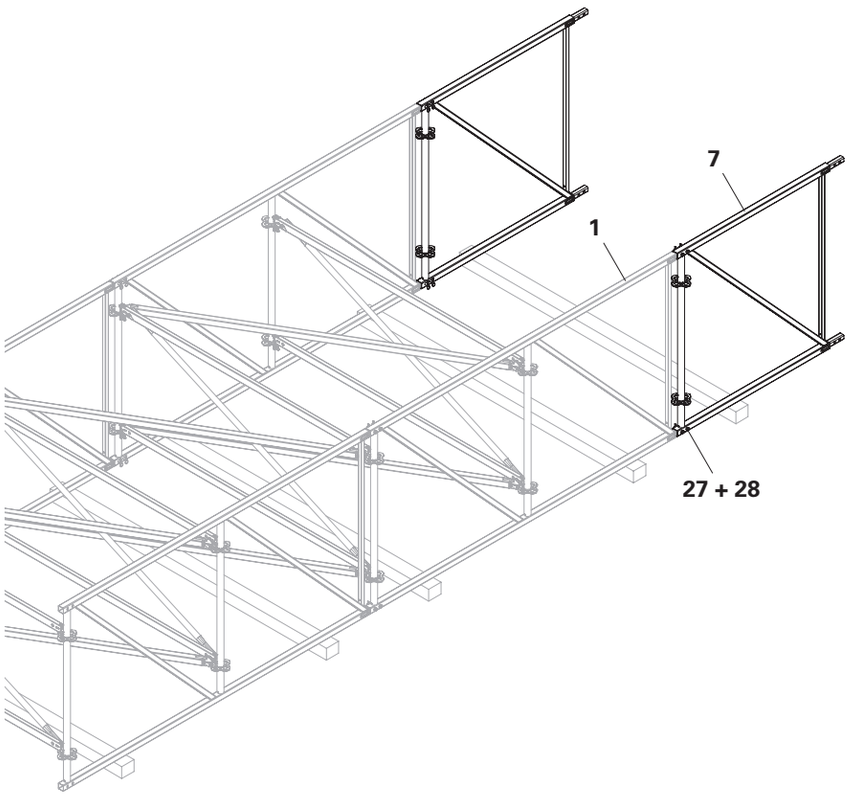


Fig. A1.07

Mounting a second intermediate element

From the middle of the girder package, the elements are rotated so that the element bracing (**7.1**) is subjected to tensile force.

Components

7	LGS Intermediate Element URB 150/150	2x
27	Bolt Ø 16 x 70	8x
28	Cotter pin 4/1	8x

Preparation

1. Turn Intermediate Element URB (**7**) by 180° around the x–axis.

(Fig. A1.08a + A1.08b)

Assembly

1. Insert the tubes of the Intermediate Element URB (**7**) into the spigots of the Intermediate Element URB.
2. Insert 4x bolts Ø 16 x 70 (**27**) from the outside through the Intermediate Element URB (**7**) and Intermediate Element URB.
3. Secure bolt Ø 16 x 70 (**27**) with cotter pin 4/1 (**28**).

(Fig. A1.08)

Are the Intermediate Elements URB installed in a rotated position?
(Fig. A1.08c)
⇒ As a result, the element bracing (**1.1**) is not subjected to tensile stress.

Changing the bracing direction

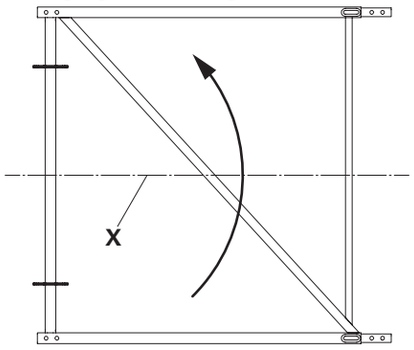


Fig. A1.08a

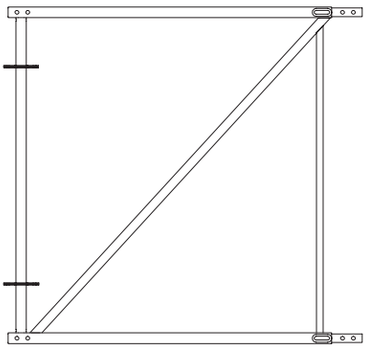


Fig. A1.08b

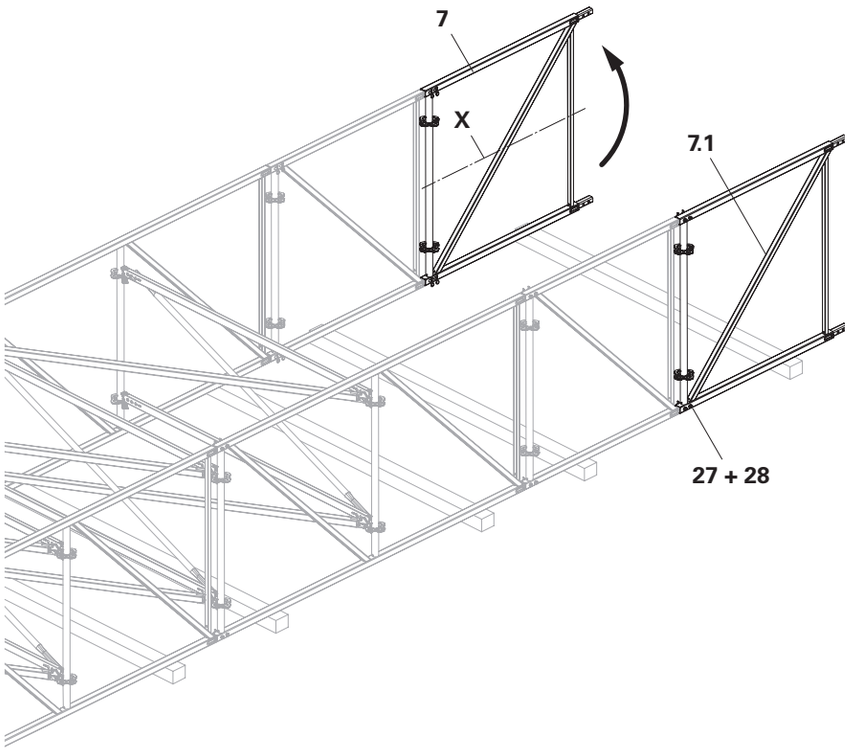


Fig. A1.08

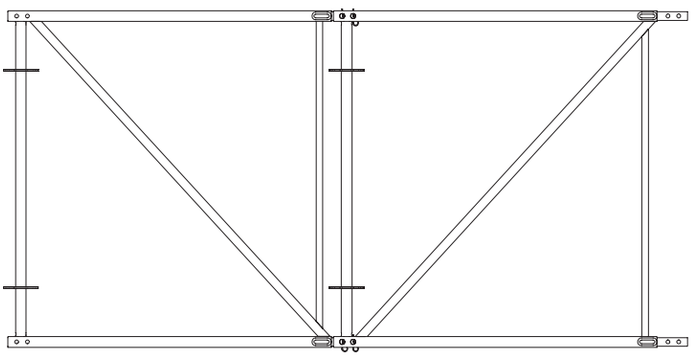


Fig. A1.08c

Bracing the intermediate elements

Components

2	Horizontal Ledger UH–2 250	4x
4	Ledger Brace UBL–2 250/100	2x
6	Horizontal Brace UBH Flex 250/150	4x

Assembly

1. Attach Horizontal Ledgers UH–2 (**2**) to the rosette on both sides using the ledger heads and wedges, and secure with hammer blows.
2. Fit Ledger Braces UBL–2 (**4**).
3. Install Horizontal Braces UBH Flex (**6**).

(Fig. A1.09)

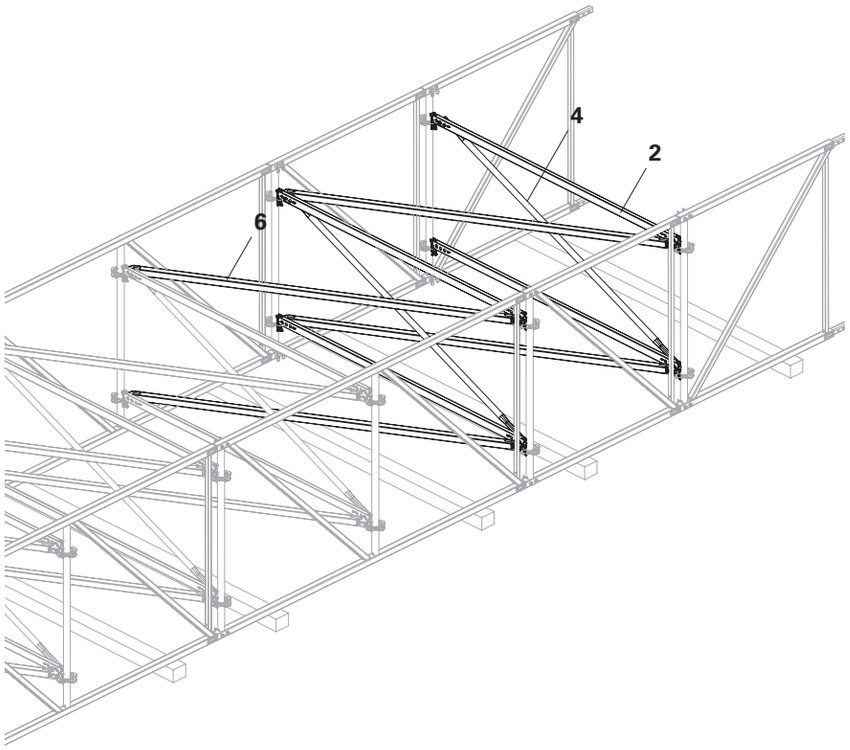


Fig. A1.09

Completing the girder package

Diagonals of the Standard Element URB must point in the same direction as the diagonals of the Intermediate Element URB.

Components

1	LGS Standard Element URB 300/150	4x
2	Horizontal Ledger UH–2 250	8x
4	Ledger Brace UBL–2 250/100	4x
6	Horizontal Brace UBH Flex 250/150	8x
27	Bolt Ø 16 x 70	16x
28	Cotter pin 4/1	16x

Assembling the first element

1. Insert the tubes of the Standard Element URB (**1a**) into the spigots of the Intermediate Element URB (**7**).
2. Insert 4x bolts Ø 16 x 70 (**27**) from the outside through the Standard Element URB (**1**) and Intermediate Element URB (**7**).
3. Secure bolt Ø 16 x 70 (**27**) with cotter pin 4/1 (**28**).

(Fig. A1.10)

Mounting an additional element

1. Insert the tubes of the Standard Element URB (**1b**) into the spigots of the Standard Element URB (**1a**).
2. Insert 4x bolts Ø 16 x 70 (**27**) from the outside through the Standard Element URB (**1**) and Standard Element URB.
3. Secure bolt Ø 16 x 70 (**27**) with cotter pin 4/1 (**28**).

(Fig. A1.10)

Bracing the elements

1. Attach Horizontal Ledgers UH–2 (**2**) to the rosette on both sides using the ledger heads and wedges, and secure with hammer blows.
2. Fit Ledger Braces UBL–2 (**4**).
3. Install Horizontal Braces UBH Flex (**6**).

(Fig. A1.10)

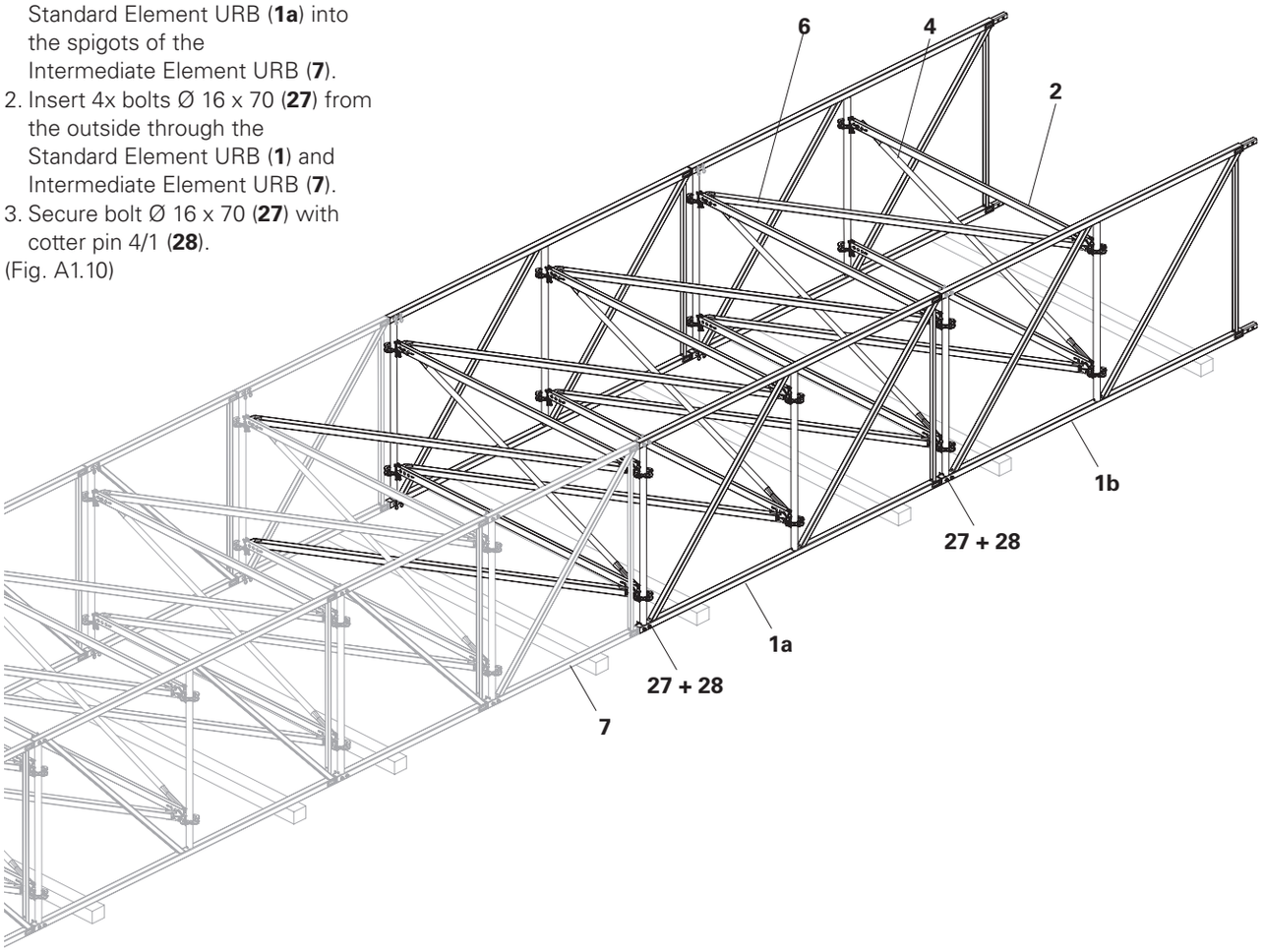


Fig. A1.10

A1 Girder package

Components

2	Horizontal Ledger UH–2 250	2x
4	Ledger Brace UBL–2 250/100	1x
6	Horizontal Brace UBH Flex 250/150	2x
8	LGS End Element URB 150	2x
27	Bolt Ø 16 x 70	8x
28	Cotter pin 4/1	8x

Mounting the end element

1. Insert the End Element URB (**8**) into the spigots of the Standard Element URB (**1**).
2. Insert 4x bolts Ø 16 x 70 (**27**) from the outside through the End Element URB (**8**) and Standard Element URB (**1**).
3. Secure bolt Ø 16 x 70 (**27**) with cotter pin 4/1 (**28**).
4. Attach Horizontal Ledgers UH–2 (**2**) to the rosette on both sides using the ledger heads and wedges, and secure with hammer blows.
5. Fit Ledger Braces UBL–2 (**4**).
6. Install Horizontal Braces UBH Flex (**6**).

(Fig. A1.11)

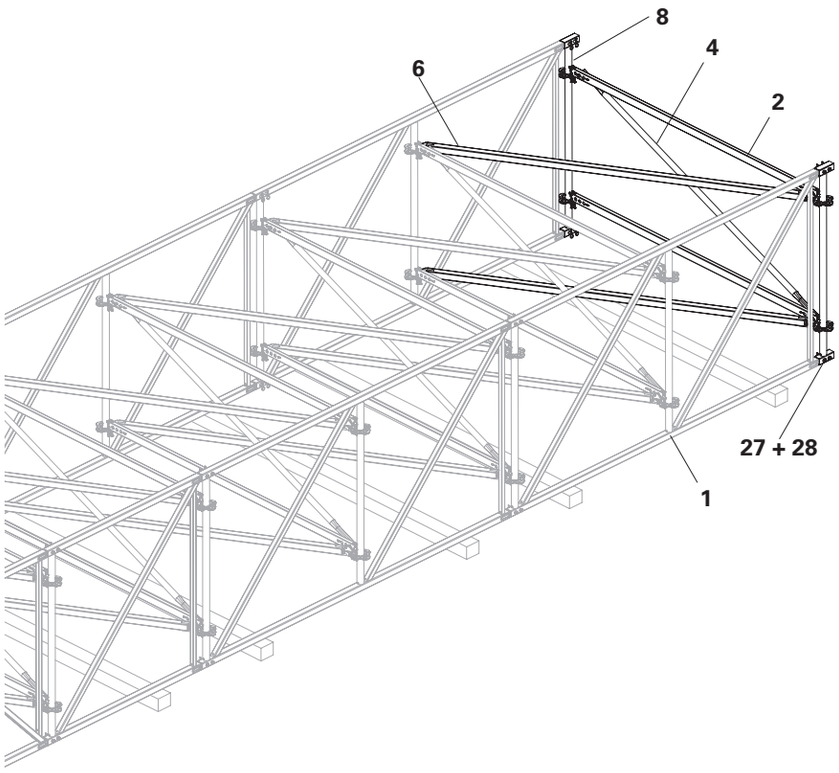


Fig. A1.11

Top standards

Components

9	LGS Collar URP	12x
10	Pin with Spacer Tube URE 4/42	8x
11	Top Standard UVH 100	8x

Assembly

1. Attach Collars URP (**9**) to the Standard Elements URB, Intermediate Elements URB and End Elements URB with 3.00 m spacings.
2. Securely fix the wedges (**9.1**).

(Fig. A2.01 + A2.01a)

The collar must be centred over the vertical tube of the standard or intermediate element.

Assembling the top standards

1. Insert the spigot with the Spacer Tube URE 4/42 (**10**) into the Collars URP (**9**).
2. Insert the Top Standard UVH (**11**) into the spigot with Spacer Tube URE 4/42 (**10**).

(Fig. A2.01 + A2.01a)

Ensure that the holes are aligned for marking out.

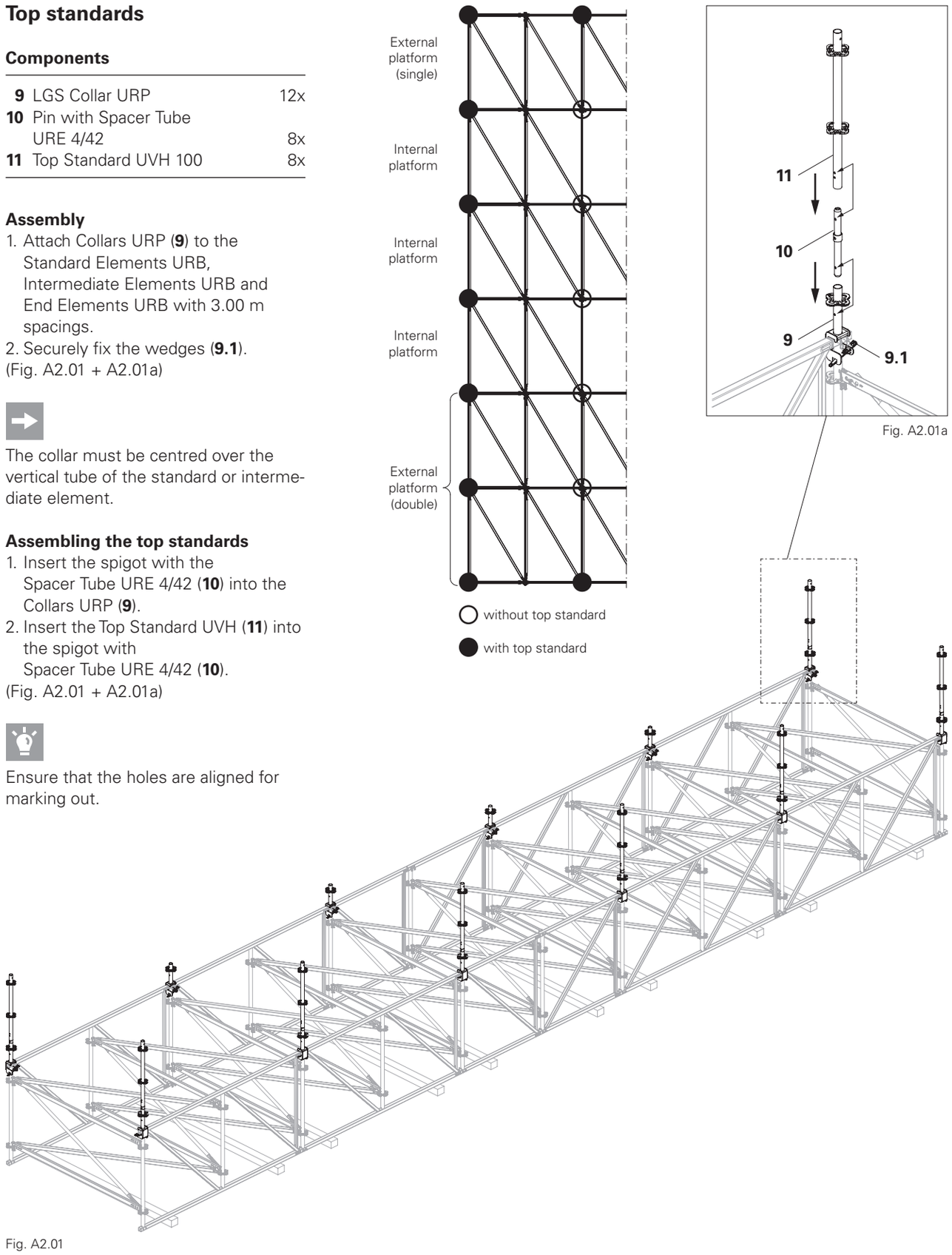


Fig. A2.01a

Fig. A2.01

Decks

Install Horizontal Ledger UHV–2 as decking support.

Components

3	Horizontal Ledger UH–2 300	10x
12	Horizontal Ledger UHV 250–2	6x

Assembly

1. Attach Horizontal Ledgers UH–2 (**2b**) to the rosette on both sides in the longitudinal direction using the ledger heads and wedges, and secure with hammer blows.
2. Attach Horizontal Ledgers UHV (**12**) to the rosette on both sides in the transverse direction using the ledger heads and wedges, and secure with hammer blows.

(Fig. A2.02)

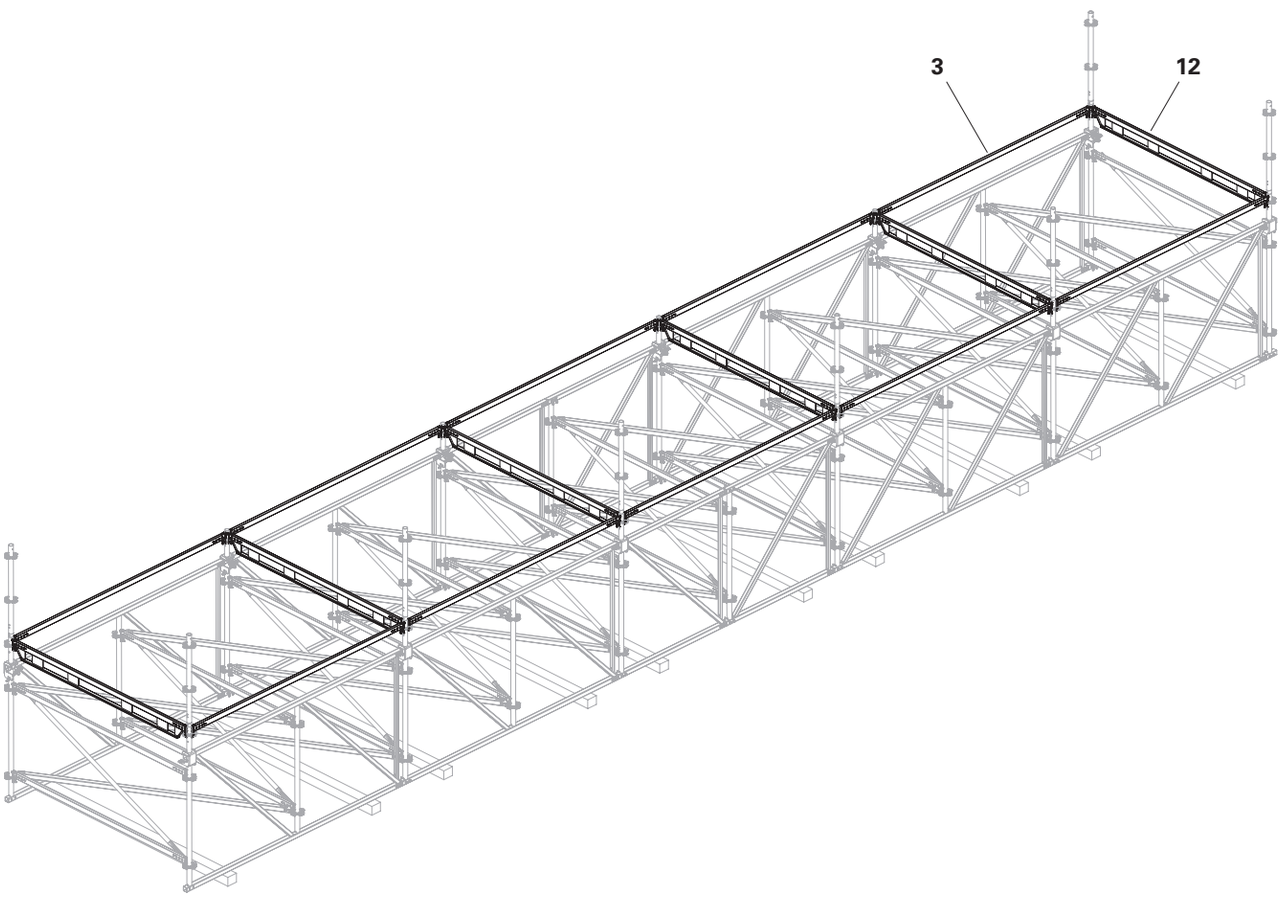


Fig. A2.02

Warning

Risk of falling!

⇒ Install steel decks from a safe working position, or mount temporary guardrails.

Components

13 Steel Deck UDG–2 25 x 300	50x

Assembly

1. Mount Steel Decks UDG–2 (**13**) in the longitudinal direction on Horizontal Ledger UHV (**12**).
   → Lift lock devices drop under the Horizontal Ledger UHV and secure the deck.

(Fig. A2.03)

Have all lift locks (**13.1**) fallen below the horizontal ledger? Bracket (**13.2**) must be flush with the deck.
If not, lift the deck slightly and let it drop into position or operate the lift lock manually.

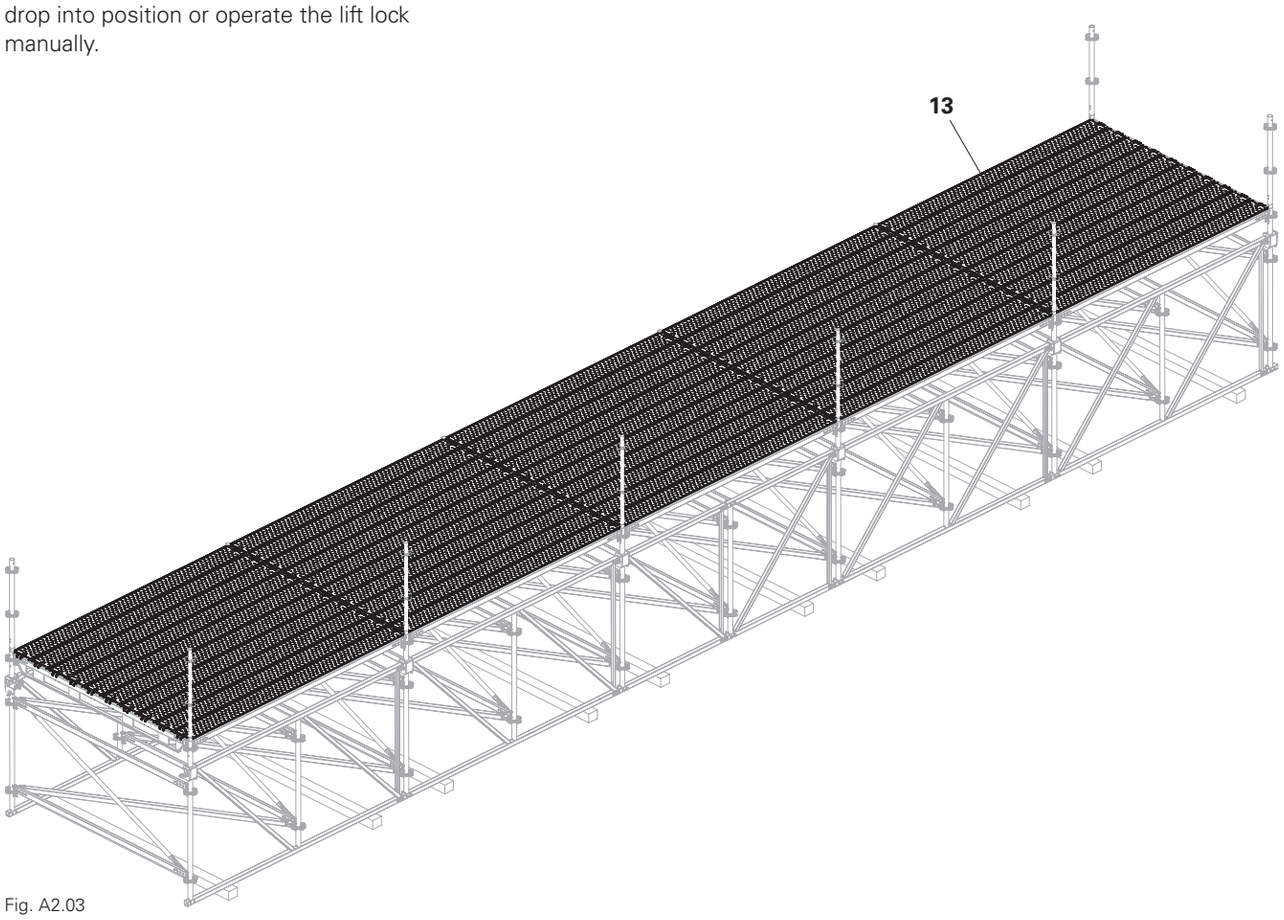


Fig. A2.03

Guardrails and toe boards

Warning

Risk of falling!

⇒ Mount the lateral protection from a safe working position

Components

2	Horizontal Ledger UH–2 250	4x
3	Horizontal Ledger UH–2 300	10x
24	Steel Toe Board UPY 250	2x
25	Steel Toe Board UPY 300	5x

Assembly

1. Attach Horizontal Ledgers UH–2 (**2**) to the rosette on both sides as guardrails using the ledger heads and wedges, and secure with hammer blows.
2. Attach Horizontal Ledger UH–2 (**3**) to the rosette on both sides as guardrails using the ledger heads and wedges, and secure with hammer blows.
3. Install the Steel Toe Boards UPY (**24**) on the standards on the front side.
4. Install the Steel Toe Boards UPY (**25**) on the standards on the longitudinal side.

(Fig. A2.04)

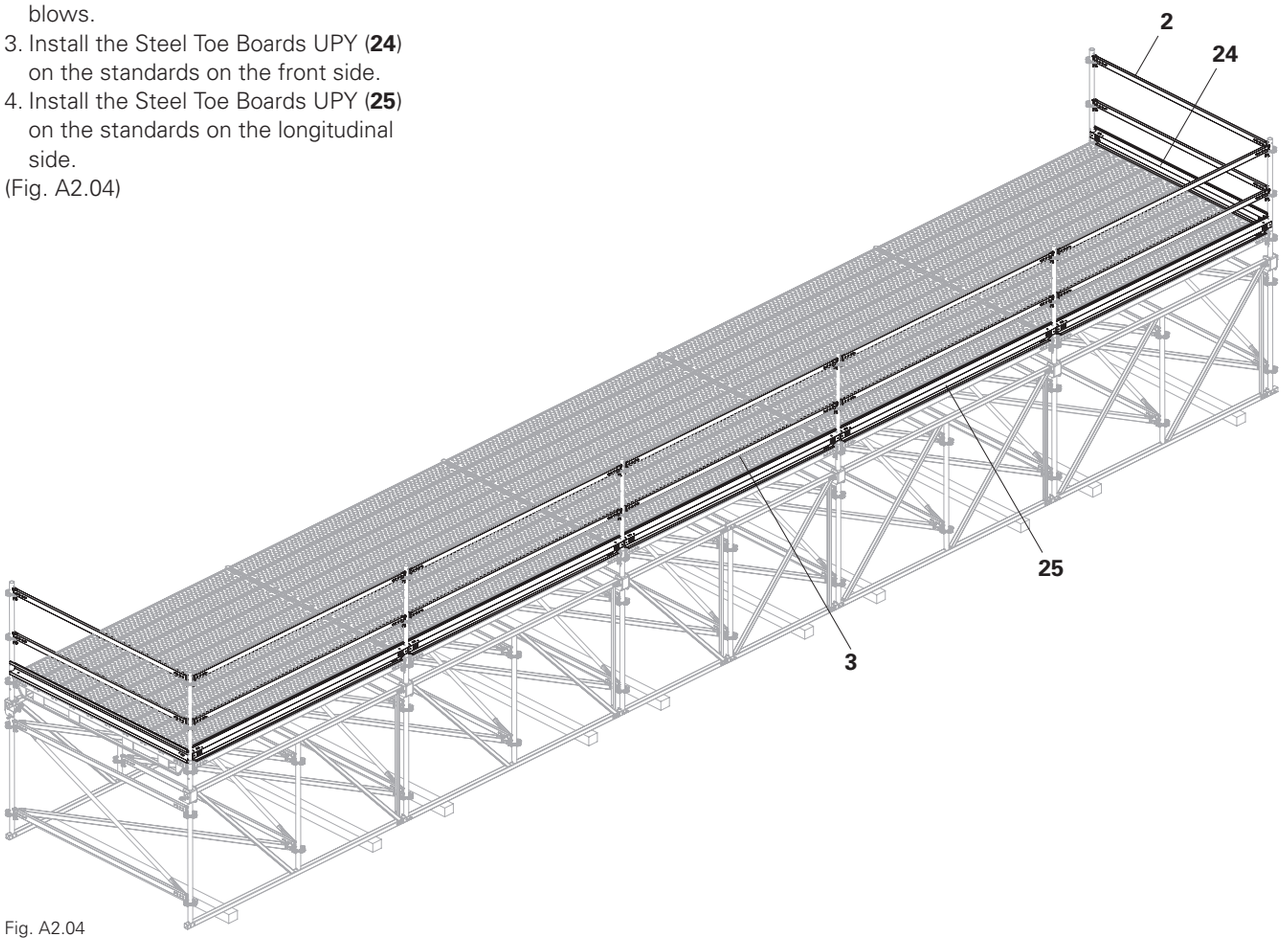


Fig. A2.04

Top standards and decks

Components

3	Horizontal Ledger UH–2 300	10x
9	LGS Collar URP	12x
10	Pin with Spacer Tube URE 4/42	4x
11	Top Standard UVH 100	4x
12	Horizontal Ledger UHV–2 250	6x

Assembly

1. Attach Collars URP (**9**) to the Standard Elements URB, Intermediate Elements URB and End Elements URB with 3.00 m spacings.
2. Securely fix the wedges (**9.1**).

(Fig. A3.01 + A3.01a)

3. Insert the spigot with the Spacer Tube URE 4/42 (**10**) into the Collars URP (**9**) at the four corners.
4. Insert the Top Standard UVH (**11**) into the spigot with Spacer Tube URE 4/42 (**10**).

(Fig. A3.01 + A3.01a)

Ensure that the holes are aligned for marking out.

5. Attach Horizontal Ledgers UH–2 (**3**) to the rosette on both sides using the ledger heads and wedges, and secure with hammer blows.
6. Attach Horizontal Ledgers UHV (**12**) to the rosette on both sides using the ledger heads and wedges, and secure with hammer blows.

(Fig. A3.01)

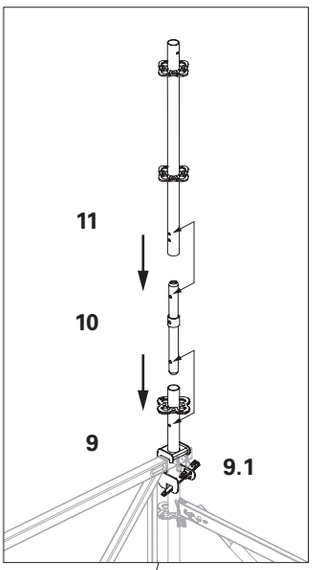


Fig. A3.01a

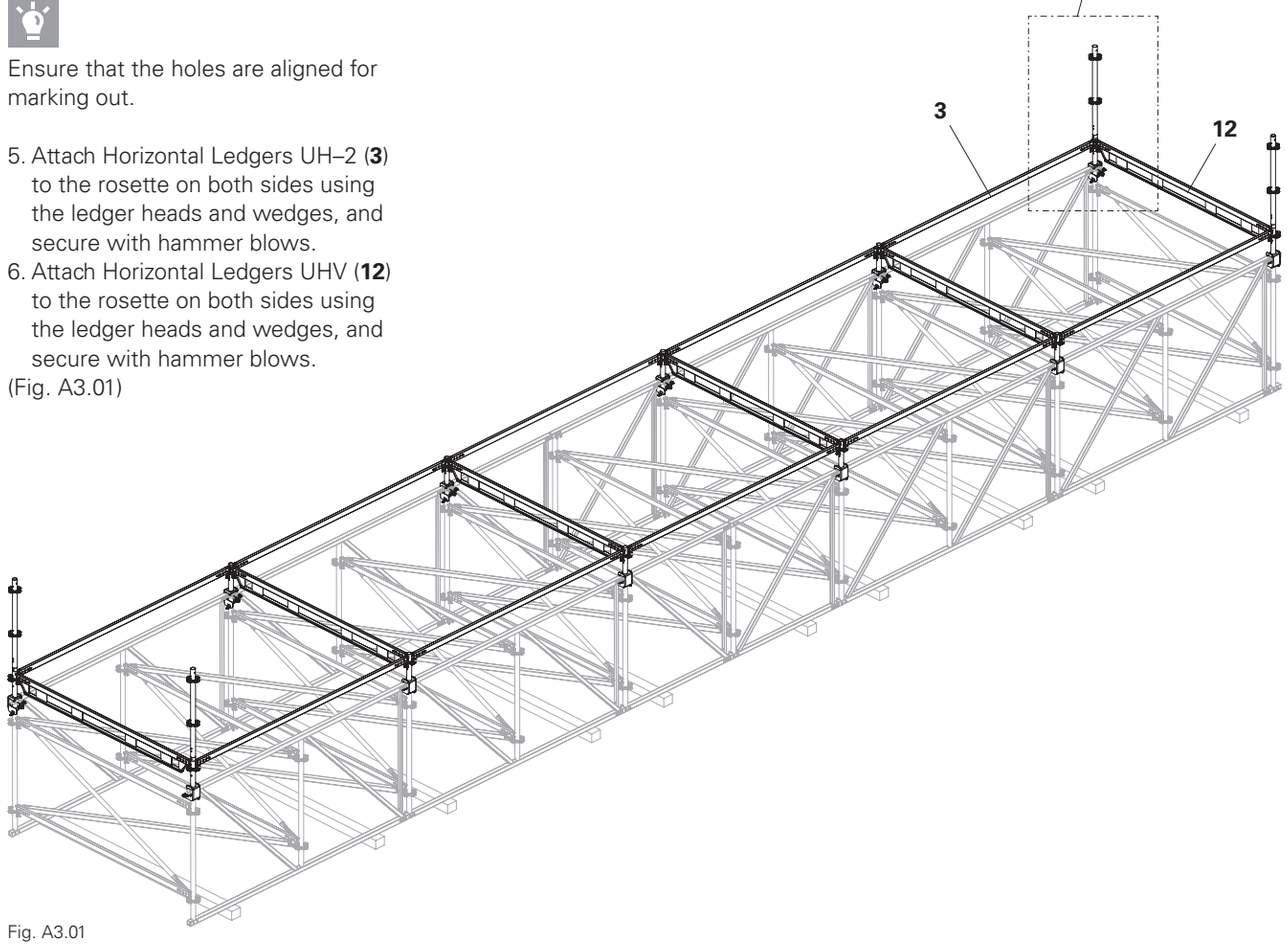


Fig. A3.01

Warning

Risk of falling!

⇒ Install steel decks from a safe working position, or mount temporary guardrails.

Components

13 Steel Deck UDG–2 25 x 300	50x

Assembly

1. Mount Steel Decks UDG–2 (**13**) in the longitudinal direction on Horizontal Ledger UHV (**12**).
   → Lift lock devices drop under the Horizontal Ledger UHV and secure the deck.

(Fig. A3.02)

Have all lift locks (**13.1**) fallen below the horizontal ledger? Bracket (**13.2**) must be flush with the deck.
If not, lift the deck slightly and let it drop into position or operate the lift lock manually.

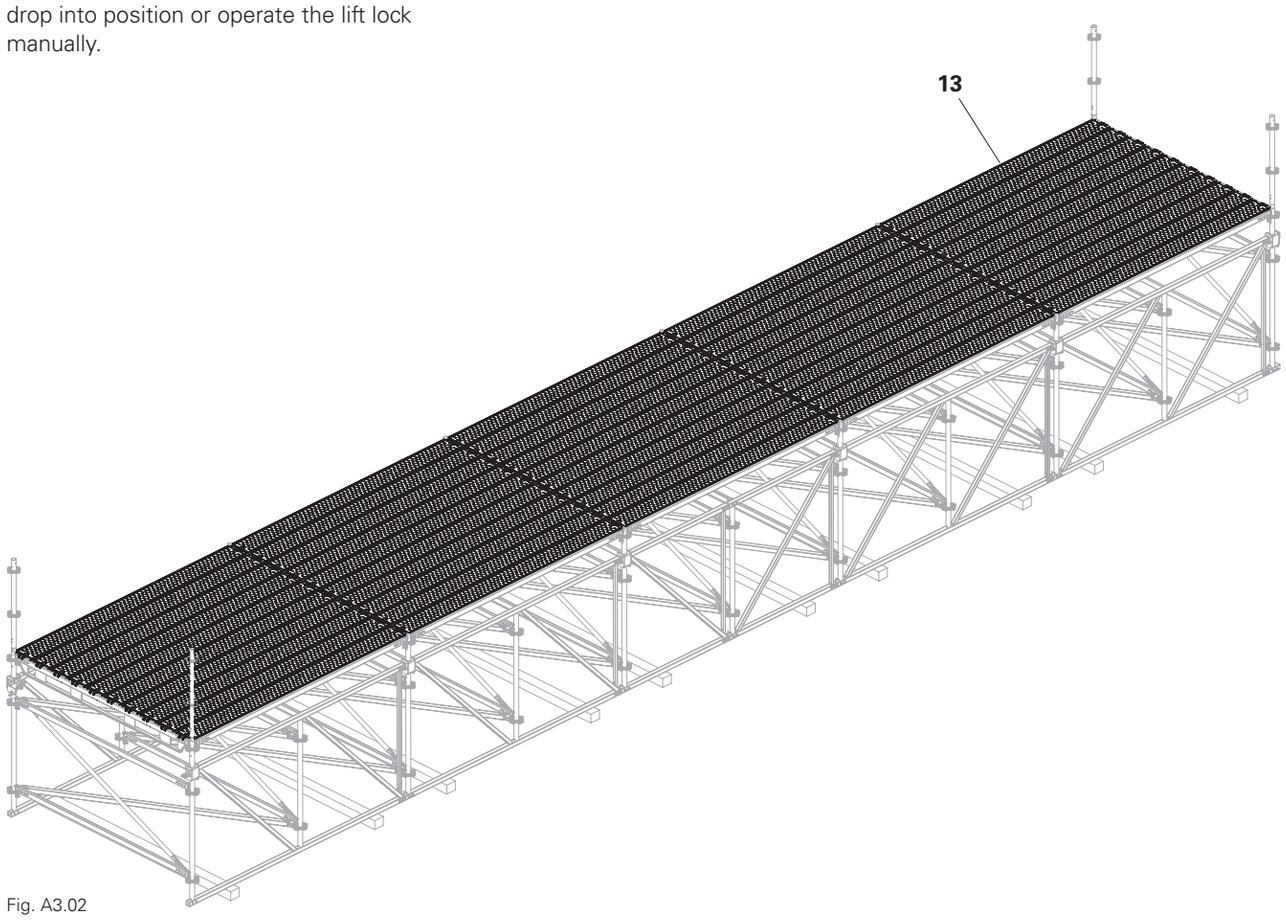


Fig. A3.02

Guardrails and toe boards

Components

2	Horizontal Ledger UH–2 250	4x
24	Steel Toe Board UPY 250	2x

Assembly

1. Attach Horizontal Ledger UH–2 (**2**) to the rosette on both sides as guardrails using the ledger heads and wedges, and secure with hammer blows.
2. Install the Steel Toe Boards UPY (**24**) on the standards on the front side.

(Fig. A3.03)

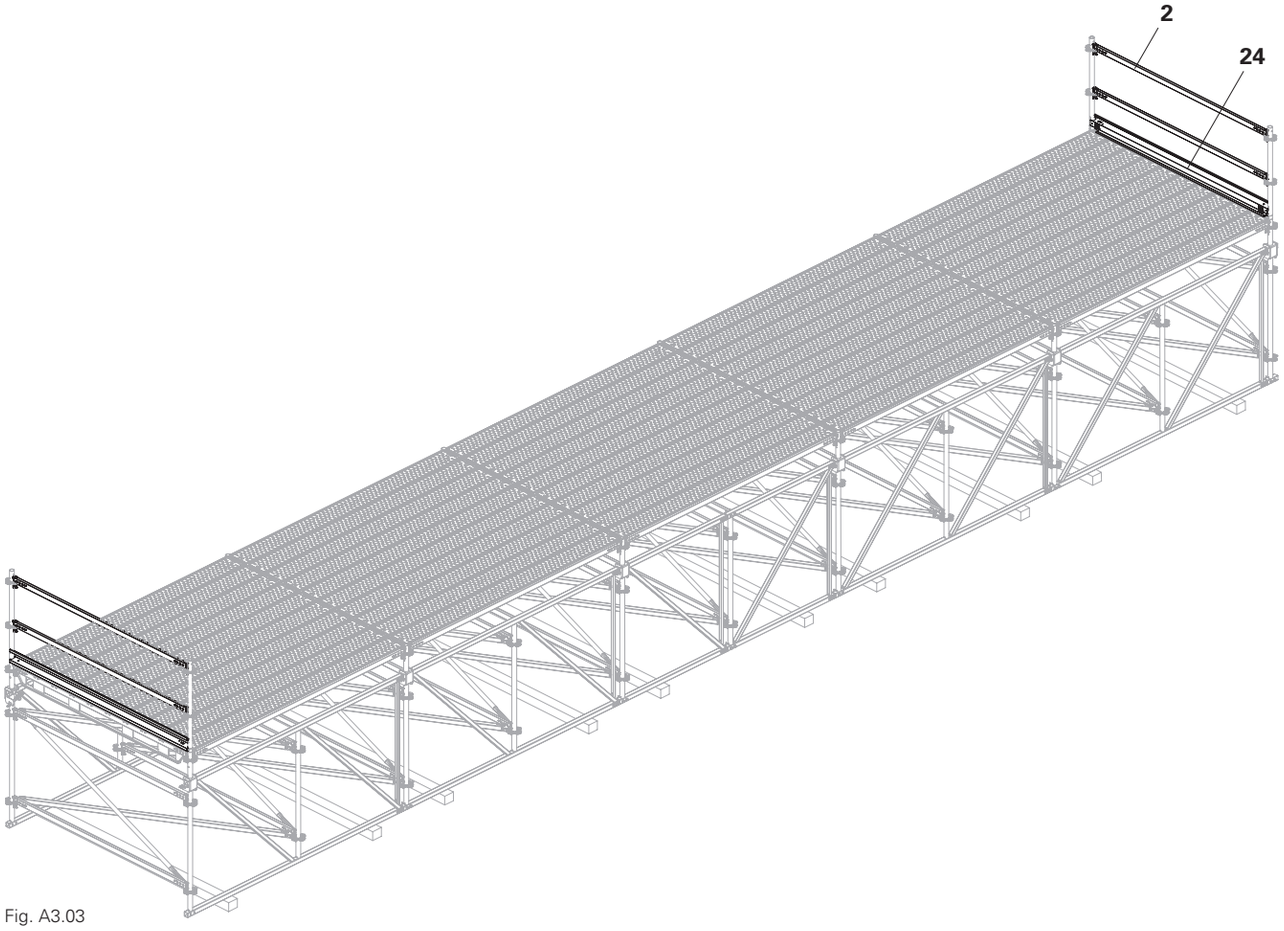


Fig. A3.03

A4 LGS Support URS 0°

Warning

Risk of injury!

⇒ Do not stand under the suspended load.

⇒ The working level must have sufficient load–bearing capacity.

Preparation

1. Attach the Working Platform LGS 150 to the crane using 4–sling lifting gear, α = approx. 45°. (Fig. A4.01a) Attachment points on the Standard Element URB in the centre. (Fig. A4.01b)
2. Set up the support with height ≥45 cm. (Fig. A4.01c)
3. Place the Working Platform LGS 150 on the support.

(Fig. A4.01)

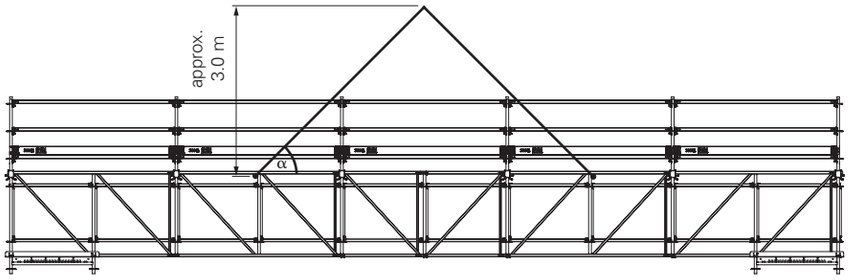


Fig. A4.01a

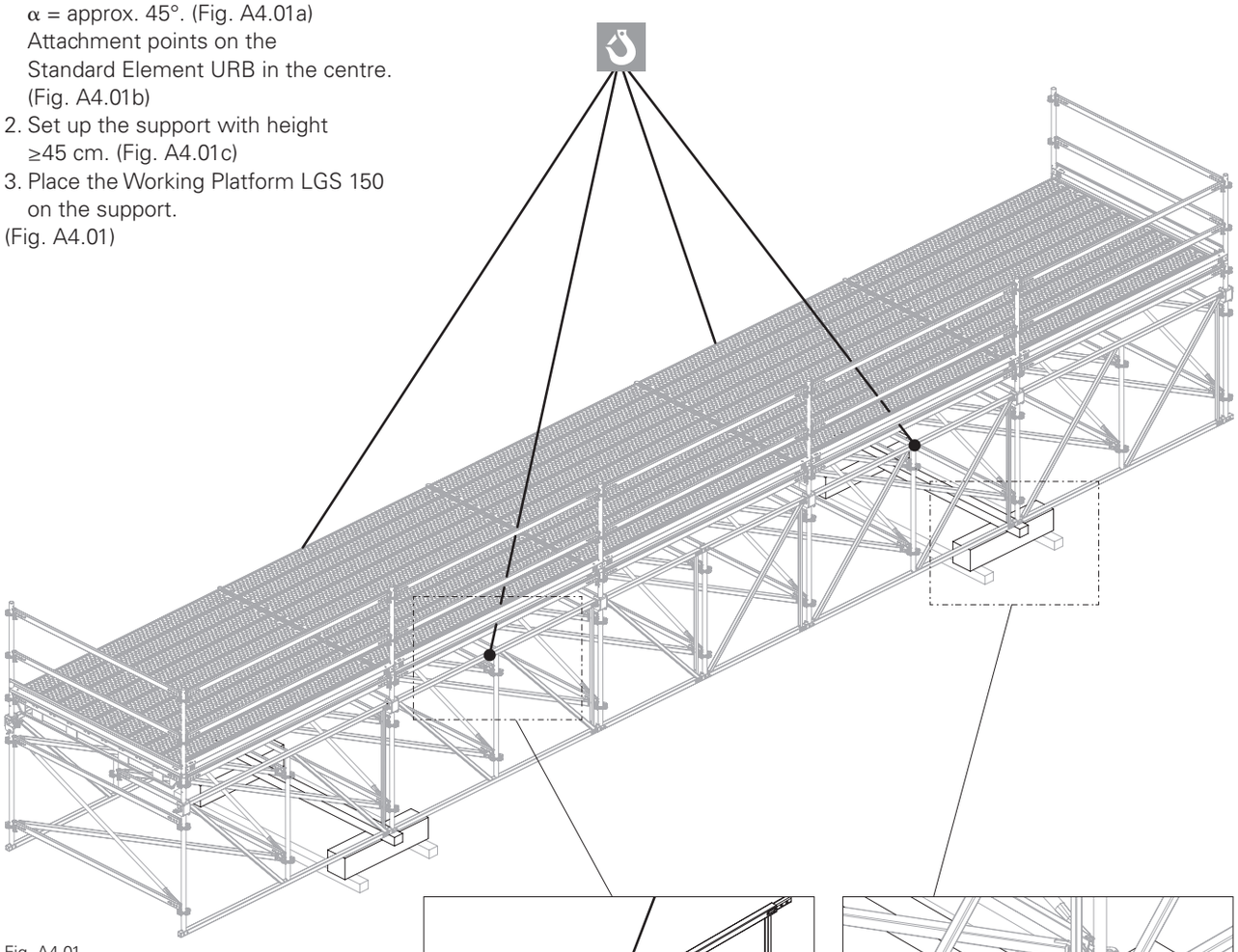


Fig. A4.01

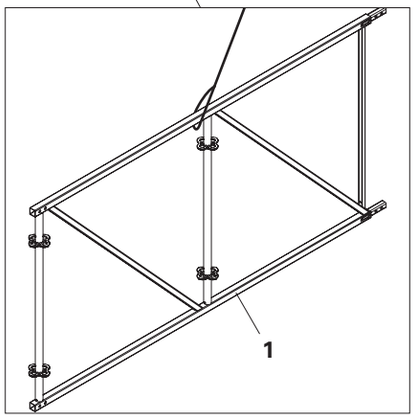


Fig. A4.01b

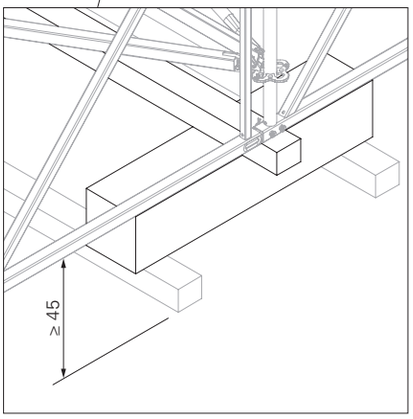


Fig. A4.01c

Fig. A4.01b shows the position of the crane splice on the LGS Standard Element URB 300/150 (**1**) without additional assembly.

A4 LGS Support URS 0°

Components

14 LGS Support URS 0°	4x
27 Bolt Ø 16 x 70	12x
28 Cotter pin 4/1	12x

Assembly on the end element
Attach the support (**14**) to Standard Element URB and End Element URB using the bolts (**27**), and secure with cotter pins 4/1 (**28**):
– 2x below on the side of the vertical through the holes of the support and End Element URB with the bolts of the End Element URB (remove the bolts of the End Element URB and reinstall with the support),
– 1x above the rectangular tube of the standard element.
(Fig. A4.02 + A4.02a + A4.02b)

Assembly on the standard element
Fix the support (**14**) to the Standard Element URB using the bolts (**27**), and secure the cotter pins 4/1 (**28**):
– 2x below on the side of the vertical through the holes of the support and the Standard Element URB,
– 1x above the rectangular tube of the standard element.
(Fig. A4.02 + A4.02c)

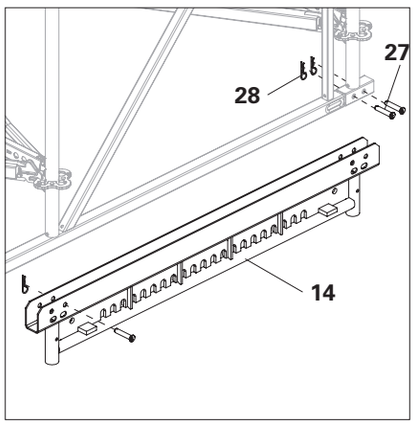


Fig. A4.02a

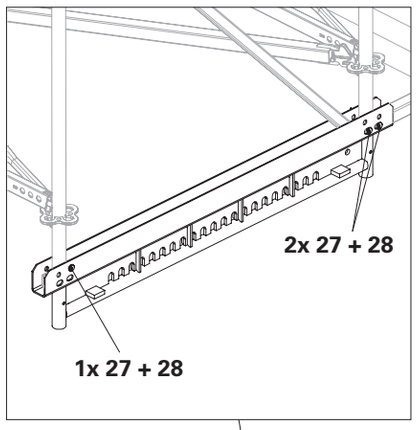


Fig. A4.02b

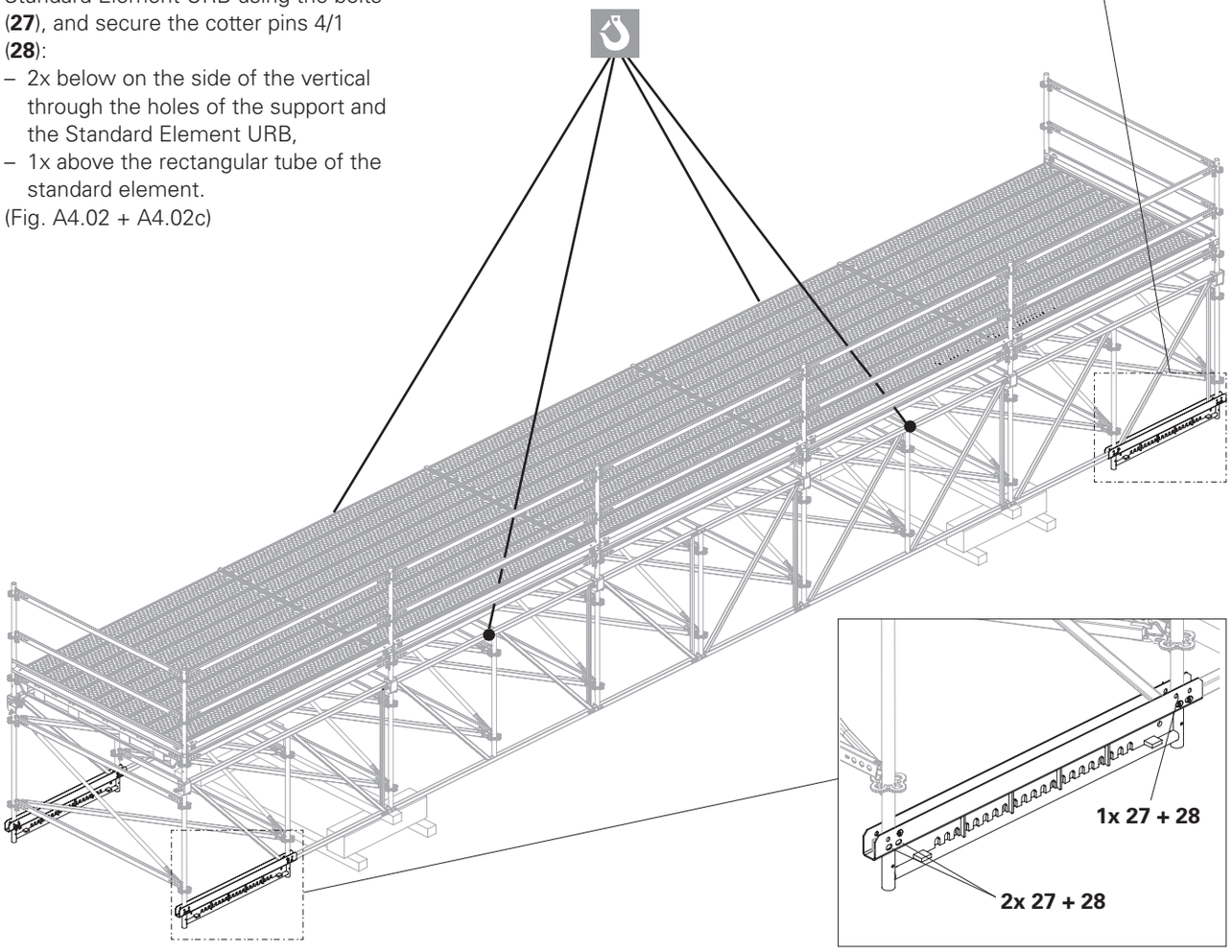

Fig. A4.02

Fig. A4.02c

A5 Ledgers

- Mount the supports from a safe working position.
- The supporting structure is not the subject of these Instructions for Assembly and Use.
- During assembly of the supporting structure, always ensure that the holes in the verticals are aligned.
- The Ledger URL is available in four lengths "L_1":
  - 67 cm: URL 67/14
  - 75 cm: URL 75/14
  - 100 cm: URL 100/14
  - 150 cm: URL 150/14 – shown

Components

15	Ledger URL 150/14	3x
16	Bolt ISO 4014 M10 x 100	6x
17	Nut ISO 7040 M10–8	6x

Assembly

1. Insert 3x Ledgers URL (**15**) into the standards. Ensure that the row of holes is at the top. (Fig. A5.01 + A5.01a)
2. The Ledgers URL (**15**) are attached to the standards by means of 2x bolt ISO 4014 M10 x 100 (**16**) and nuts ISO 7040 M10 (**17**) respectively. (Fig. A5.01b)

Is the row of holes (**15.1**) at the top?

During further assembly, please note that there are two variants:

- Mobile girder package.
- Fixed girder package.

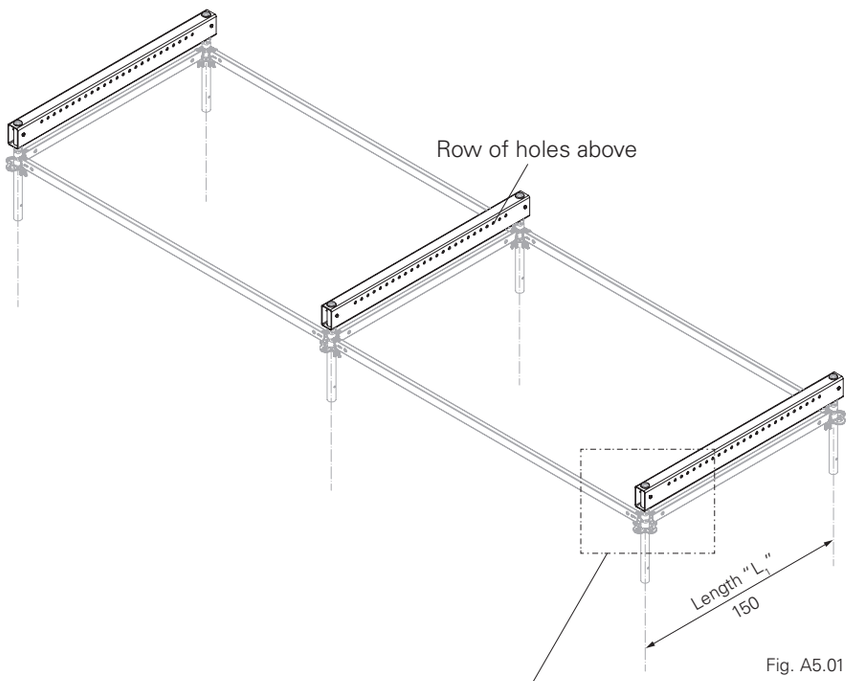


Fig. A5.01

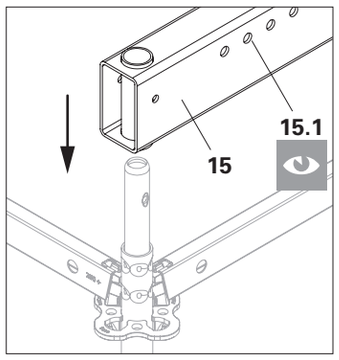


Fig. A5.01a

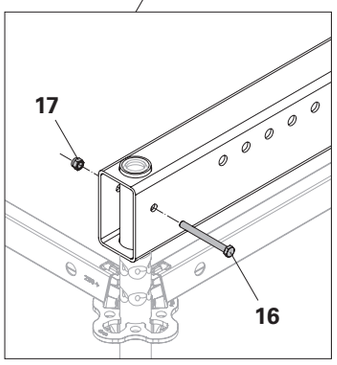


Fig. A5.01b

Fitting the rail support

- Mount the supports from a safe working position.
- The position of the Rail Supports URF (**18**) with the hole to be used is project–related.
- Ensure that the rail support is mounted in a uniform way (same direction and same hole).

Components

18	Rail Support URF	3x
26	Bolt Ø 16 x 150	3x
28	Cotter pin 4/1	3x

Assembly

1. Place the Rail Support URF (**18**) on the Ledger URL (**15**).
2. Fix the Rail Support URF (**18**) to the Ledger URL (**15**) using 1x bolt (**26**) respectively, and secure with cotter pins (**28**).

(Fig. A6.01 + A6.01a)

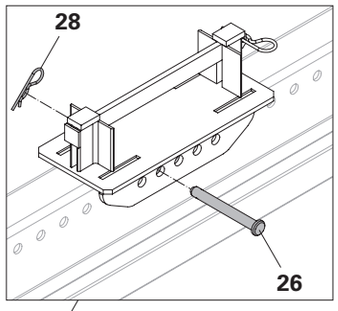


Fig. A6.01a

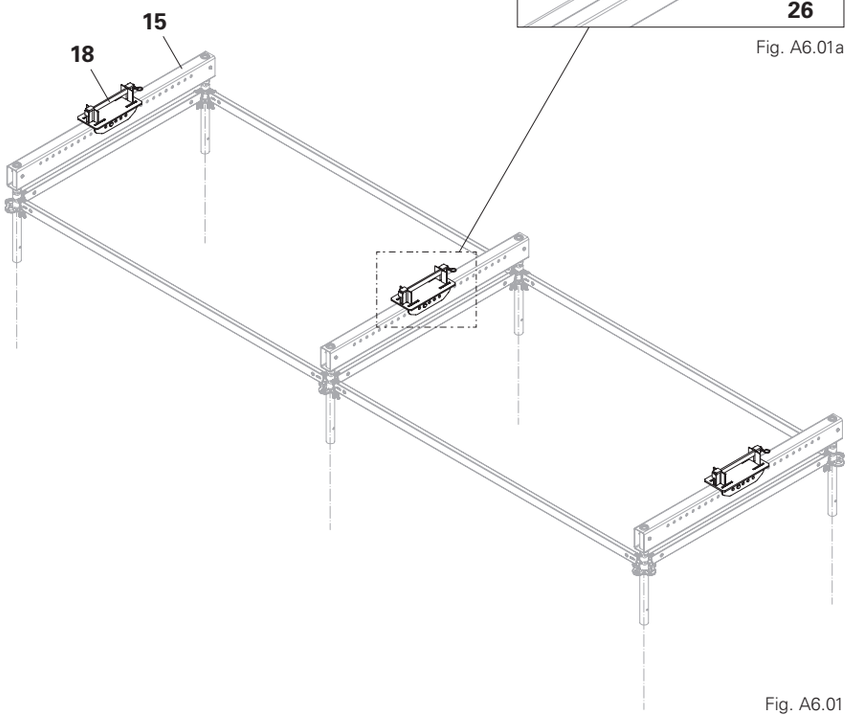


Fig. A6.01

Fitting the rail

The Aluminium Rail URT is available in four lengths "L_2":
- 150 cm: URT 150
- 200 cm: URT 200
- 250 cm: URT 250 – shown
- 300 cm: URT 300

Components

19 Aluminium Rail URT 250	2x
20 Rail End Piece URD	1x

Preparation

1. Remove cotter pin (**18.2**) from the holder (**18.1**).
2. Pull out the holder (**18.1**).

Assembly

1. Place one Aluminium Rail URT (**19**) between two Rail Supports URF (**18**). (Fig. 6.02)
2. Push one holder (**18.1**) through the guide of the Rail Support URF above the bottom spigot (**19.1**). (Fig. 6.02a)
3. Insert the cotter pin (**18.2**) into the hole of the holder (**18.1**). (Fig. 6.02a)
   → The aluminium rail is securely locked.
4. Insert an additional Aluminium Rails URT with the spigots (**19.1**) (**19.2**) into the profile tubes (**19.3**) of the first Aluminium Rail URT. (Fig. A6.02)
5. Repeat steps 2, 3 and 4 for each additional aluminium rail.

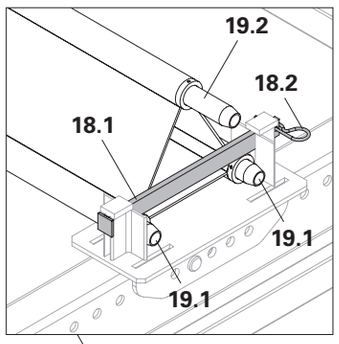


Fig. A6.02a

Fig. A6.02

Mounting the Rail End Piece URD

1. On the last Aluminium Rail URT, push the two pins of the Rail End Piece URD (**20**) into the two lower holes of the profile tube. (Fig. A6.02b)
2. Firstly, push the holder (**18.1**) through the guide of the Rail Support URF – at A – then between the brackets of the End Piece URB – at B – and again through the guide of the Rail Support URF – at C. (Fig. 6.02b + 6.02c)
3. Insert a cotter pin (**18.2**) into the hole of the holder. (Fig. 6.02c)
   → The holder is secured.

View "X"

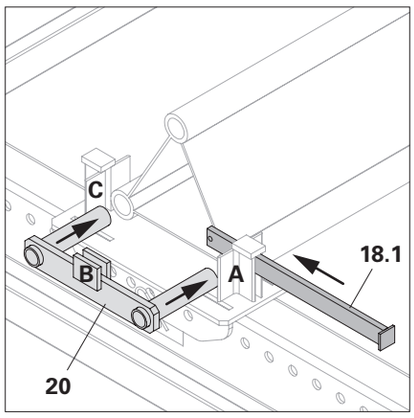


Fig. A6.02b

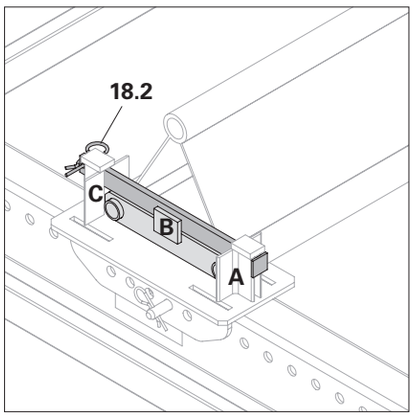


Fig. A6.02c

Fitting stoppers

- The stoppers cannot transfer the horizontal loads of the platform, therefore the platform must be secured by means of Tension Belts PTB 12 (see Section "Positioning the girder package on the carriage" on page 42).
- Stoppers limit the distance moved and are mounted at the open ends of the aluminium rail.

Components

21 Stopper URA–2	2x

Assembly

1. Place Stopper URA–2 (**21**) with contour plate (**21.1**) and clamping piece (**21.2**) on the upper profile tube (**19.3**) of the Aluminium Rail URT. Take into consideration dimension > 100 mm. (Fig. A6.03a)
2. Secure the wedge (**21.3**) with a hammer. (Fig. A6.03)
   → The stopper is securely locked in position.

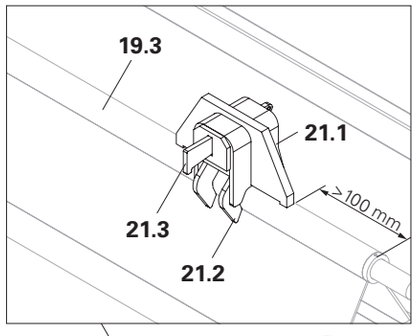


Fig. A6.03a

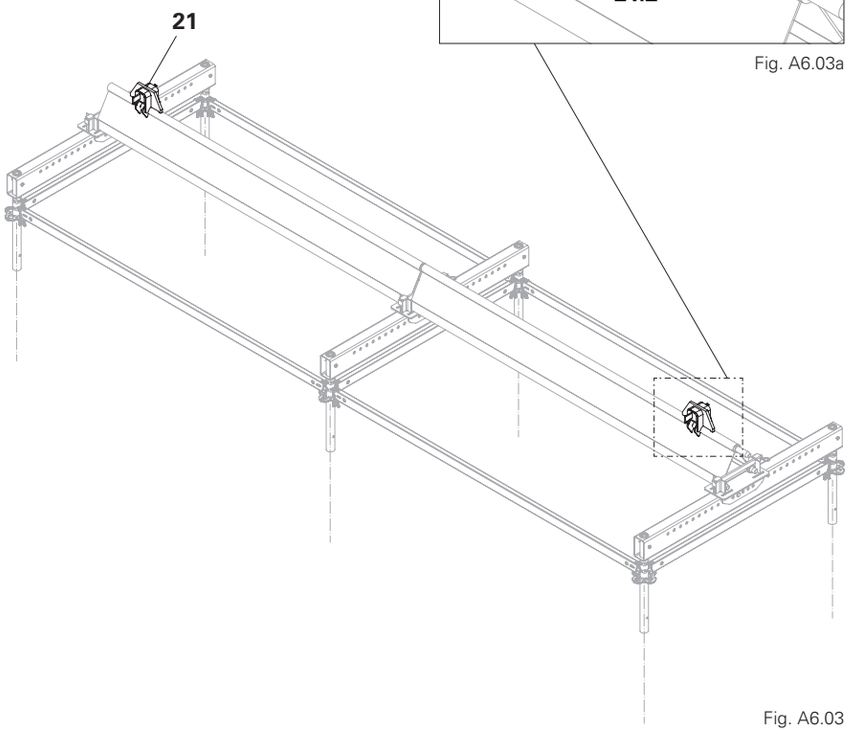


Fig. A6.03

Fitting the carriage

- The carriage connects the support to the aluminium rail and can be moved in a longitudinal direction.
- Ensure that the Carriages URW are mounted in a uniform way (number of holes on each side is the same).

Components per side

22 Carriage URW	2x

Preparation

1. Release bolts M12 x 30 (**22.3**) – per block 2x.
2. Remove blocks (**22.2**).
3. Remove cotter pin (**22.5**) and bolt (**22.4**).
4. Remove lift lock (**22.6**).
5. Have all parts ready.

(Fig. A6.04a + A6.04b)

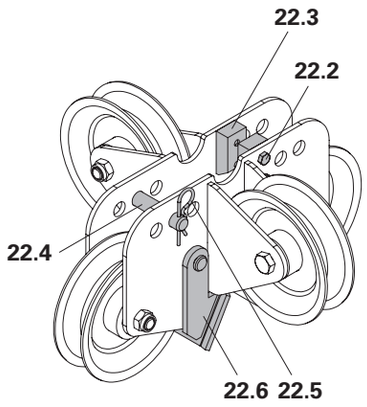


Fig. A6.04a

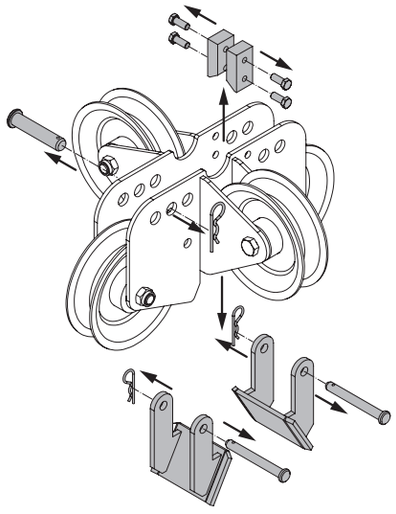


Fig. A6.04b

Assembly

1. Place Carriage URW (**22**) with the rollers (**22.7**) on the tube (**19.3**) of the Aluminium Rail URT (**19**).
2. Fit the lift lock (**22.6**).
   → Carriage is secured against lifting.

(Fig. A6.05 + A6.05a)

Is the lift lock (**22.6**) lying on the side surfaces of the rail?

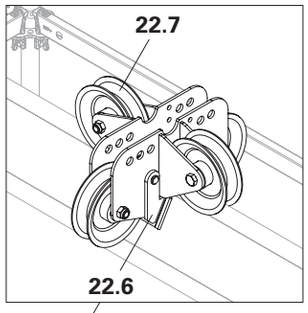


Fig. A6.05a

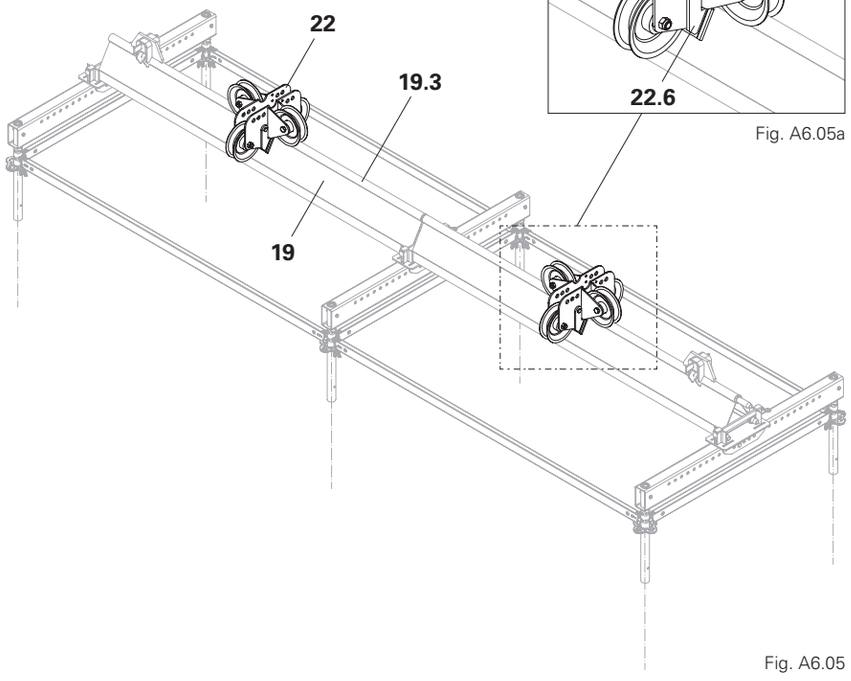
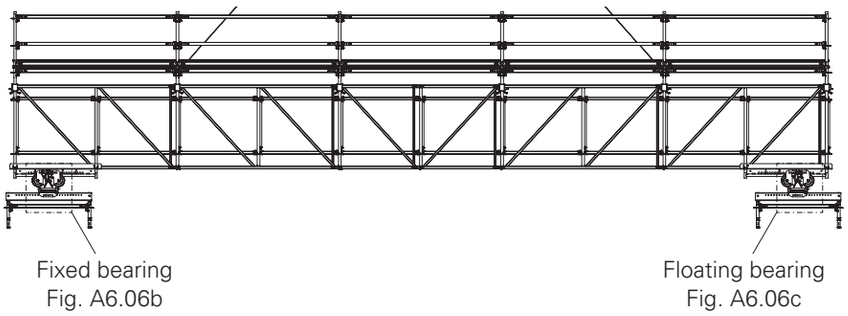


Fig. A6.05

Positioning the girder package on the carriage



Danger

- Risk of injury!

⇒ When in the parking position, secure the girder package in order to prevent it from moving. (Fig. A6.06)

⇒ Do not stand under the suspended load.

⇒ Mount the components from a safe working position.

- Crushing risk!

  ⇒ Do not reach between the girder package and Carriage URW.

- The position of the Support URS 0° (**14**) with the hole to be used on the Carriage URW (**22**) is determined on a project–specific basis.
- Mount a fixed bearing on one side of the shoring and the floating bearing on the other side.
- For attachment points, see Section A4.

Guide the girder package with ropes.

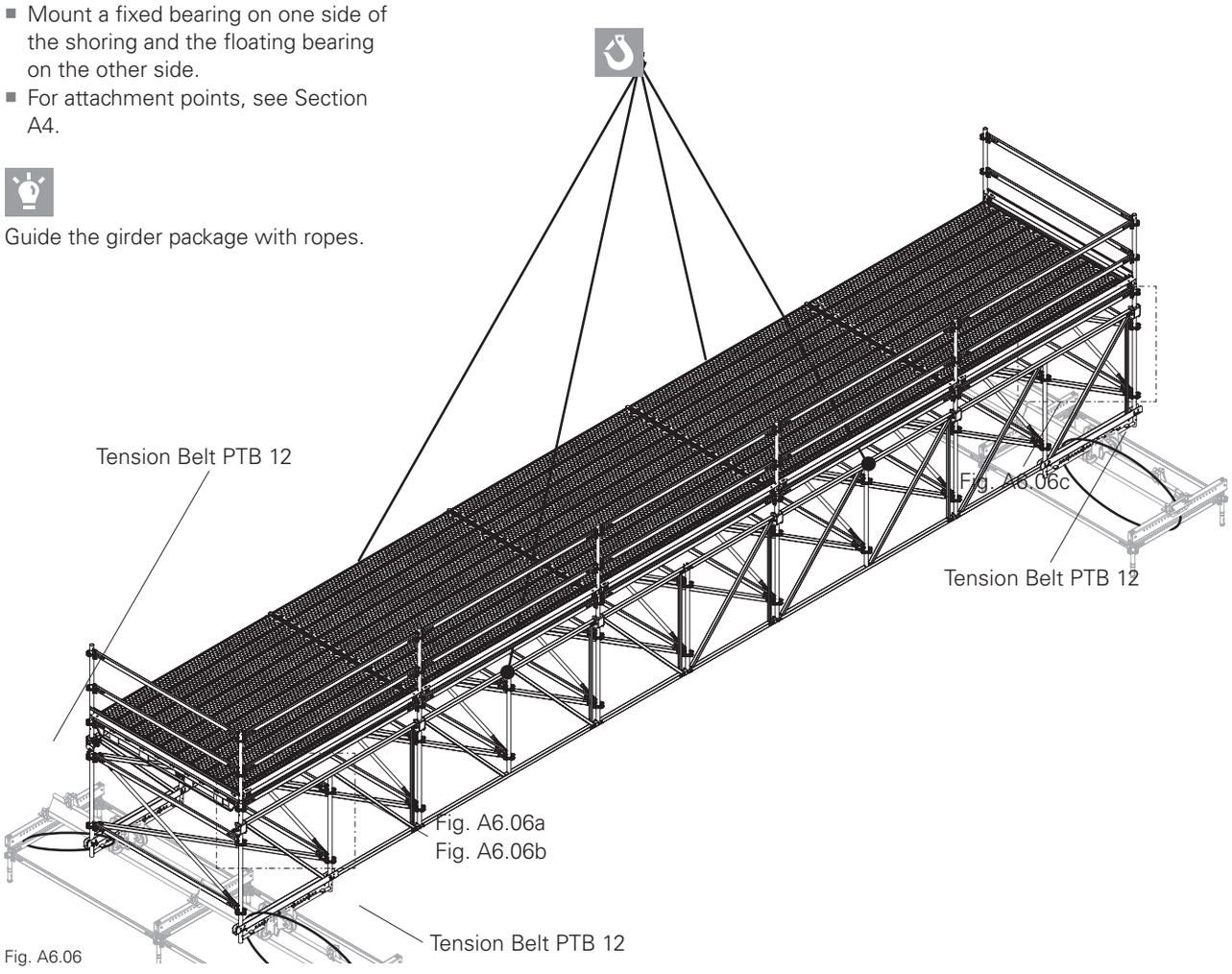


Fig. A6.06

Fitting a girder package

1. Raise the girder package with the crane and place on the Carriage URW (**22**).
2. Place blocks (**22.2**) on the tube of the Support URS 0° (**14**) as lift lock devices and fix them to the Carriage URW (**22**) using 2x bolts M12 x 30 (**22.3**) respectively.

(Fig. A6.06a)

3. Insert bolts (**22.4**) through the designated recess of the Carriage URW (**22**) and hole of the Support URS (**14**), and secure with cotter pins (**22.5**). (Fig. A6.06a)
   → Fixed bearing is now mounted. (Fig. A6.06b)
4. Install second side, as described in steps 1 + 2. Do not secure bolts and cotter pins.
   → Floating bearing is now mounted. (Fig. A6.06c)

(Fig. A6.06)

Are both fixed bearings of the girder package bolted in the same recess?

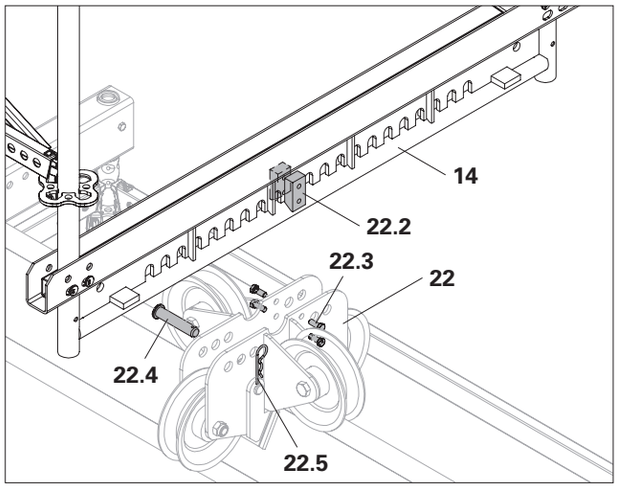


Fig. A6.06a

Fixed bearing (bolted to the support)

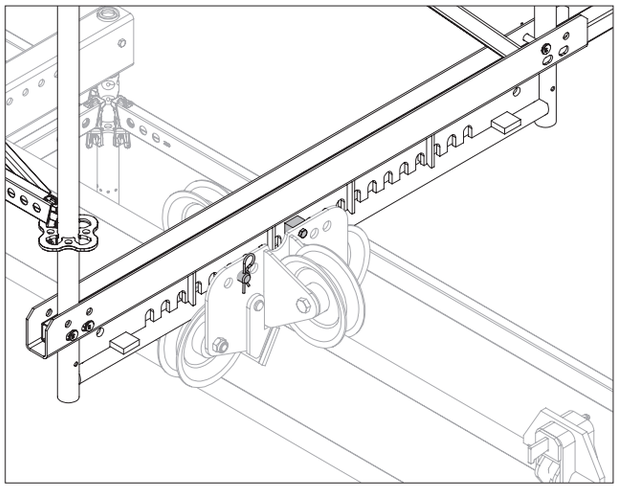


Fig. A6.06b

Floating bearing (not bolted to the support)

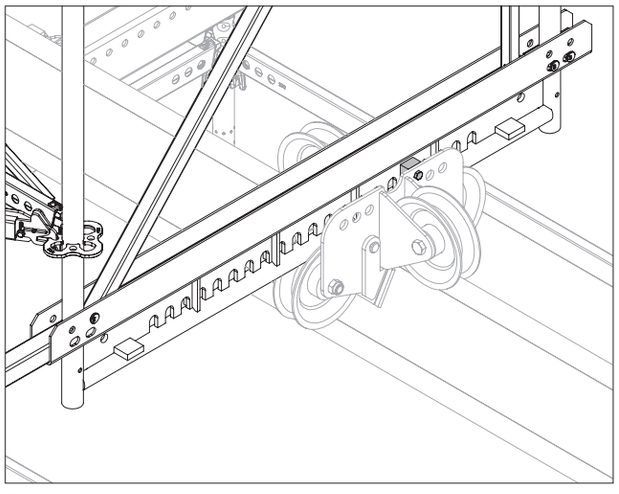


Fig. A6.06c

A7 Fixed girder package

Fitting the bearer

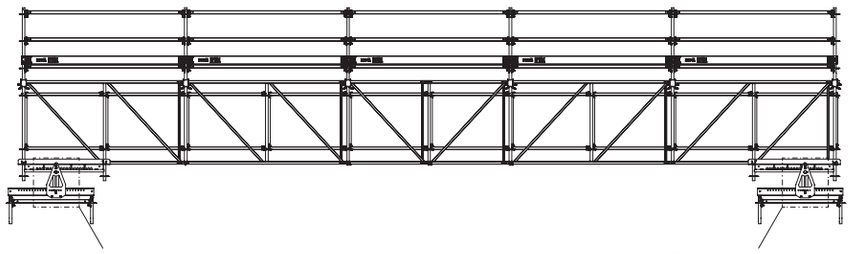
Warning
Risk of injury!
⇒ Mount the components from a safe working position.

- The exact position of the bearer (**23**) on the Ledger URL (**15**) with the hole to be used is determined on a project–specific basis.
- Hole positions of the bearer are not mirrored. Therefore, always install the bearers in the same way.

Components

23	LGS Bearer URS	2x
5	Ledger Brace UBL–2 250/50	2x

Preparation
Release 3x bolts Ø 16 (**23.1**) and cotter pins 4/1 (**23.2**) on the bearer (**23**). (Fig. A7.01)



Fixed bearing
Fig. A7.02a

Floating bearing
Fig. A7.02b

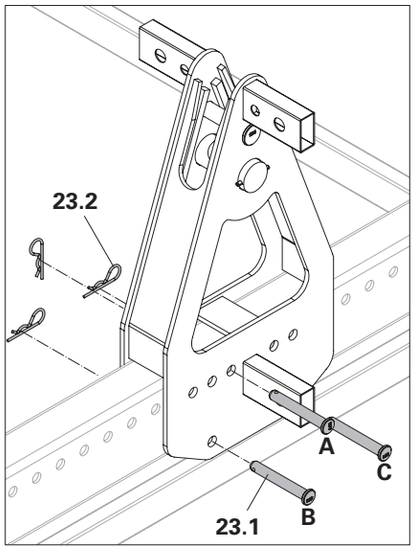


Fig. A7.01

A7 Fixed girder package

Assembly of the fixed bearing
1. Place the Bearer URS (**23**) on the Ledger URL (**15**).
2. Mount the Bearer URS (**23**) in A + B + C using 1x bolt Ø 16 (**23.1**) and cotter pin 4/1 (**23.2**) respectively.

(Fig. A7.02a)

Assembly of the floating bearing
1. Place the Bearer URS (**23**) on the Ledger URL (**15**).
2. Mount the Bearer URS (**23**) in B + C using 1x bolt Ø 16 (**23.1**) and cotter pin 4/1 (**23.2**) respectively.

(Fig. A7.02b)

Assembly of the reinforcement
1. Install Ledger Braces UBL–2 (**5**) crosswise on the Bearer URS (**23**). (Fig. A7.03)

Have the bearers
- been installed in the same way?
- bolted in the same hole on the fixed bearing?

Fixed bearing (bolted to the carriage)

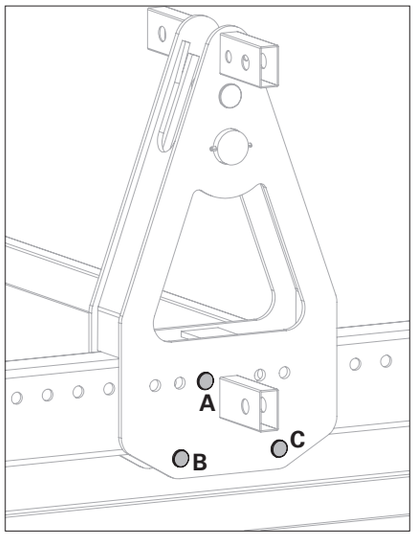


Fig. A7.02a

Floating bearing (not bolted to the carriage)

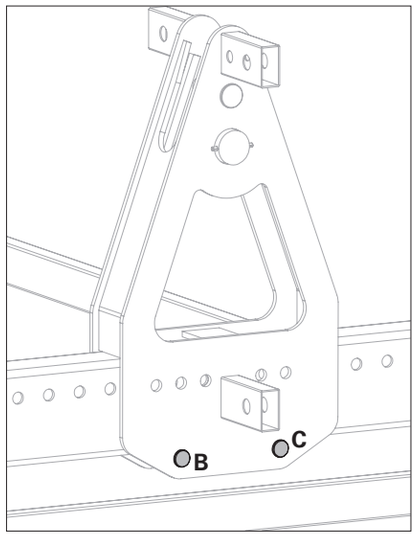


Fig. A7.02b

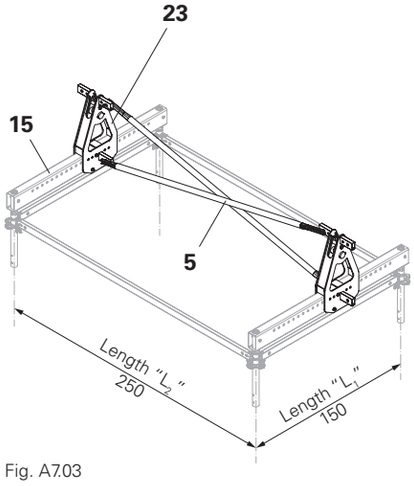


Fig. A7.03

Positioning the girder package on the bearer

Warning

- Risk of injury!
  - ⇒ Do not stand under the suspended load.
  - ⇒ Mount the components from a safe working position.
- Crushing risk!
  - ⇒ Do not reach between the girder package and Bearer URS.

Preparation

Remove bolts Ø 24 (**23.3**) and cotter pins 5/1 (**23.4**) on the Bearer URS (**23**). (Fig. A7.04a)

Assembly

1. Raise the girder package with the crane and place in the Bearer URS (**23**). (For attachment points, see Section A4.) (Fig. A7.04a)
2. Fix bolts Ø 24 (**23.3**) and cotter pins 5/1 (**23.4**).
   → The bearer and girder package are now securely connected.
   (Fig. A7.04 + A7.04b)

Are the right and left sides of the girder package bolted in the same recess?

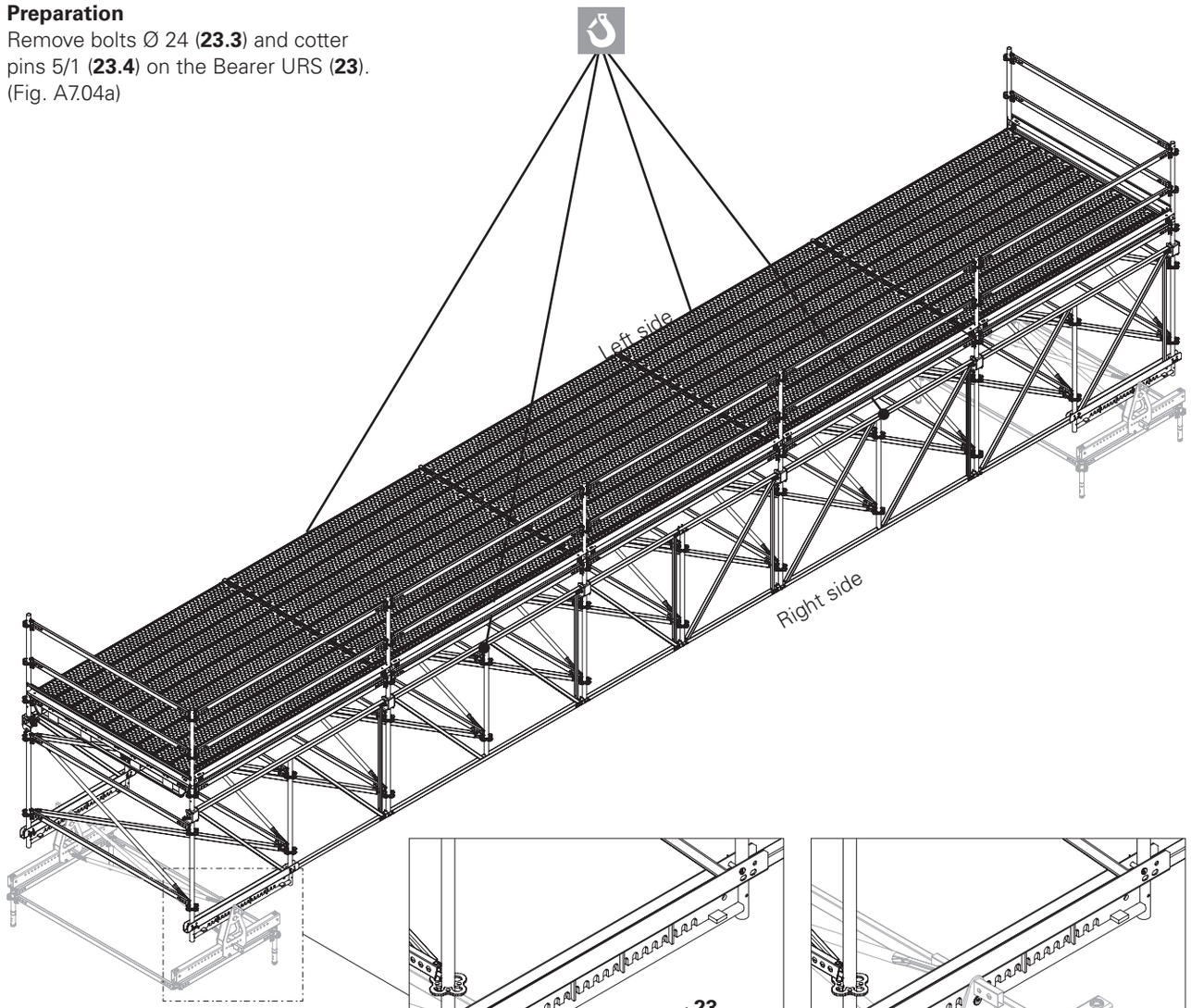


Fig. A7.04

Fig. A7.04a

Fig. A7.04b

A8 Disassembly

Danger

Risk of injury!

⇒ Do not stand under the suspended load.

⇒ Dismantle the components from a safe working position.

⇒ The working level must have sufficient load–bearing capacity.

Dismantle the Working Platform LGS in reverse order as shown in the assembly procedure.

Disassembly

1. Release the Working Platform LGS from the Bearer URS (fixed girder package) or Carriage URW (mobile girder package) and lay it on the working level (≥45 cm). (For attachment points, see Section A4.)
2. Dismantle Ledger URL.
3. Dismantle supports 0°.
4. Dismantle Working Platform LGS. (Fig. A8.01)

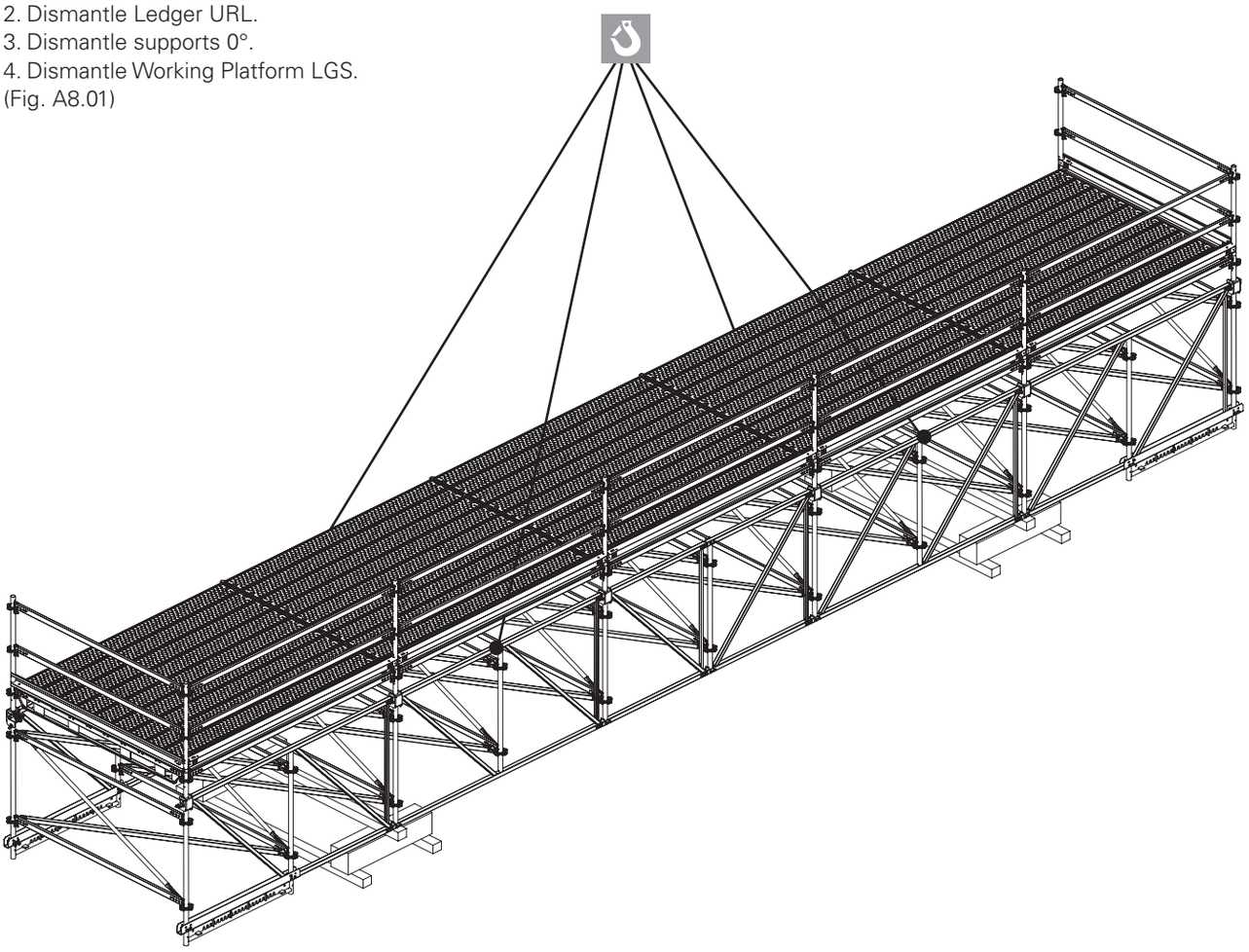


Fig. A8.01

Span 10.50 m

Depending on the wind load, it is possible to construct a bridge for a span of 10.50 m with the following level widths:

- 1.5 m
- 2.0 m
- 2.5 m
- 3.0 m

(see Tab. B1.01)

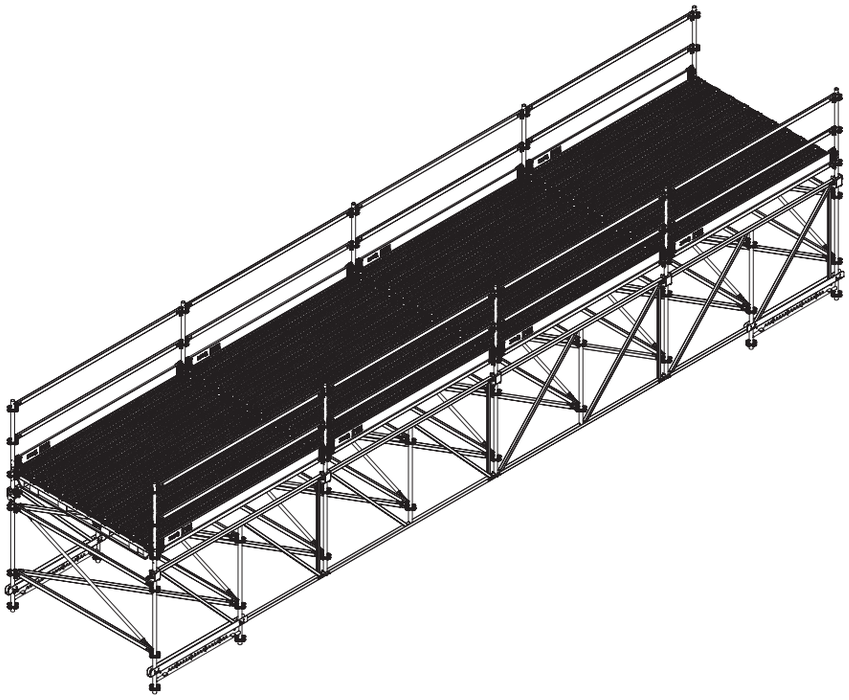


Fig. B1.01

Level width

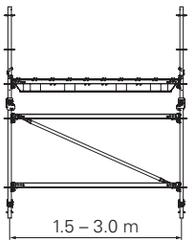


Fig. B1.01a

Span

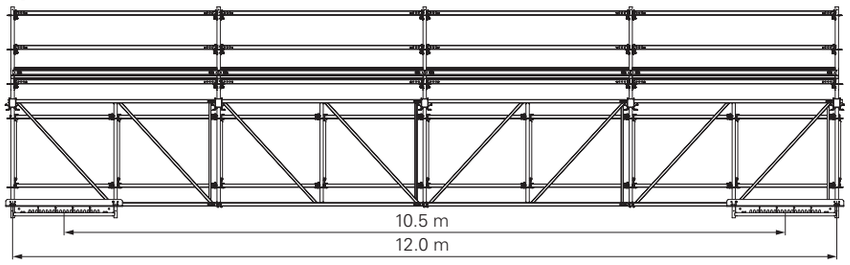


Fig. B1.01b

Live load [kN/m²]	LC 1 = 0.75			LC 3 = 2.0			LC 4 = 3.0			LC 5 = 4.5		
Wind load [kN/m²]	0.35	0.56	0.77	0.35	0.56	0.77	0.35	0.56	0.77	0.35	0.56	0.77
Level width 1.5 m	x	x	x	x	x	x	x	x	x	x	x	x
Level width 2.0 m	x	x	x*	x	x	x*	x	x	x*	x	x	
Level width 2.5 m	x	x		x	x		x	x				
Level width 3.0 m	x			x			x					

* Additional Ledger Braces UBL–2 required in the edge area. (Fig. B1.01c)

Tab. B1.01

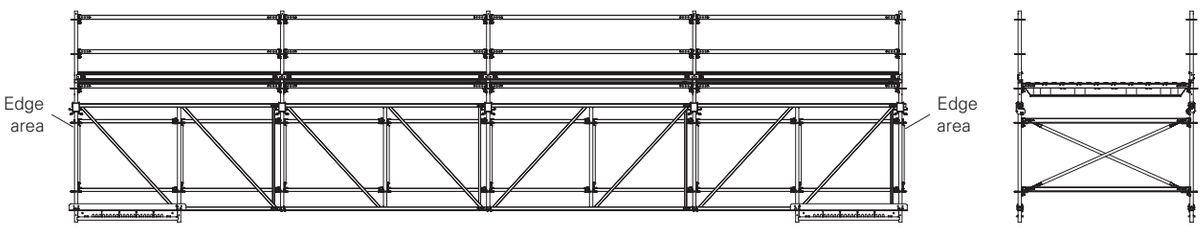


Fig. B1.01c

Span 13.50 m

Depending on the wind load, it is possible to construct a bridge for a span of 13.50 m with the following level widths:

- 1.5 m
- 2.0 m
- 2.5 m
- 3.0 m

(see Tab. B1.02)

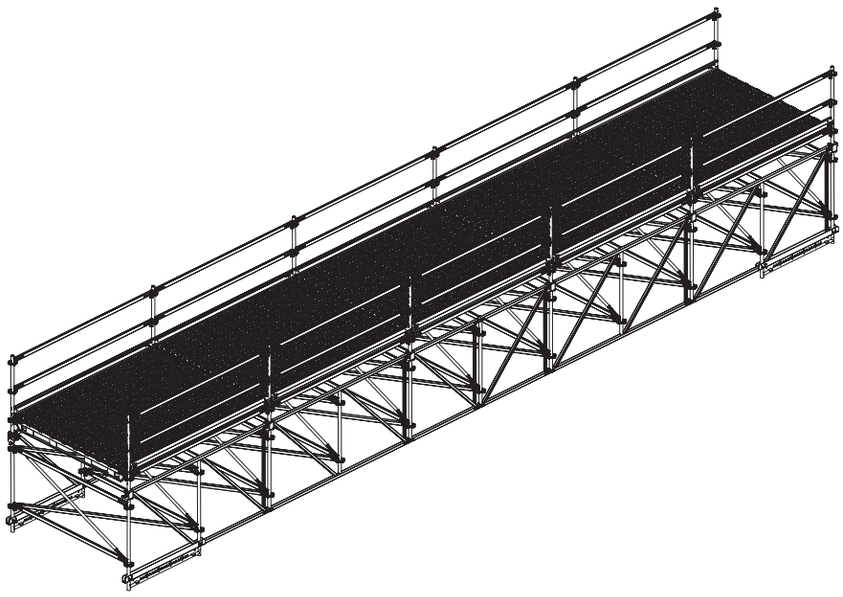


Fig. B1.02

Level width

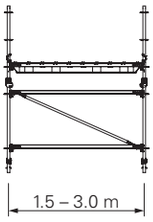


Fig. B1.02a

Span

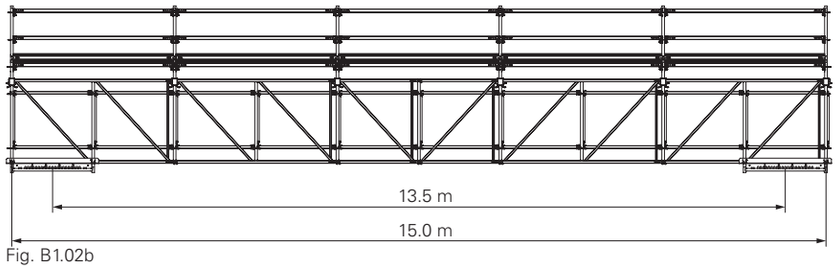


Fig. B1.02b

Live load [kN/m²]	LC 1 = 0.75			LC 3 = 2.0			LC 4 = 3.0		
Wind load [kN/m²]	0.35	0.56	0.77	0.35	0.56	0.77	0.35	0.56	0.77
Level width 1.5 m	x	x		x	x		x	x	
Level width 2.0 m	x	x		x	x				
Level width 2.5 m	x			x					
Level width 3.0 m	x								

Tab. B1.02

Span 16.50 m

Depending on the wind load, it is possible to construct a bridge for a span of 16.50 m with the following level widths:

- 1.5 m
- 2.0 m

(see Tab. B1.03)

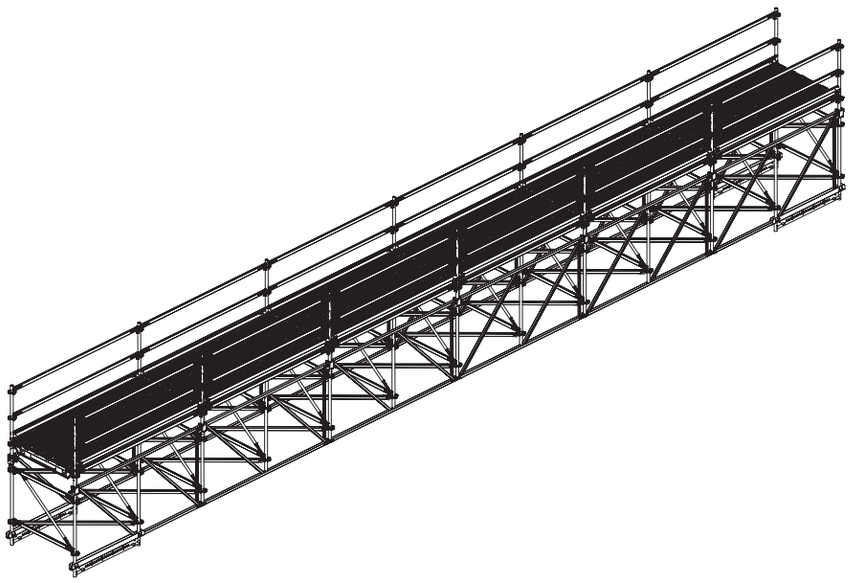


Fig. B1.03

Level width



Fig. B1.03a

Span

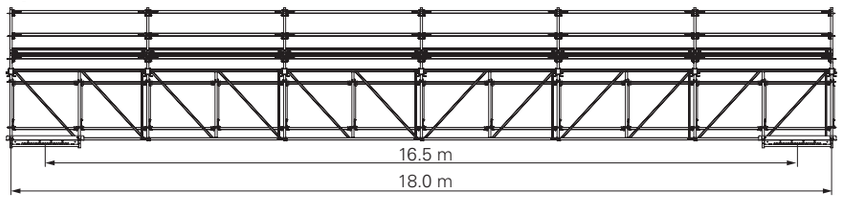


Fig. B1.03b

Live load [kN/m²]	LC 1 = 0.75		
Wind load [kN/m²]	0.35	0.56	0.77
Level width 1.5 m	x		
Level width 2.0 m	x		

Tab. B1.03

Span 19.50 m

Depending on the wind load, it is possible to construct a bridge for a span of 19.50 m with the following level widths:

- 1.5 m
- 2.0 m

(see Tab. B1.04)

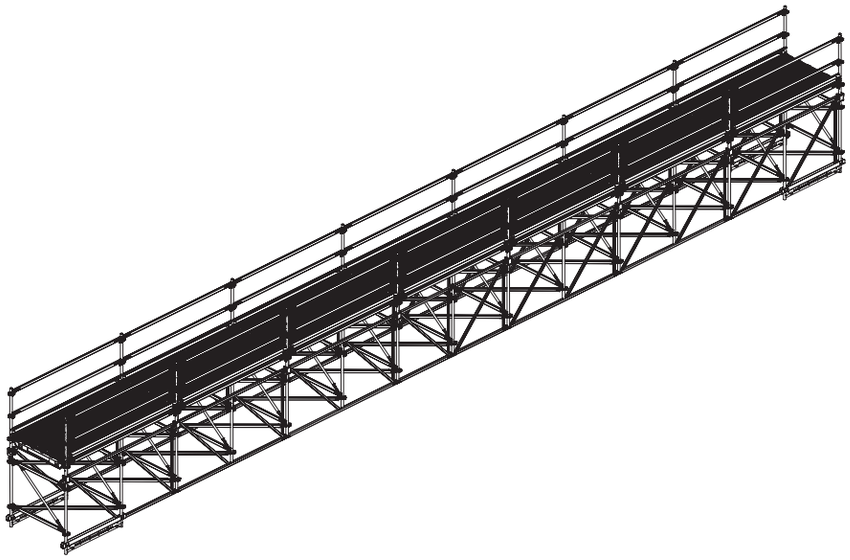


Fig. B1.04



Fig. B1.04a

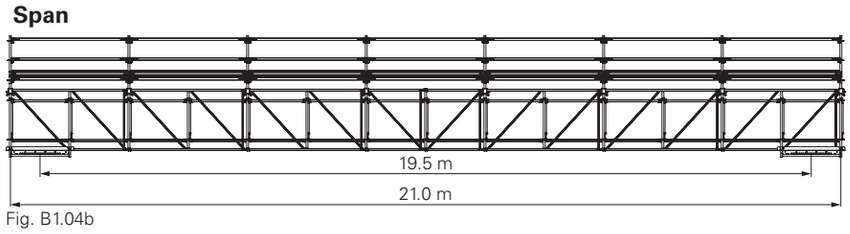


Fig. B1.04b

Live load [kN/m²]	LC 1 = 0.75		
Wind load [kN/m²]	0.35	0.56	0.77
Level width 1.5 m	x		
Level width 2.0 m	x		

Tab. B1.04

B1 Bridge

Weights

Bridge weights for span and level widths [kg]				
	Span [m]			
Level width [m]	10.5	13.5	16.5	19.5
1.5	1594	1942	2292	2641
2.0	1786	2181	2577	2972
2.5	1978	2420		
3.0	2172	2660		

Tab. B1.05

Span 10.50 m

- Level width up to 3.0 m.
- The following components can be left out in the centre of the intermediate packages:
  – 8x Horizontal Brace UBH
  – 4x Ledger Brace UBL–2
- With an even number of packages, a double girder package is mounted in the edge area. (Fig. B2.01b)

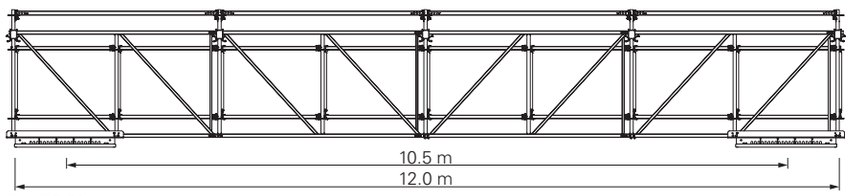


Fig. B2.01

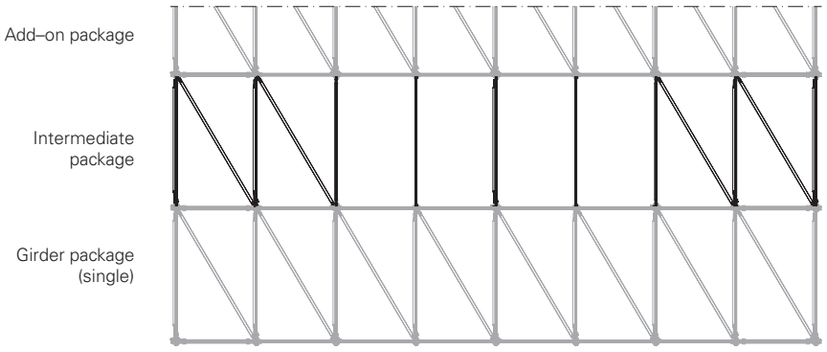


Fig. B2.01a

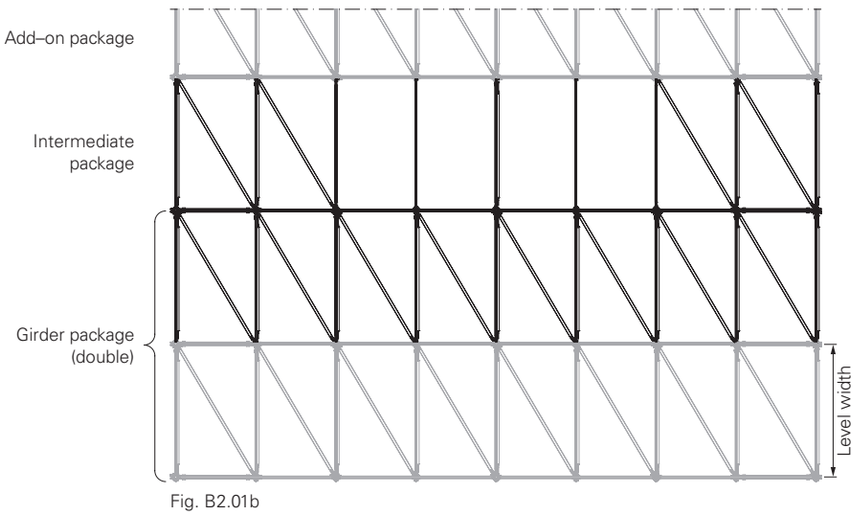


Fig. B2.01b

Live load [kN/m²]	LC 1 = 0.75			LC 3 = 2.0			LC 4 = 3.0		
Wind load [kN/m²]	0.35	0.56	0.77	0.35	0.56	0.77	0.35	0.56	0.77
Level width 1.5 m	x	x	x	x	x	x	x	x	x
Level width 2.0 m	x	x	x	x	x	x			
Level width 2.5 m	x	x	x	x*	x*	x*			
Level width 3.0 m	x	x	x						

* Partial area load of 2.00 kN/m² on an area of 6.0 m² on the platform is possible. Load on the remaining area of 0.75 kN/m².

Tab. B2.01

Span 13.50 m

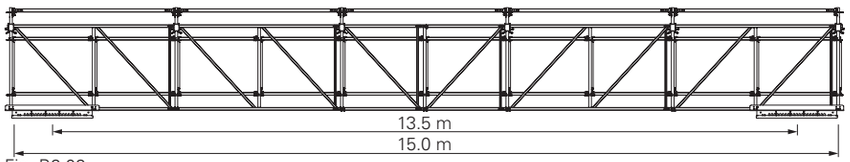


Fig. B2.02

- Level width up to 3.0 m.
- The following components can be left out in the centre of the intermediate elements:
  – 8x Horizontal Brace UBH
  – 4x Ledger Brace UBL–2
- With an even number of packages, a double girder package is mounted in the edge area. (Fig. B2.02b)

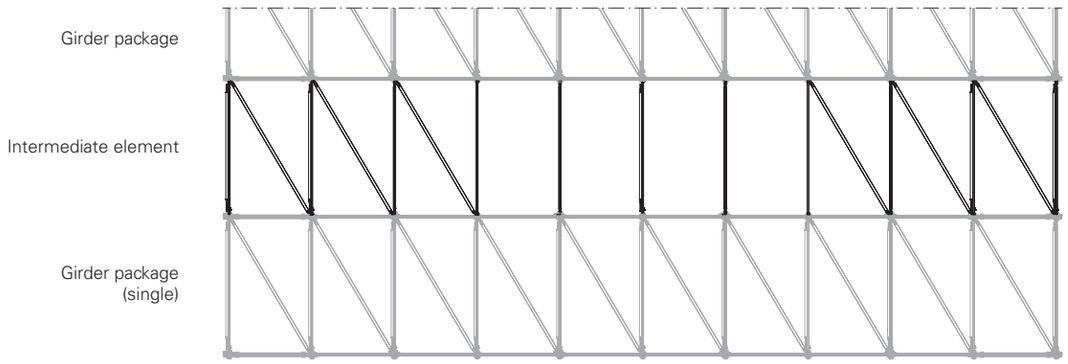


Fig. B2.02a

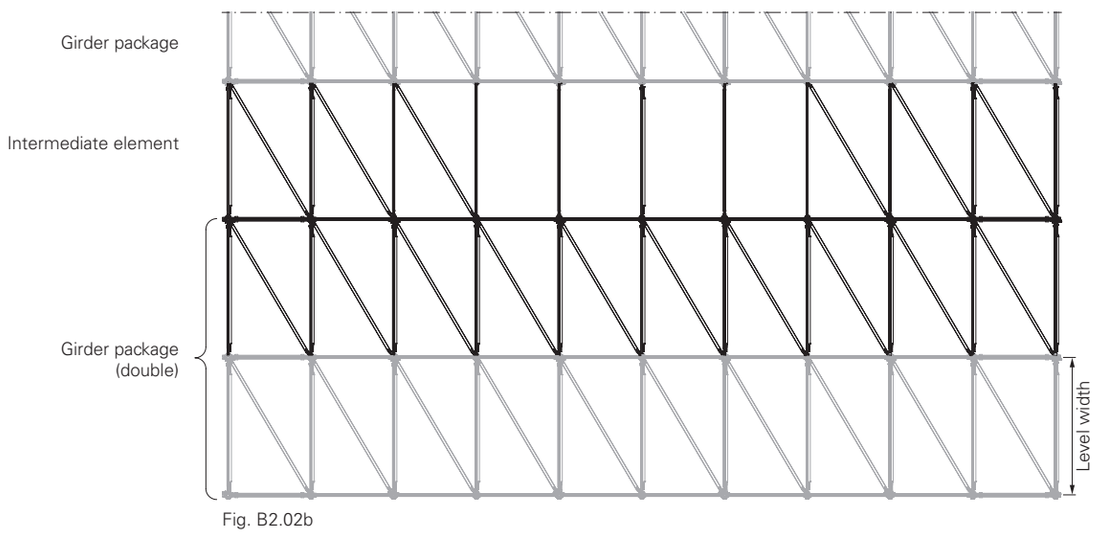


Fig. B2.02b

Live load [kN/m²]	LC 1 = 0.75			LC 3 = 2.0		
Wind load [kN/m²]	0.35	0.56	0.77	0.35	0.56	0.77
Level width 1.5 m	x	x	x	x	x	x
Level width 2.0 m	x	x	x	x*	x*	x*
Level width 2.5 m	x	x	x			
Level width 3.0 m	x	x	x			

* Partial area load of 2.00 kN/m² on an area of 6.0 m² on the platform is possible. Load on the remaining area of 0.75 kN/m².

Tab. B2.02

Span 16.50 m

- Level width up to 2.0 m.
- The following components can be left out in the centre of the intermediate elements:
  – 8x Horizontal Brace UBH
  – 4x Ledger Brace UBL–2
- With an even number of packages, a double girder package is mounted in the edge area. (Fig. B2.03b)

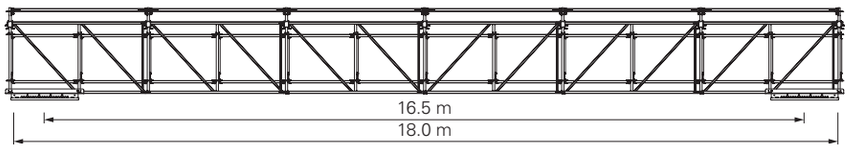


Fig. B2.03

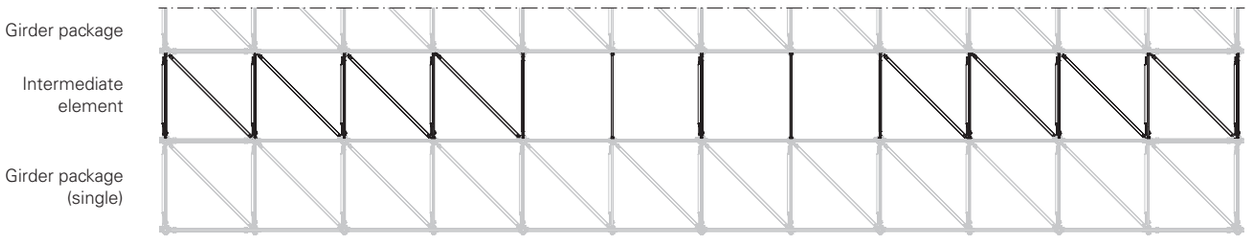


Fig. B2.03a

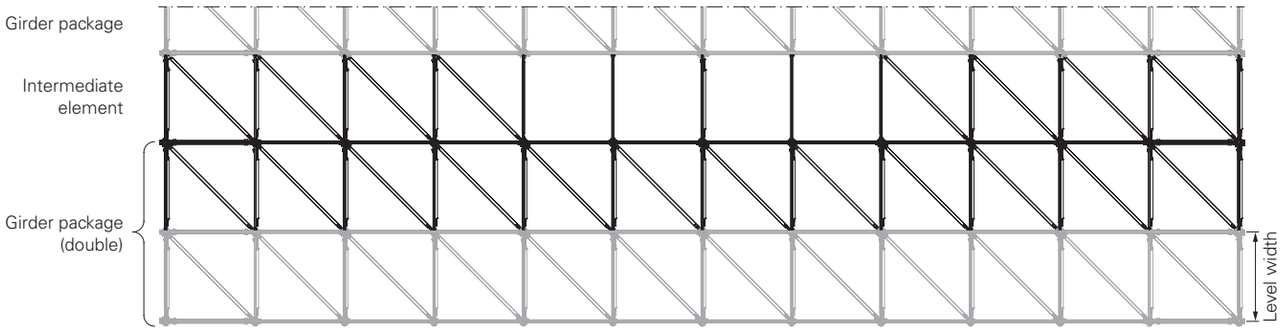


Fig. B2.03b

Live load [kN/m²]	LC 1 = 0.75		
Wind load [kN/m²]	0.35	0.56	0.77
Level width 1.5 m	x	x	x
Level width 2.0 m	x	x	x

Tab. B2.03

Span 19.50 m

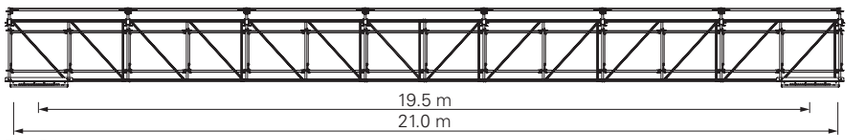


Fig. B2.04

- Level width 1.5 m.
- The following components can be left out in the centre of the intermediate packages:
  – 8x Horizontal Brace UBH
  – 4x Ledger Brace UBL–2
- With an even number of packages, a double girder package is mounted in the edge area. (Fig. B2.04b)

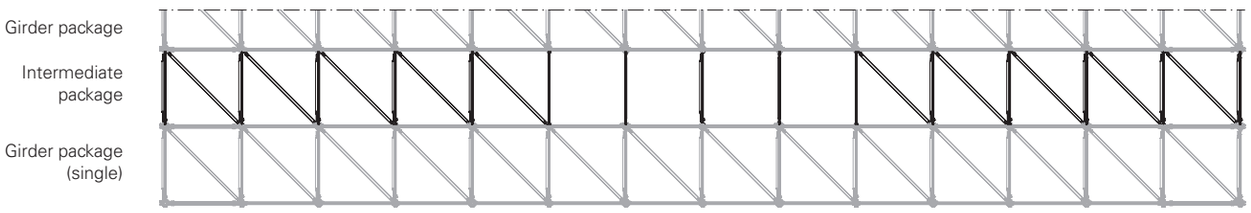


Fig. B2.04a

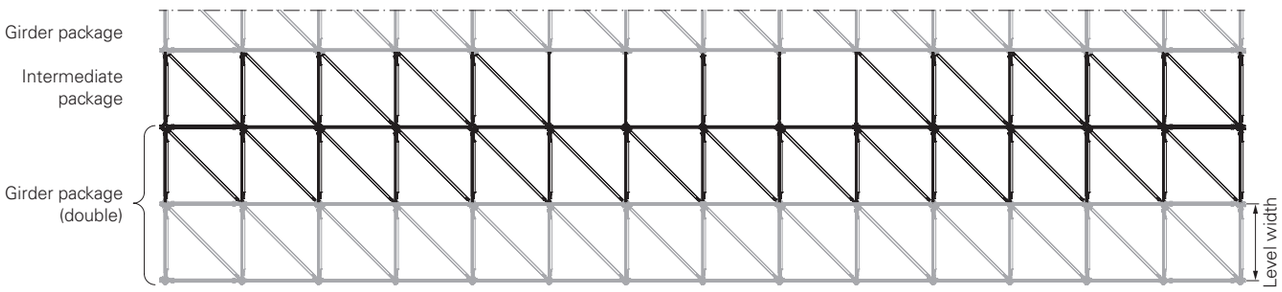


Fig. B2.04b

Live load [kN/m²]	LC 1 = 0.75		
Wind load [kN/m²]	0.35	0.56	0.77
Level width 1.5 m	x	x	

Tab. B2.04

Weights

Girder package weights for span and level widths [kg]								
Level width [m]	Span [m]							
	10.5		13.5		16.5		19.5	
	single	double	single	double	single	double	single	double
1.5	1370	2420	1662	2943	1956	3475	2249	3998
2.0	1562	2804	1901	3419	2241	4045		
2.5	1754	3190	2140	3898				
3.0	1948	3577	2380	4382				

Tab. B2.05

Guardrail weights for level widths [kg]		
Level width [m]	1x Top Standard UVH 100	2x Top Standard UVH 100
1.5	19	25
2.0	22	29
2.5	26	32
3.0	30	36

Tab. B2.06

The weight of the guardrail includes toe boards and Horizontal Ledgers UH–2.

Intermediate package weights for span and level widths [kg]				
Level width [m]	Span [m]			
	10.5	13.5	16.5	19.5
1.5	983	1213	1452	1681
2.0	1163	1439	1724	
2.5	1341	1664		
3.0	1522	1894		

Tab. B2.07

Example:
Span: 13.50 m
Level width: 2.5 m
Bays: 6
Guardrail: continuous

Weight of platform:
Double platform (**1x**) = 3.898 kg
Single platform (**2x**) = 2 x 2140 kg = 4.280 kg
Intermediate package (**2x**) = 2 x 1.439 kg = 2.878 kg
Guardrail = 10 x 30 kg + 12 x 26 kg = 300 kg + 312 kg = 612 kg

3.898 kg + 4.280 kg + 2.878 kg+ 612 kg= 11.668 kg

Bridge

- The support forces are dependent on:
  - L_{sp} = span
  - q = wind load
  - Element width
  - Load class
- Calculate the supporting structure in each case.
- Verification required for the load transfer from roof and scaffold to the ground.

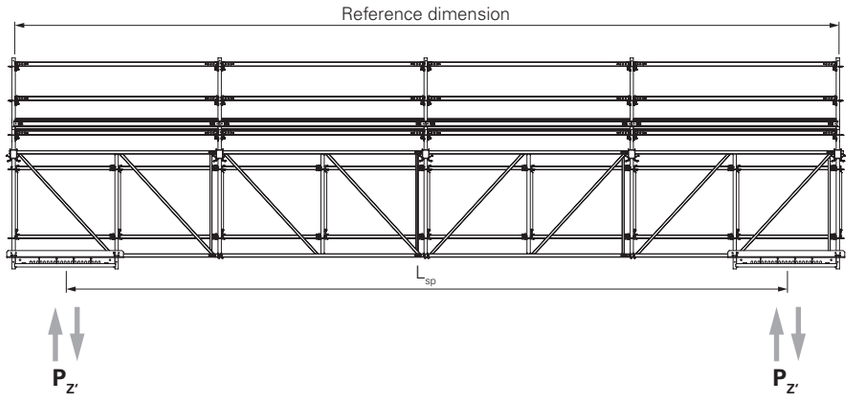


Fig. B3.01a

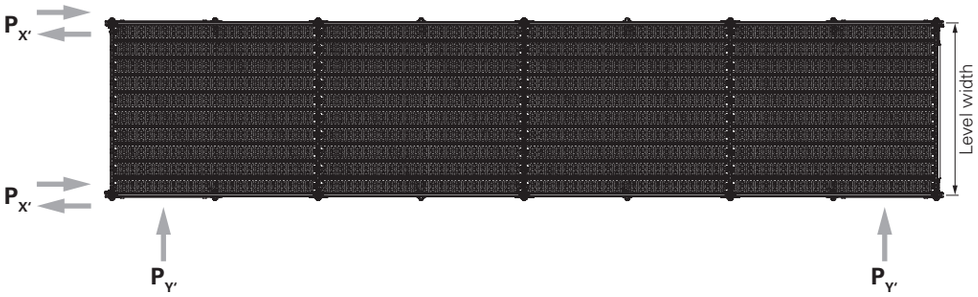


Fig. B3.01b

Maximum support forces [kN]										
Load class	**Wind load [kN/m²]**		**Level width 1.5 m**		**Level width 2.0 m**		**Level width 2.5 m**		**Level width 3.0 m**	
Load Class 1 0.75 kN/m²	W 0.0	$P_{X'}$	max. L_{sp} 19.5 m	1.6	max. L_{sp} 19.5 m	1.6	max. L_{sp} 13.5 m	1.1	max. L_{sp} 13.5 m	1.1
		$P_{Y'}$		0.9		0.9		0.7		0.7
		max. $P_{Z'}$		21.2		24.9		20.7		23.7
		min. $P_{Z'}$		0.0		0.0		0.0		0.0
	W 0.35	$P_{X'}$	max. L_{sp} 19.5 m	1.6	max. L_{sp} 19.5 m	1.6	max. L_{sp} 13.5 m	1.1	max. L_{sp} 13.5 m	1.1
		$P_{Y'}$		6.8		6.7		4.8		4.9
		max. $P_{Z'}$		24.1		23.3		19.8		22.9
		min. $P_{Z'}$		–8.5		–4.3		–1.1		0.0
	W 0.56	$P_{X'}$	max. L_{sp} 10.5 m	1.1	max. L_{sp} 10.5 m	1.1	max. L_{sp} 10.5 m	0.9		
		$P_{Y'}$		7.8		7.7		6.0		
		max. $P_{Z'}$		23.4		20.6		19.8		
		min. $P_{Z'}$		–12.0		–7.6		–3.9		
	W 0.77	$P_{X'}$	max. L_{sp} 10.5 m	0.9	max. L_{sp} 10.5 m	0.9				
		$P_{Y'}$		8.2		8.1				
		max. $P_{Z'}$		26.5		24.0				
		min. $P_{Z'}$		–14.6		–9.9				

Tab. B3.01a

B3 Support forces

Maximum support forces [kN]										
Load class	**Wind load [kN/m²]**		**Level width 1.5 m**		**Level width 2.0 m**		**Level width 2.5 m**		**Level width 3.0 m**	
Load Class 3 2.0 kN/m²	W 0.0	$P_{X'}$	max. L_{sp} 13.5 m	1.1	max. L_{sp} 13.5 m	1.1	max. L_{sp} 13.5 m	1.4	max. L_{sp} 13.5 m	1.4
		$P_{Y'}$		0.6		0.6		0.8		0.5
		max. $P_{Z'}$		26.0		32.2		38.8		36.2
		min. $P_{Z'}$		0.0		0.0		0.0		0.0
	W 0.35	$P_{X'}$	max. L_{sp} 13.5 m	1.1	max. L_{sp} 13.5 m	1.1	max. L_{sp} 13.5 m	1.4	max. L_{sp} 10.5 m	1.4
		$P_{Y'}$		4.8		4.8		4.8		3.8
		max. $P_{Z'}$		24.4		31.0		37.6		35.6
		min. $P_{Z'}$		–6.0		–3.1		–1.1		0.0
	W 0.56	$P_{X'}$	max. L_{sp} 13.5 m	1.1	max. L_{sp} 13.5 m	1.1	max. L_{sp} 10.5 m	1.1		
		$P_{Y'}$		7.8		7.9		6.0		
		max. $P_{Z'}$		24.4		31.0		30.2		
		min. $P_{Z'}$		–12.0		–7.6		–3.9		
	W 0.77	$P_{X'}$	max. L_{sp} 10.5 m	0.9	max. L_{sp} 10.5 m	0.9				
		$P_{Y'}$		8.2		8.1				
		max. $P_{Z'}$		31.0		24.0				
		min. $P_{Z'}$		–14.6		–9.9				
Load Class 4 3.0 kN/m²	W 0.0	$P_{X'}$	max. L_{sp} 13.5 m	1.3	max. L_{sp} 10.5 m	1.4	max. L_{sp} 10.5 m	1.7	max. L_{sp} 10.5 m	2.0
		$P_{Y'}$		0.7		0.8		0.9		1.1
		max. $P_{Z'}$		34.9		35.5		43.1		50.7
		min. $P_{Z'}$		0.0		0.0		0.0		0.0
	W 0.35	$P_{X'}$	max. L_{sp} 13.5 m	1.3	max. L_{sp} 10.5 m	1.4	max. L_{sp} 10.5 m	1.7	max. L_{sp} 10.5 m	2.0
		$P_{Y'}$		4.8		3.9		3.7		3.8
		max. $P_{Z'}$		33.0		34.0		41.7		49.3
		min. $P_{Z'}$		–6.0		–2.6		–0.9		0.0
	W 0.56	$P_{X'}$	max. L_{sp} 13.5 m	1.3	max. L_{sp} 10.5 m	1.4	max. L_{sp} 10.5 m	1.7		
		$P_{Y'}$		7.8		6.3		6.0		
		max. $P_{Z'}$		33.0		34.0		41.7		
		min. $P_{Z'}$		–12.0		–6.1		–3.9		
	W 0.77	$P_{X'}$	max. L_{sp} 10.5 m	1.0	max. L_{sp} 10.5 m	1.4				
		$P_{Y'}$		8.3		8.3				
		max. $P_{Z'}$		34.4		34.1				
		min. $P_{Z'}$		–14.6		–9.9				
Load Class 5 4.5 kN/m²	W 0.0	$P_{X'}$	max. L_{sp} 10.5 m	1.5	max. L_{sp} 10.5 m	2.0				
		$P_{Y'}$		0.9		1.2				
		max. $P_{Z'}$		39.4		50.3				
		min. $P_{Z'}$		0.0		0.0				
	W 0.35	$P_{X'}$	max. L_{sp} 10.5 m	1.5	max. L_{sp} 10.5 m	2.0				
		$P_{Y'}$		3.9		3.9				
		max. $P_{Z'}$		37.1		48.0				
		min. $P_{Z'}$		–4.9		–2.5				
	W 0.56	$P_{X'}$	max. L_{sp} 10.5 m	1.5	max. L_{sp} 10.5 m	2.0				
		$P_{Y'}$		6.4		6.3				
		max. $P_{Z'}$		37.1		48.0				
		min. $P_{Z'}$		–9.7		–6.1				

Tab. B3.01b

platform

- The support forces are dependent on:
  - L_{sp} = span
  - q = wind load
  - Element width
  - Load class
- Calculate the supporting structure in each case.
- Verification required for the load transfer from roof and scaffold to the ground.

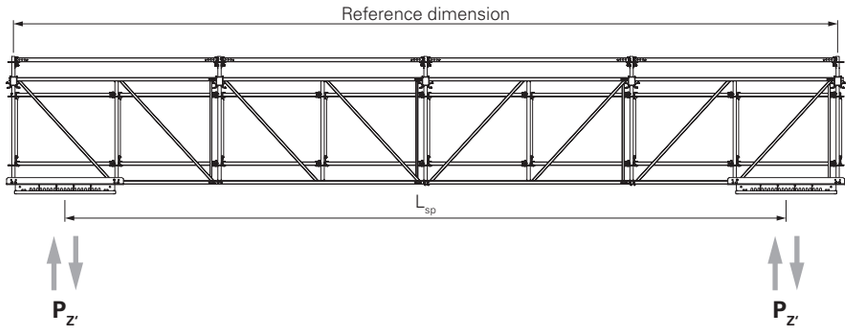


Fig. B3.02a

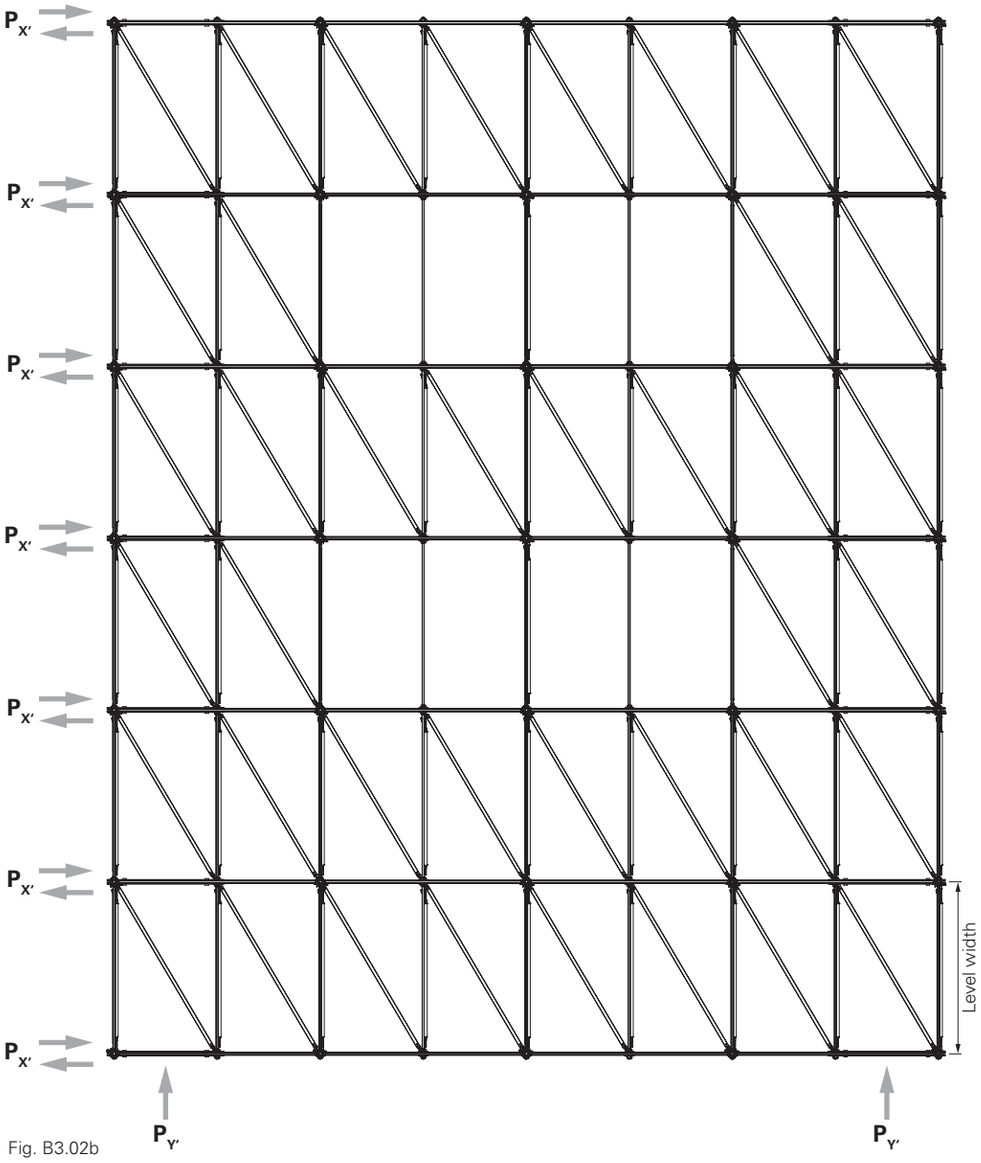


Fig. B3.02b

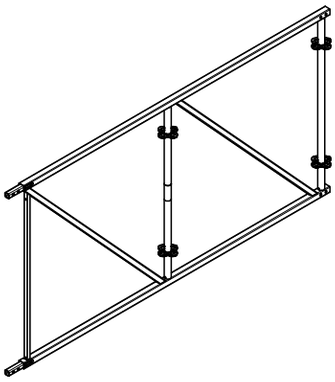
B3 Support forces

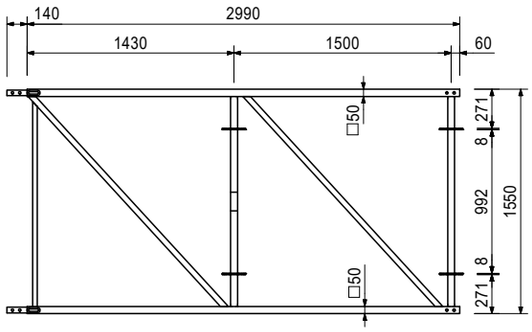
Maximum support forces [kN]												
Load class	**Wind load [kN/m²]**		**Level width 1.5 m**		**Level width 2.0 m**		**Level width 2.5 m**		**Level width 3.0 m**			
Load Class 1 0.75 kN/m²	W 0.0	$P_{X'}$	max. L_{sp} 19.5 m	4.2	max. L_{sp} 16.5 m	3.6	max. L_{sp} 13.5 m	3.0	max. L_{sp} 13.5 m	3.0		
		$P_{Y'}$		1.5		1.2		1.1		1.2		
		max. $P_{Z'}$		28.5		32.6		33.6		39.8		
		min. $P_{Z'}$		0.0		0.0		0.0		0.0		
	W 0.35	$P_{X'}$	max. L_{sp} 19.5 m	4.2	max. L_{sp} 16.5 m	3.6	max. L_{sp} 13.5 m	3.0	max. L_{sp} 13.5 m	3.0		
		$P_{Y'}$		4.0		3.4		2.9		3.0		
		max. $P_{Z'}$		28.5		32.6		33.7		39.8		
		min. $P_{Z'}$		0.0		0.0		0.0		0.0		
	W 0.56	$P_{X'}$	max. L_{sp} 19.5 m	4.2	max. L_{sp} 16.5 m	3.6	max. L_{sp} 13.5 m	3.0	max. L_{sp} 13.5 m	3.0		
		$P_{Y'}$		6.3		5.4		4.6		4.7		
		max. $P_{Z'}$		28.5		32.6		33.7		39.8		
		min. $P_{Z'}$		–1.4		0.0		0.0		0.0		
	W 0.77	$P_{X'}$	max. L_{sp} 16.5 m	3.6	max. L_{sp} 16.5 m	3.6	max. L_{sp} 13.5 m	3.0	max. L_{sp} 13.5 m	3.0		
		$P_{Y'}$		7.3		7.4		6.3		6.4		
		max. $P_{Z'}$		25.3		32.6		33.7		39.8		
		min. $P_{Z'}$		–3.5		–0.7		0.0		0.0		
Load Class 3 2.0 kN/m²	W 0.0	$P_{X'}$	max. L_{sp} 13.5 m	3.0	max. L_{sp} 10.5 m	2.4						
		$P_{Y'}$		1.1		0.8						
		max. $P_{Z'}$		41.5		44.6						
		min. $P_{Z'}$		0.0		0.0						
	W 0.35	$P_{X'}$	max. L_{sp} 13.5 m	3.0	max. L_{sp} 10.5 m	2.4						
		$P_{Y'}$		2.8		2.2						
		max. $P_{Z'}$		41.6		44.6						
		min. $P_{Z'}$		0.0		0.0						
	W 0.56	$P_{X'}$	max. L_{sp} 13.5 m	3.0	max. L_{sp} 10.5 m	2.4						
		$P_{Y'}$		4.5		3.5						
		max. $P_{Z'}$		41.6		44.6						
		min. $P_{Z'}$		–1.3		0.0						
	W 0.77	$P_{X'}$	max. L_{sp} 13.5 m	3.0	max. L_{sp} 10.5 m	2.4						
		$P_{Y'}$		6.1		4.8						
		max. $P_{Z'}$		41.6		44.6						
		min. $P_{Z'}$		–3.1		–0.8						
Load Class 4 3.0 kN/m²	W 0.0	$P_{X'}$	max. L_{sp} 10.5 m	2.7								
		$P_{Y'}$		1.0								
		max. $P_{Z'}$		47.4								
		min. $P_{Z'}$		0.0								
	W 0.35	$P_{X'}$	max. L_{sp} 10.5 m	2.7								
		$P_{Y'}$		2.2								
		max. $P_{Z'}$		47.4								
		min. $P_{Z'}$		0.0								
	W 0.56	$P_{X'}$	max. L_{sp} 10.5 m	2.7								
		$P_{Y'}$		3.5								
		max. $P_{Z'}$		47.4								
		min. $P_{Z'}$		–1.0								
	W 0.77	$P_{X'}$	max. L_{sp} 10.5 m	2.7								
		$P_{Y'}$		4.8								
		max. $P_{Z'}$		47.4								
		min. $P_{Z'}$		–2.4								

Tab. B3.02

Art. no.	Weight [kg]	
104768	55.400	**LGS STANDARD ELEM. URB 300/150**

Standard element for the LGS Lattice Girder System.





Accessories (not included)

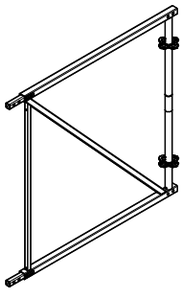
018060	0.014	**COTTER PIN 4/1 GALVANISED**
106031	0.142	**BOLT D=16/70, GALV.**

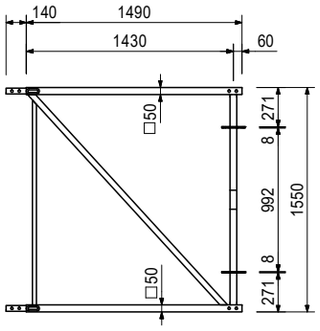
Note

Alternative accessories:
070890 Nut ISO 7040 M16–8, galv.
721729 Bolt ISO 4014 M16 x 90–8.8, galv.

Art. no.	Weight [kg]	
104792	29.700	**LGS INTERMEDIATE ELEM. URB 150/150**

Filler element for the LGS Lattice Girder System.





Accessories (not included)

018060	0.014	**COTTER PIN 4/1 GALVANISED**
106031	0.142	**BOLT D=16/70, GALV.**

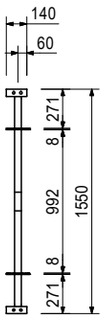
Note

Alternative accessories:
070890 Nut ISO 7040 M16–8, galv.
721729 Bolt ISO 4014 M16 x 90–8.8, galv.

Art. no.	Weight [kg]	
105334	7.390	**LGS END ELEMENT URB 150**

For assembly at the last LGS Standard or Intermediate Element.





Accessories (not included)

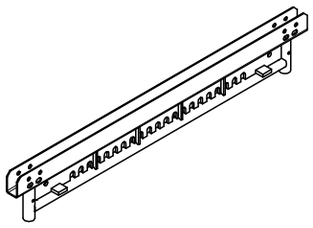
018060	0.014	**COTTER PIN 4/1 GALVANISED**
106031	0.142	**BOLT D=16/70, GALV.**

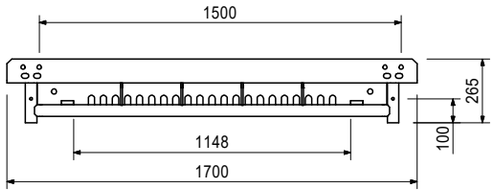
Note

Alternative accessories:
070890 Nut ISO 7040 M16–8, galv.
721729 Bolt ISO 4014 M16 x 90–8.8, galv.

Art. no.	Weight [kg]	
105399	35.600	**SUPPORT URS 0 DEGREES**

For platforms or bridges.





Accessories (not included)

018060	0.014	**COTTER PIN 4/1 GALVANISED**
106031	0.142	**BOLT D=16/70, GALV.**

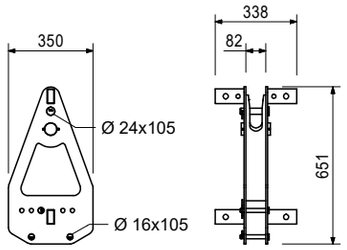
Note

Alternative accessories:
070890 Nut ISO 7040 M16–8, galv.
721729 Bolt ISO 4014 M16 x 90–8.8, galv.

Art. no.	Weight [kg]	
105398	23.600	**BEARER URS**

Connects the Support LGS to the Ledger URL.

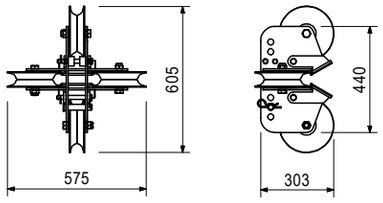




Art. no.	Weight [kg]	
104777	42.800	**CARRIAGE URW**

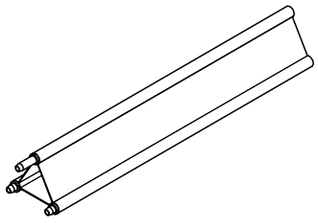
Connects the support to the Rail URT.
Allows movement in the longitudinal direction and horizontal sliding in the direction of the girder.

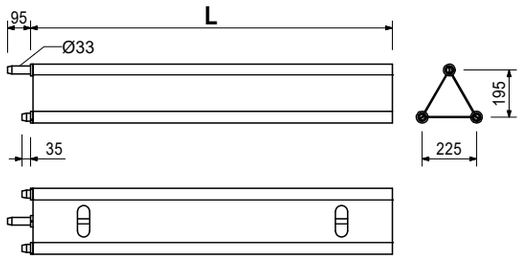




Art. no.	Weight [kg]		L [mm]
		Aluminium Rails URT	
104790	21.400	**ALUMINIUM RAIL URT 150**	1500
104791	28.000	**ALUMINIUM RAIL URT 200**	2000
104796	34.600	**ALUMINIUM RAIL URT 250**	2500
104797	41.200	**ALUMINIUM RAIL URT 300**	3000

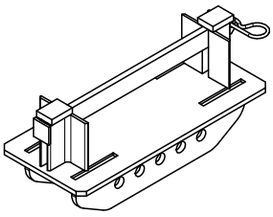
For moving LGS Units. Mounted to the Rail Support URF.

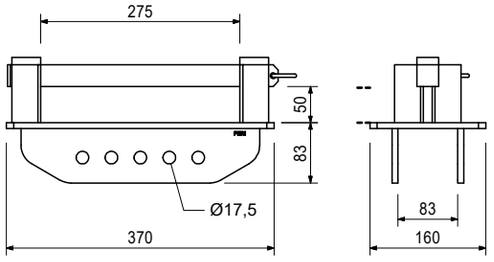




Art. no.	Weight [kg]	
104853	8.260	**RAIL SUPPORT URF**

Connects the Rail URT with the
Ledger URL.





Accessories (not included)

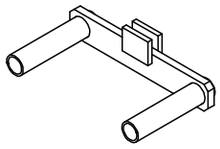
022230	0.033	**COTTER PIN 5/1 GALVANISED**
715357	0.238	**BOLT 16X146 GALV.**

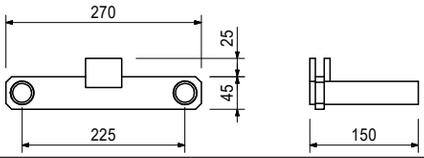
Note

Alternative accessories:
070890 Nut ISO 7040 M16–8, galv.
105402 Bolt ISO 4014 M16 x 120–8.8, galv.

Art. no.	Weight [kg]	
104852	1.870	**RAIL END PIECE URD**

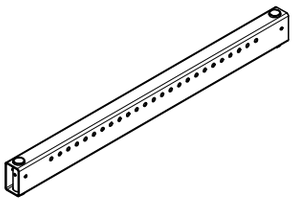
To secure the Aluminium Rail URT. Assembly at the last Rail Support URF.

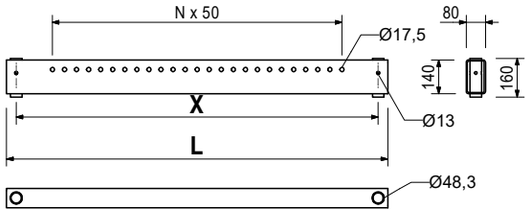




Art. no.	Weight [kg]		L [mm]	X [mm]
		Ledger URL		
132553	12.600	**LEDGER URL 67/14**	750	670
131869	13.900	**LEDGER URL 75/14**	830	750
115018	17.700	**LEDGER URL 100/14**	1080	1000
105386	25.600	**LEDGER URL 150/14**	1580	1500

Connects the LGS Unit to the PERI UP substructure.



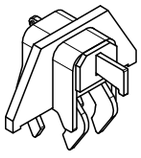


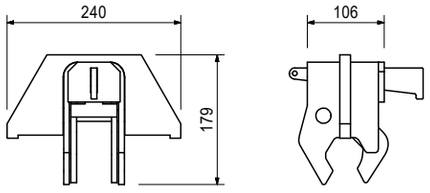
Accessories (not included)

710242	0.063	**BOLT.ISO 4014–M10X100–8.8–VZ**
780356	0.011	**HEX. NUT ISO 7040–M10–8–VZ**

Art. no.	Weight [kg]	
118022	5.130	**STOPPER URA–2**

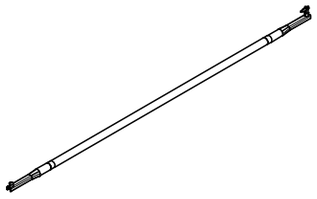
Limit stop for the Carriage URW on the Aluminium Rail URT.

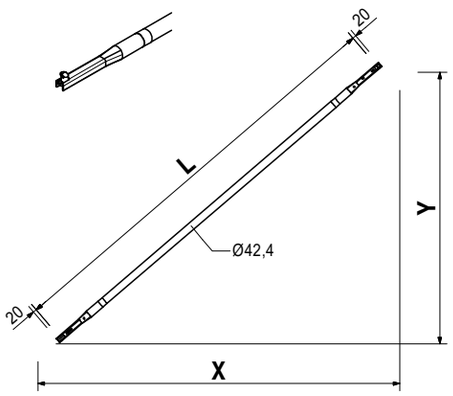




Art. no.	Weight [kg]		L [mm]	X [mm]	Y [mm]
		Ledger Braces UBL–2			
132771	2.140	**LEDGER BRACE UBL–2 100/50**	901	1000	500
132773	2.830	**LEDGER BRACE UBL–2 100/100**	1250	1000	1000
132775	3.680	**LEDGER BRACE UBL–2 100/150**	1677	1000	1500
132777	4.600	**LEDGER BRACE UBL–2 100/200**	2136	1000	2000
132779	3.030	**LEDGER BRACE UBL–2 150/50**	1347	1500	500
132781	3.530	**LEDGER BRACE UBL–2 150/100**	1601	1500	1000
132783	4.230	**LEDGER BRACE UBL–2 150/150**	1953	1500	1500
132785	5.040	**LEDGER BRACE UBL–2 150/200**	2358	1500	2000
132787	5.330	**LEDGER BRACE UBL–2 175/200**	2500	1750	2000
132789	3.970	**LEDGER BRACE UBL–2 200/50**	1820	2000	500
132791	4.360	**LEDGER BRACE UBL–2 200/100**	2016	2000	1000
132793	4.940	**LEDGER BRACE UBL–2 200/150**	2305	2000	1500
132795	5.640	**LEDGER BRACE UBL–2 200/200**	2658	2000	2000
132797	4.450	**LEDGER BRACE UBL–2 225/50**	2062	2250	500
132808	4.800	**LEDGER BRACE UBL–2 225/100**	2236	2250	1000
132810	5.980	**LEDGER BRACE UBL–2 225/200**	2829	2250	2000
132812	5.250	**LEDGER BRACE UBL–2 250/100**	2462	2500	1000
132814	5.730	**LEDGER BRACE UBL–2 250/150**	2705	2500	1500
132816	6.340	**LEDGER BRACE UBL–2 250/200**	3010	2500	2000
132827	5.920	**LEDGER BRACE UBL–2 300/50**	2795	3000	500
132829	6.180	**LEDGER BRACE UBL–2 300/100**	2926	3000	1000
132831	6.590	**LEDGER BRACE UBL–2 300/150**	3133	3000	1500
132833	7.120	**LEDGER BRACE UBL–2 300/200**	3400	3000	2000

They are attached using holes in the horizontal ledgers.



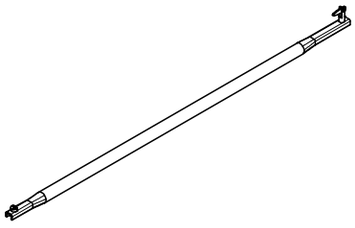


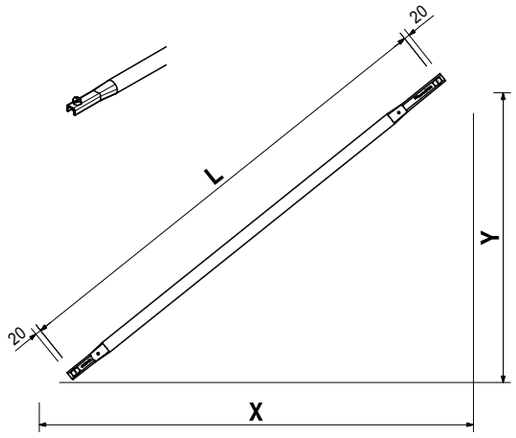
Note

Longitudinally–stamped with coloured label for easier identification.
UBL–2 150/250 identical to UBL–2 300/50.
UBL–2 225/150 identical to UBL–2 175/200.
UBL–2 250/50 identical to UBL–2 200/150
UBL–2 75/200 identical to UBL–2 225/50.

Art. no.	Weight [kg]		L [mm]	X [mm]	Y [mm]
		Ledger Braces UBL			
415156	2.660	**LEDGER BRACE UBL 100/50**	901	1000	500
415513	4.640	**LEDGER BRACE UBL 100/150**	1677	1000	1500
415157	5.810	**LEDGER BRACE UBL 100/200**	2136	1000	2000
407867	3.790	**LEDGER BRACE UBL 150/50**	1347	1500	500
400055	4.440	**LEDGER BRACE UBL 150/100**	1601	1500	1000
402846	5.340	**LEDGER BRACE UBL 150/150**	1953	1500	1500
400057	6.380	**LEDGER BRACE UBL 150/200**	2358	1500	2000
409034	6.740	**LEDGER BRACE UBL 175/200**	2500	1750	2000
404391	5.000	**LEDGER BRACE UBL 200/50**	1820	2000	500
400059	5.500	**LEDGER BRACE UBL 200/100**	2016	2000	1000
402862	6.240	**LEDGER BRACE UBL 200/150**	2305	2000	1500
400061	7.160	**LEDGER BRACE UBL 200/200**	2658	2000	2000
430282	4.450	**LEDGER BRACE UBL 225/50**	2062	2250	500
430283	4.800	**LEDGER BRACE UBL 225/100**	2236	2250	1000
417689	7.580	**LEDGER BRACE UBL 225/200**	2829	2250	2000
400063	6.640	**LEDGER BRACE UBL 250/100**	2462	2500	1000
402861	7.260	**LEDGER BRACE UBL 250/150**	2705	2500	1500
400065	8.050	**LEDGER BRACE UBL 250/200**	3010	2500	2000
404762	7.490	**LEDGER BRACE UBL 300/50**	2795	3000	500
400067	7.830	**LEDGER BRACE UBL 300/100**	2926	3000	1000
404766	8.360	**LEDGER BRACE UBL 300/150**	3133	3000	1500
400069	9.050	**LEDGER BRACE UBL 300/200**	3400	3000	2000

They are attached using holes in the horizontal ledgers.



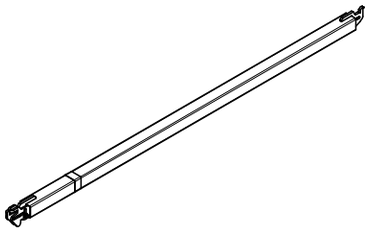


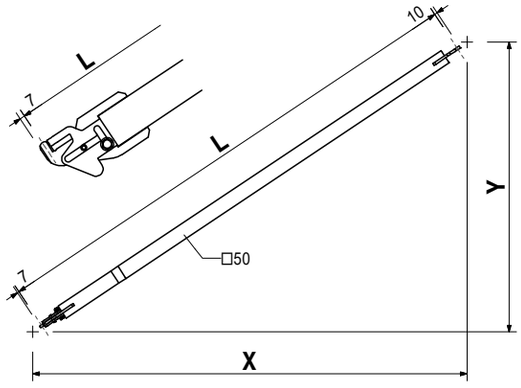
Note

Longitudinally–stamped with coloured label for easier identification.
UBL 150/250 identical to UBL 300/50.
UBL 225/150 identical to UBL 175/200.
UBL 250/50 identical to UBL 200/150
UBL 75/200 identical to UBL 225/50.

Art. no.	Weight [kg]		L [mm]	X [mm]	Y [mm]
		Horizontal Braces UBH Flex			
114818	4.590	**H–BRACE UBH FLEX 100/100**	1335	1000	1000
114904	5.630	**H–BRACE UBH FLEX 125/125**	1689	1250	1250
114821	5.730	**H–BRACE UBH FLEX 150/100**	1725	1500	1000
114908	6.170	**H–BRACE UBH FLEX 150/125**	1874	1500	1250
114912	6.660	**H–BRACE UBH FLEX 150/150**	2042	1500	1500
114820	7.010	**H–BRACE UBH FLEX 200/100**	2161	2000	1000
124097	7.780	**H–BRACE UBH FLEX 200/150**	2422	2000	1500
114916	8.740	**H–BRACE UBH FLEX 200/200**	2749	2000	2000
114896	8.130	**H–BRACE UBH FLEX 250/ 75**	2541	2500	750
114819	8.360	**H–BRACE UBH FLEX 250/100**	2620	2500	1000
114996	8.650	**H–BRACE UBH FLEX 250/125**	2720	2500	1250
124101	9.000	**H–BRACE UBH FLEX 250/150**	2838	2500	1500
114920	9.840	**H–BRACE UBH FLEX 250/200**	3123	2500	2000
114928	10.800	**H–BRACE UBH FLEX 250/250**	3456	2500	2500
114900	9.550	**H–BRACE UBH FLEX 300/ 75**	3025	3000	750
114892	9.740	**H–BRACE UBH FLEX 300/100**	3092	3000	1000
124105	10.300	**H–BRACE UBH FLEX 300/150**	3279	3000	1500
114924	11.000	**H–BRACE UBH FLEX 300/200**	3528	3000	2000
114932	11.900	**H–BRACE UBH FLEX 300/250**	3826	3000	2500
114936	12.900	**H–BRACE UBH FLEX 300/300**	4163	3000	3000

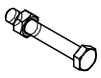
For horizontal bracing of towers.
Can also be used underneath Decks UDG.

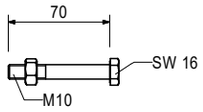




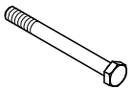
Art. no.	Weight [kg]	
100719	0.060	**BOLT.ISO 4014–M10X070–8.8–VZ–MU**
138009	0.060	**BOLT.ISO 4014–M10X070–10.9–VZ–MU**

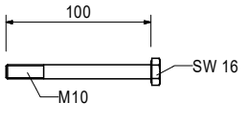
As tension–proof connection of verticals at suspended scaffolds and formwork girders.





Art. no.	Weight [kg]		L [mm]
710242	0.063	**BOLT.ISO 4014–M10X100–8.8–VZ**	100

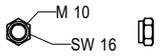




Art. no.	Weight [kg]	
780356	0.011	**HEX. NUT ISO 7040–M10–8–VZ**

Self–locking.

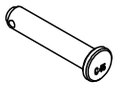


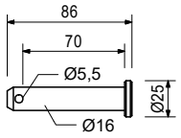


Note

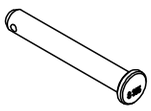
Width across flats AF 16.

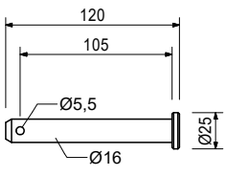
Art. no.	Weight [kg]	
106031	0.142	**BOLT D=16/70, GALV.**





Art. no.	Weight [kg]	
106194	0.195	**BOLT D=16/105, GALV.**



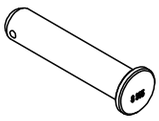


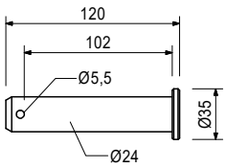
Art. no.	Weight [kg]	
018060	0.014	**COTTER PIN 4/1 GALVANISED**



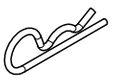


Art. no.	Weight [kg]	
106191	0.438	**BOLT D=24/105, GALV.**



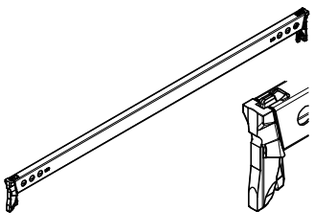


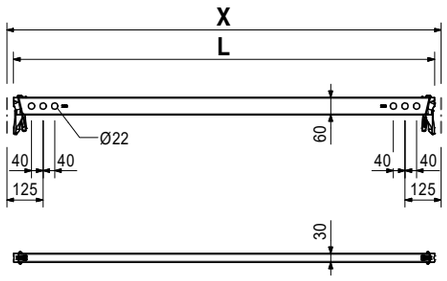
Art. no.	Weight [kg]	
022230	0.033	**COTTER PIN 5/1 GALVANISED**





Art. no.	Weight [kg]		L [mm]	X [mm]
		Horizontal Ledger UH–2		
131995	1.400	**HORIZONTAL LEDGER UH–2 25**	204	250
133900	1.590	**HORIZONTAL LEDGER UH–2 33**	284	330
131998	2.030	**HORIZONTAL LEDGER UH–2 50**	454	500
133903	2.470	**HORIZONTAL LEDGER UH–2 67**	624	670
132213	2.680	**HORIZONTAL LEDGER UH–2 75**	704	750
132004	3.730	**HORIZONTAL LEDGER UH–2 100**	954	1000
132007	4.500	**HORIZONTAL LEDGER UH–2 125**	1204	1250
132010	4.670	**HORIZONTAL LEDGER UH–2 150**	1454	1500
132013	5.330	**HORIZONTAL LEDGER UH–2 175**	1704	1750
132016	5.990	**HORIZONTAL LEDGER UH–2 200**	1954	2000
132019	6.650	**HORIZONTAL LEDGER UH–2 225**	2204	2250
132025	7.310	**HORIZONTAL LEDGER UH–2 250**	2454	2500
132022	8.640	**HORIZONTAL LEDGER UH–2 300**	2954	3000

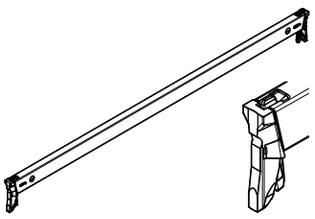


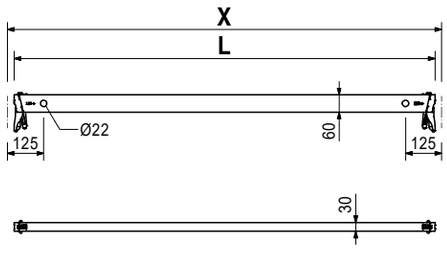


Note

With length marking for easier identification.

Art. no.	Weight [kg]	
		Horizontal Ledger UH Plus
414613	1.430	**HORIZONTAL LEDGER UH 25 PLUS**
414595	2.080	**HORIZONTAL LEDGER UH 50 PLUS**
414629	2.740	**HORIZONTAL LEDGER UH 75 PLUS**
414632	4.470	**HORIZONTAL LEDGER UH 100 PLUS**
414638	5.440	**HORIZONTAL LEDGER UH 125 PLUS**
414641	4.720	**HORIZONTAL LEDGER UH 150 PLUS**
417032	5.390	**HORIZONTAL LEDGER UH 175 PLUS**
414645	6.050	**HORIZONTAL LEDGER UH 200 PLUS**
416356	6.710	**HORIZONTAL LEDGER UH 225 PLUS**
414648	7.370	**HORIZONTAL LEDGER UH 250 PLUS**
414651	8.690	**HORIZONTAL LEDGER UH 300 PLUS**



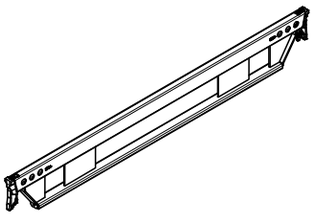


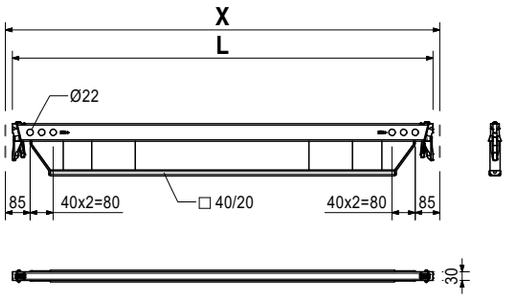
Note

With length marking for easier identification.

Art. no.	Weight [kg]		L [mm]	X [mm]
		Horizontal Ledger UHV–2		
137020	9.410	**HORIZONTAL LEDGER UHV–2 150**	1454	1500
137025	12.700	**HORIZONTAL LEDGER UHV–2 200**	1954	2000
137030	15.200	**HORIZONTAL LEDGER UHV–2 250**	2454	2500
137035	18.500	**HORIZONTAL LEDGER UHV–2 300**	2954	3000

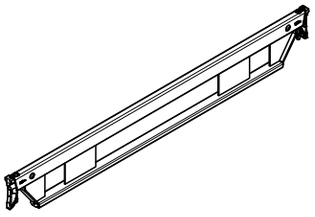
For high loads, e.g. in the case of material storage.

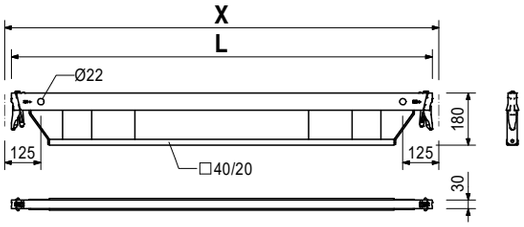




Art. no.	Weight [kg]	
		Horizontal Ledger UHV Plus
414681	11.000	**HORIZONTAL LEDGER UHV 150 PLUS**
414687	14.900	**HORIZONTAL LEDGER UHV 200 PLUS**
414691	18.100	**HORIZONTAL LEDGER UHV 250 PLUS**
414695	21.800	**HORIZONTAL LEDGER UHV 300 PLUS**

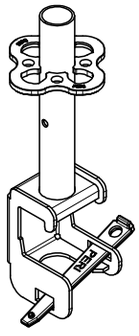
For high loads, e.g. in the case of material storage.

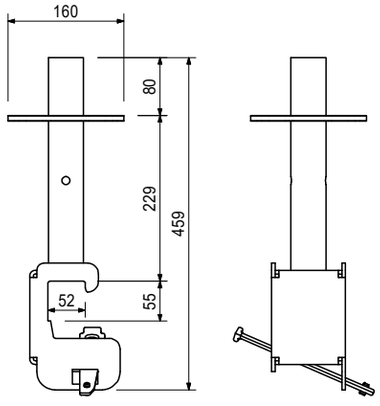




Art. no.	Weight [kg]	
105366	3.690	**LGS COLLAR URP**

Base for further scaffold assembly on LGS Elements.





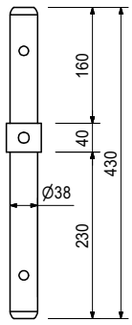
Accessories (not included)

105372	2.500	**PIN WITH SPACER TUBE URE4/42**

Art. no.	Weight [kg]	
105372	2.500	**PIN WITH SPACER TUBE URE4/42**

For attaching to Element Collar URP, Connector ULS Flex and Head Frame EVH. Spacer tube enables further installation in the system grid.





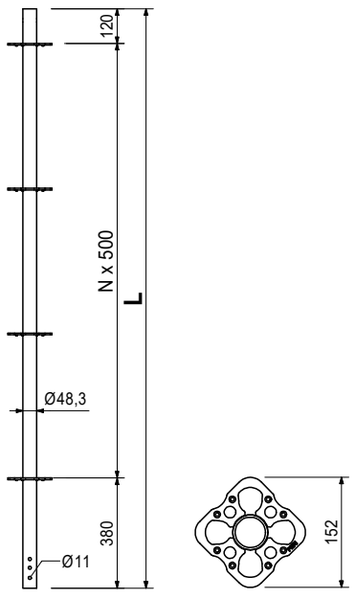
Accessories (not included)

100719	0.060	**BOLT.ISO 4014–M10X070–8.8–VZ–MU**
780356	0.011	**HEX. NUT ISO 7040–M10–8–VZ**

Art. no.	Weight [kg]		L [mm]
		Top Standards UVH–2	
132123	2.100	**TOP STANDARD UVH–2 50**	500
132194	4.210	**TOP STANDARD UVH–2 100**	1000
132196	6.070	**TOP STANDARD UVH–2 125**	1250
132198	6.320	**TOP STANDARD UVH–2 150**	1500
132200	8.420	**TOP STANDARD UVH–2 200**	2000
132202	10.500	**TOP STANDARD UVH–2 250**	2500

Without pin for mounting head spindles.

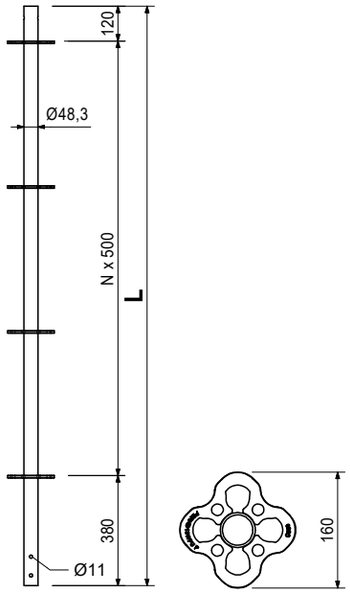




Art. no.	Weight [kg]	
		Top Standards UVH
401309	2.510	**TOP STANDARD UVH 50**
400000	4.610	**TOP STANDARD UVH 100**
400003	6.920	**TOP STANDARD UVH 150**
400005	9.230	**TOP STANDARD UVH 200**
400007	11.500	**TOP STANDARD UVH 250**

Without pin for mounting head spindles.

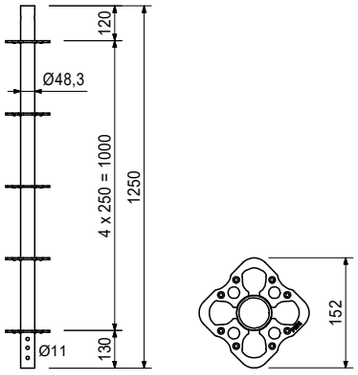




Art. no.	Weight [kg]		L [mm]
132196	6.070	**TOP STANDARD UVH–2 125**	1250

Without pin for mounting head spindles.

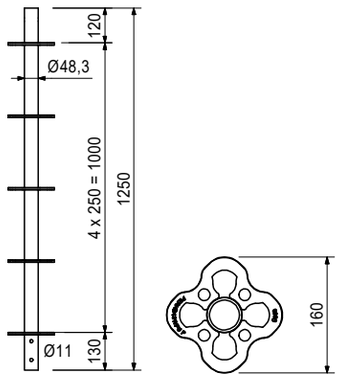




Art. no.	Weight [kg]	
417195	7.590	**TOP STANDARD UVH 125**

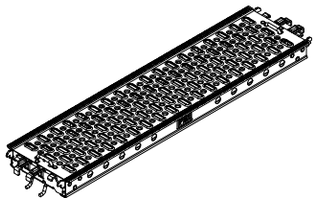
Without pin for mounting head spindles.

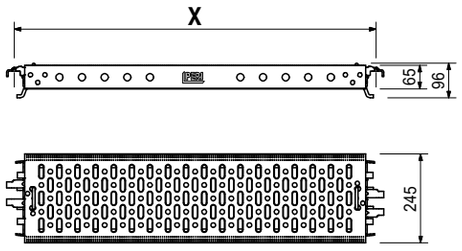




Art. no.	Weight [kg]		X [mm]	perm. p [kN/m²]
		Steel Decks UDG 25		
424124	3.810	**STEEL DECK UDG 25X50**	500	6
432858	4.810	**STEEL DECK UDG 25X67**	670	6
424121	5.180	**STEEL DECK UDG 25X75**	750	6
424118	6.550	**STEEL DECK UDG 25X100**	1000	6
424115	7.940	**STEEL DECK UDG 25X125**	1250	6
424112	9.330	**STEEL DECK UDG 25X150**	1500	6
424109	12.200	**STEEL DECK UDG 25X200**	2000	6
423771	14.900	**STEEL DECK UDG 25X250**	2500	4.5
424915	17.700	**STEEL DECK UDG 25X300**	3000	3

Fit onto Horizontal Ledgers UH.





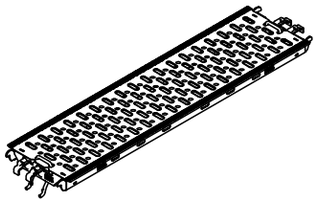
Note

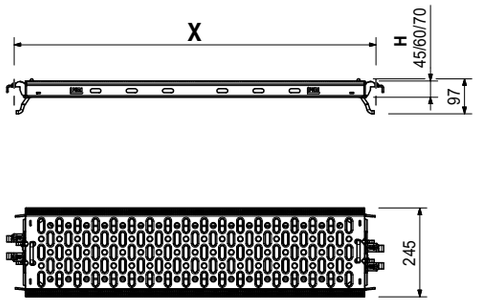
Values correspond with EN 12811–1.
max. p = max. possible surface load without deflection limitation.

PERI UP Flex Platform LGS

Art. no.	Weight [kg]		X [mm]	perm. p [kN/m²]
		Steel Decks UDG–2 25		
132479	3.190	**STEEL DECK UDG–2 25X 50**	500	6
132483	3.960	**STEEL DECK UDG–2 25X 67**	670	6
132488	4.320	**STEEL DECK UDG–2 25X 75**	750	6
132492	5.450	**STEEL DECK UDG–2 25X100**	1000	6
132502	6.590	**STEEL DECK UDG–2 25X125**	1250	6
132505	7.730	**STEEL DECK UDG–2 25X150**	1500	6
132508	10.500	**STEEL DECK UDG–2 25X200**	2000	6
132511	12.900	**STEEL DECK UDG–2 25X250**	2500	4.5
132515	15.800	**STEEL DECK UDG–2 25X300**	3000	3

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.

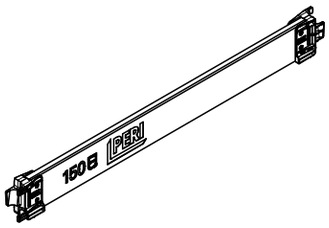


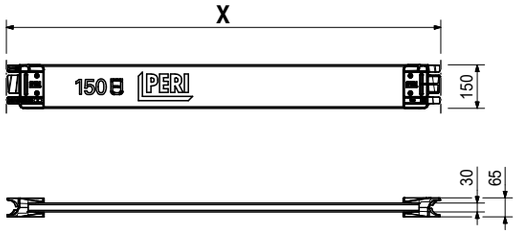


Note

Values correspond with EN 12811–1.

Art. no.	Weight [kg]		L [mm]	X [mm]
		Wood Toe Boards UPF		
129490	1.180	**WOOD TOE BOARD UPF 50**	495	500
129492	1.550	**WOOD TOE BOARD UPF 67**	665	670
129494	1.720	**WOOD TOE BOARD UPF 75**	745	750
129496	2.250	**WOOD TOE BOARD UPF 100**	995	1000
129498	3.320	**WOOD TOE BOARD UPF 150**	1495	1500
129500	4.390	**WOOD TOE BOARD UPF 200**	1995	2000
129502	5.460	**WOOD TOE BOARD UPF 250**	2495	2500
129504	6.520	**WOOD TOE BOARD UPF 300**	2995	3000





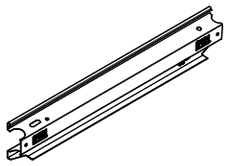
Note

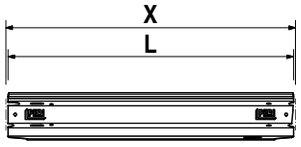
Default surface: painted yellow.

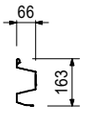
Art. no.	Weight [kg]		L [mm]	X [mm]
		Steel Toe Boards UPY		
132592	0.414	**STEEL TOE BOARD UPY 25**	236	250
110213	0.929	**STEEL TOE BOARD UPY 50**	486	500
129947	1.280	**STEEL TOE BOARD UPY 67**	656	670
110073	1.960	**STEEL TOE BOARD UPY 100**	986	1000
110160	2.990	**STEEL TOE BOARD UPY 150**	1486	1500
110176	4.030	**STEEL TOE BOARD UPY 200**	1986	2000
110208	5.060	**STEEL TOE BOARD UPY 250**	2486	2500
110211	6.090	**STEEL TOE BOARD UPY 300**	2986	3000

Note

- Default surface: galvanised and painted in yellow.





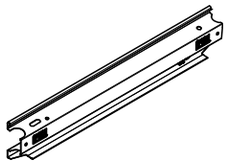


Accessories (not included)

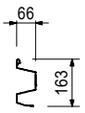
710242	0.063	**BOLT.ISO 4014–M10X100–8.8–VZ**
780356	0.011	**HEX. NUT ISO 7040–M10–8–VZ**

Art. no.	Weight [kg]		L [mm]	X [mm]
		Steel Toe Boards UPY–C		
134643	0.414	**STEEL TOE BOARD UPY 25–C**	236	250
134642	0.929	**STEEL TOE BOARD UPY 50–C**	486	500
134641	1.280	**STEEL TOE BOARD UPY 67–C**	656	670
134640	1.450	**STEEL TOE BOARD UPY 75–C**	736	750
134639	1.960	**STEEL TOE BOARD UPY 100–C**	986	1000
134638	2.480	**STEEL TOE BOARD UPY 125–C**	1236	1250
134637	2.990	**STEEL TOE BOARD UPY 150–C**	1486	1500
134636	4.030	**STEEL TOE BOARD UPY 200–C**	1986	2000
134635	5.060	**STEEL TOE BOARD UPY 250–C**	2486	2500
134634	6.090	**STEEL TOE BOARD UPY 300–C**	2986	3000

Customised toe board steel design in RAL colour scheme possible on request.



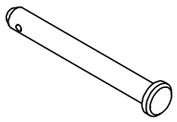


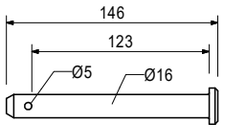


Accessories (not included)

710242	0.063	**BOLT.ISO 4014–M10X100–8.8–VZ**
780356	0.011	**HEX. NUT ISO 7040–M10–8–VZ**

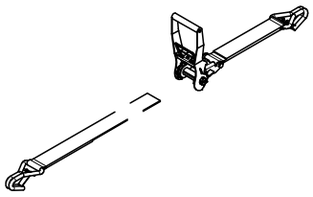
Art. no.	Weight [kg]	
715357	0.238	**BOLT 16X146 GALV.**

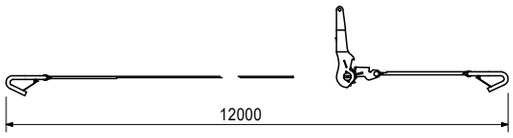




Art. no.	Weight [kg]	
118349	3.530	**TENSION BELT PTB 12**

Two–piece.





Note

Observe the notes on the belt label!
Total length 12 m, max. span 8 m.
Permissible tensile force 2.5 t.

The optimum system for every project and every requirement



Wall formwork



Column formwork



Slab formwork



Climbing systems



Bridge formwork



Tunnel formwork



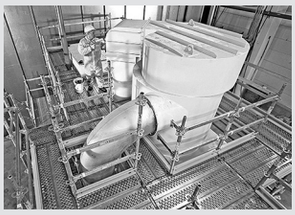
Shoring



Working scaffolds construction



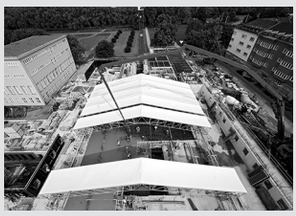
Working scaffolds facade



Working scaffolds industry



Means of access



Safety scaffolds



Safety systems



System–independent accessories



Services

PERI Danmark A/S
Forskalling & Stilladssystemer
Greve Main 26
2670 Greve
Tlf. +45 4345.3627
peri@peri.dk
www.peri.dk

EN Int Version 2.0 | DO-23-0030819 © PERI DK