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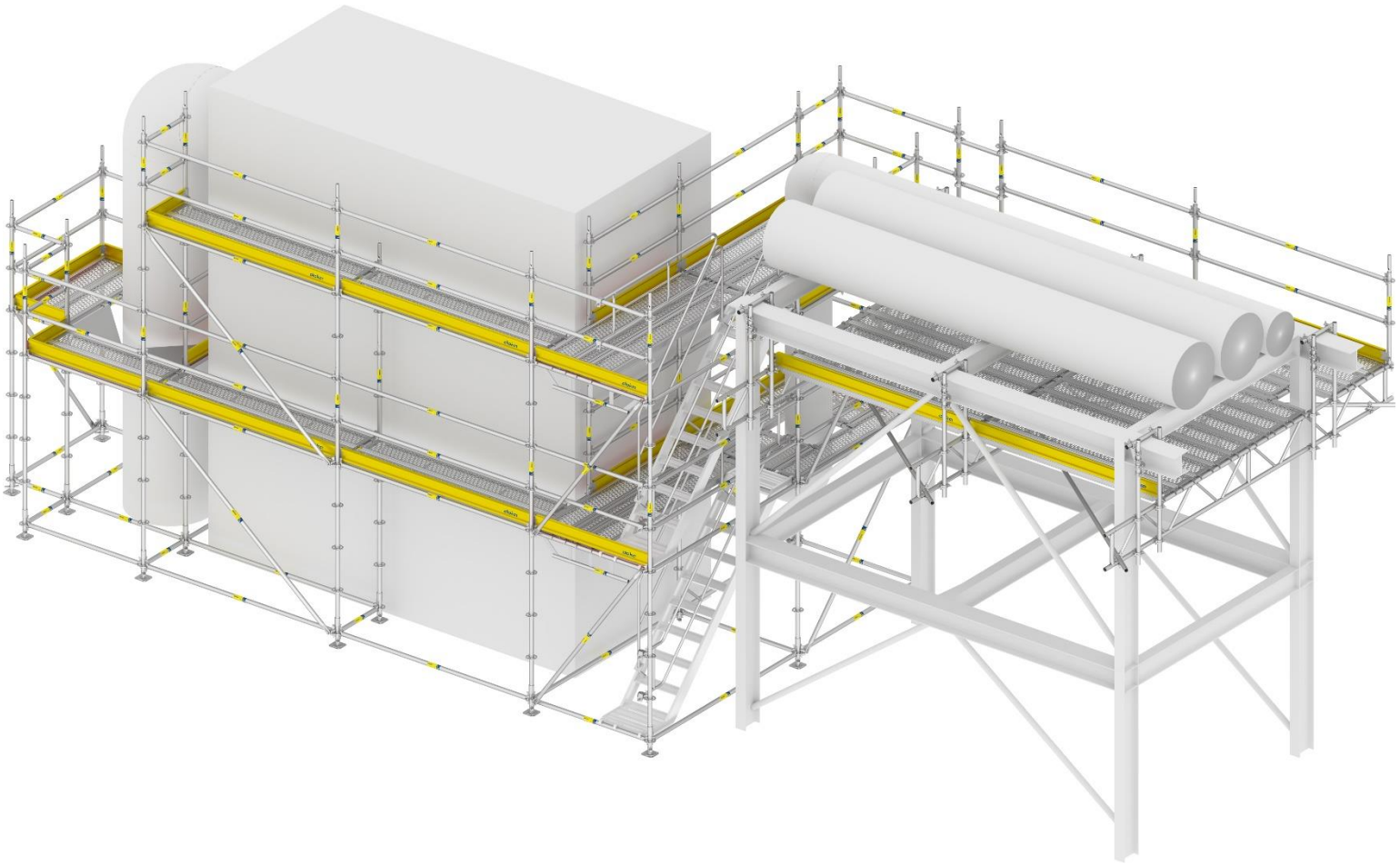
The Formwork Experts.

DokaScaff UNI

One scaffold, multiple applications.

User information

Instructions for assembly and use (Method statement)



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Introduction

Remarks on this document

- This manual can be used as a generic method statement or incorporated with a site-specific method statement.
- **Many of the illustrations in this booklet show the situation during scaffold assembly and are therefore not always complete from the safety point of view.**
- Any safety accessories not shown in these illustrations must still be used by the customer, in accordance with the applicable rules and regulations.
- **Further safety instructions, especially warnings, will be found in the individual sections of this document!**

Symbols used

The following symbols are used in this booklet:

Important note

Failure to observe this may lead to malfunction or damage.

CAUTION/WARNING/DANGER

Failure to observe this may lead to material damage or to injury, which may range from severe or up to life-threatening.

Sight-check

Indicates that a sight-check is needed to make sure that necessary actions have been carried out.

► **Instruction**

This symbol indicates that actions need to be taken by the user.

Tip

Points out useful practical tips.

Reference

Refers to other documents and materials.

Elementary safety warnings

Target users

- This manual is aimed at all persons who will be working with the Doka product or system that it describes. It contains information on the standard design for setting up the system and on its correct and compliant utilisation.
- All persons working with the product described herein must be familiar with the contents of this manual and with all the safety instructions it contains. Persons who are incapable of reading and understanding this booklet, or who can do so only with difficulty, must be instructed and trained by the customer.
- The customer is to ensure that the information materials provided by Doka (e.g. User Information booklets, Instructions for Assembly and Use, Operating Instruction manuals, plans) are available to all users, and that they have been made aware of them and have easy access to them at the usage location. In the relevant technical documentation and scaffold utilization plans, Doka shows the workplace safety precautions that are necessary in order to use the Doka products safely in the usage situations shown.
- In all cases, users are obliged to ensure the compliance with national laws, standards and rules throughout the entire project and to take appropriate additional or alternative workplace safety precautions where necessary.

Hazard assessment

- The customer is responsible for drawing up, documenting, implementing and continually updating a hazard assessment at every job-site. This document serves as basis for the site-specific hazard assessment, and for the instructions given to users on how to prepare and utilise the system. It is not a substitute of these, however.

Planning

- Provide safe workplaces for those using the scaffold (e.g. for when it is being assembled/disassembled, modified or repositioned). It must be possible to get to and from these workplaces via safe access routes!
- **If you are considering any deviation from the details and instructions given in this booklet, or any application which goes beyond those described in the booklet, then revised static calculations must be produced for checking, as well as supplementary assembly instructions.**

Rules applying during all phases of the assignment:

- The customer must ensure that this product is assembled and disassembled, reset and generally used for its intended purpose in accordance with the applicable laws, standards and rules, under the direction and supervision of suitably skilled persons. These persons' mental and physical capacity must not in any way be impaired by alcohol, medicines or drugs.
- Doka products are technical working appliances which are intended for industrial/commercial use only, always in accordance with the respective Doka User Information booklets or other technical documentation authored by Doka.
- The stability of all components and units must be ensured during all phases of the construction work!
- The functional/technical instructions, safety warnings and loading data must all be strictly observed and complied with. Failure to do so can cause accidents and severe (even life-threatening) damage to health, as well as considerable material damage.
- Fire-sources are not permitted anywhere near the scaffold. Heating appliances are only allowed if properly and expertly used and set up at a safe distance away from the scaffold.
- The work must take account of the weather conditions (e.g. risk of slippage). In extreme weather, steps must be taken in good time to safeguard the equipment, and the immediate vicinity of the equipment, and to protect employees.
- All connections must be checked regularly to ensure that they still fit properly and are functioning correctly. It is very important to check all screw-type connections and wedge-clamped joins whenever the construction operations require (particularly after exceptional events such as storms), and to tighten them if necessary.

Maintenance

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

Miscellaneous

- We reserve the right to make alterations in the interests of technical progress.

Specific safety warnings

Before assembly

- Be aware of the purpose for which the scaffold is being requested and check if the loads imposed on the scaffold are compliant with its utilisation; the various loads are:
  - self-weight;
  - live loads acting on the decks;
  - wind loads (in combination with cladding).
- Be aware of the line-up of the scaffold in regard to the building in order to minimize the gaps between both.
- Be aware of the existence of overhead electrical lines; a minimum distance of 5 m must be observed.
- Be aware if the vertical loads can be supported by the ground and the horizontal loads can be borne by, simultaneously, the anchors and the building/structure where the scaffold is being anchored to.
- Be aware of the proper functioning of the tools that are needed during assembly; standard tools include: wrench size 22, hammer, tape measure, level and 10mm drill.
- Be aware that the scaffold parts must be inspected by the customer before use to ensure they are in suitable condition; steps must be taken to rule out the use of any parts that are damaged, deformed, or weakened due to wear, corrosion or rot.
- Briefly inducte the scaffolders about the hazards and safe work method statement.

While assembly

- Set an area around the assembly zone where the passage is forbidden.
- Do not start the assembly of a new level without having completed the previous one and without inspecting the wedge-clamped and screw-type connections to detect any loose or missing parts.
- Lift and lower the scaffold parts well fastened and using appropriate means; small-size components are recommended to be moved inside baskets.
- In case the scaffold lies on the surroundings of an embankment, be aware that a minimum distance of 1 m must be respected and a revised static calculation must be produced for checking, as well as supplementary assembly instructions.
- Be aware that at the end of the assembly all remaining components must be removed from the scaffold to the ground, decks shouldn’t have gaps where objects, materials or tools can fall, toeboards and guardrails at 0.5 and 1 m are in place.
- Combining Doka scaffold with those of other manufacturers could be dangerous, risking damage to both health and property. If the intention is to combine different systems, please contact Doka for advice first.
- The equipment/system must be assembled in accordance with the applicable laws, standards and rules by suitably skilled personnel of the customer, having regard to any and all required safety inspections. If nothing else is specified, the following standards apply:
  - scaffold tubes: galvanised steel tubing with minimum dimensions Ø 48.3x 3.2 mm, according to EN 12811-1:2003 4.2.1.2;
  - timber components: strength Class C24 for solid wood, according to EN 338;
  - scaffold tube couplings according to EN 74.
- It is not permitted to modify Doka products; any such modifications constitute a safety risk.
- Doka products and systems must be set up in such a way that all loads acting upon them are safely transferred!

Fall protection measures

- During assembly, modification and disassembly, personal protective equipment (PPE), temporary guardrails, or a combination of both may be required.
- The use of PPE to prevent falling is regulated in the project-related risk assessment that has been prepared by the contractor (user).
- Standard PPE include safety helmet, gloves, protective shoes, protective goggles, working clothes and safety harness.
- The use of a safety harness with shock absorptive lanyard is only permitted when the falling height is above 6 m measured vertically from anchoring point to the ground.

While using

- Be aware that personnel should be properly informed about the correct use of the scaffold, including authorized users and maximum loads (e.g. scaffold tag).
- Be aware that accessing the scaffold is only permitted through indicated access points; jumping from the scaffold to the building and vice-versa is not allowed.
- Be aware that moving upwards and downwards on the scaffold is only permitted through access decks, ladders or stairways, whose hatches should remain closed and opened only when strictly necessary.
- Be aware that working simultaneously above someone that is working on a different level is not permitted.
- Be aware that materials and tools should be distributed evenly over the decks to avoid overloads.
- Be aware that a minimum corridor with 1.9 m of headroom and 0.6 m of width must be guaranteed, including at places where materials will be stocked.
- Be aware that modifications on the scaffold must only be performed by skilled personnel, having regard to any and all required safety inspections.
- Be aware that modifications on the vicinity of the scaffold feet, such as digging, are strictly not permitted.

Inspection and tagging

National regulations may require scaffolds to be tagged with their loading-data according to the intended use. This tag is to be placed at all access points, so the end-user of the scaffold is informed of the risks if the intended use is not complied with.

The form template for this scaffold tag shall be adapted to ensure compliance with national laws, standards and regulations.

Furthermore, during assembly, modification and disasembly, the scaffold erector must ensure that all access points display safety symbols: "No entry for unauthorized persons".

An inspection to the scaffold is considered required on the following events:

- before being used for the first time, technically qualified personnel from the company responsible for assembling the scaffold must verify that it has been properly assembled and in accordance with the applicable laws, standards and regulations.
- if any modifications of any kind occur on the scaffold, the scaffold erector must be immediately informed, and he must ensure that an additional inspection is carried out by a competent person appointed by him and a new tag shall be affixed.
- furthermore, following significant alteration of the initial assembly, adverse weather or any event likely to have affected its stability, such as an accident or a collision, an additional inspection is to be carried out by a competent person and a new tag shall be affixed.
- although not mandatory, regular weekly inspections are considered to be a good practise.

Transporting, stacking and storing

- Observe all regulations applying to the handling of scaffolding. In addition, the Doka slinging means must be used - this is a mandatory requirement.
- Remove any loose parts or fix them in place so that they cannot be dislodged or fall free!
- All components must be stored safely, following all the special Doka instructions given in the relevant sections of this manual!

Regulations; industrial safety

- All laws, standards, industrial safety regulations and other safety rules applying to the application and utilisation of Doka products in the country and/or region in which the products are being used must always be observed.
- If a person or object falls against, or into, the sideguard component and/or any of its accessories, the component affected may only continue in use after it has been inspected and passed by an expert.

System description

Features overview

DokaScaff UNI is a scaffold system based on the trademarked Catari US®. It is manufactured using high-strength steel, automated welding and hot-dipped galvanization as coating, which offers to its users the highest product quality and durability with the least possible maintenance.

Its design, based on the ringlock fitting (rosette), makes the system suitable even for the most complex and demanding scaffold constructions, such as heavy duty industrial and civil engineering applications.

The rosette is a disk welded to the standards[1)] every 50 cm, which contains specially shaped openings able to fix up to eight other components of the system through wedge-clamped heads. These heads exist at the extremity of the system's components, such as ledgers[2)] or diagonal braces, and fit exactly round the perforated rosettes assuring solid joints with high load-bearing capacity. Due to the way the rosette openings are formed, nearly any angle can be set.

DokaScaff UNI normally uses 32 cm wide steel decks with lengths ranging from 73 cm to 307 cm. Other options are however available, such as full aluminium decks, combined aluminium and plywood decks, steel stairways or aluminium stairways.

DokaScaff UNI components come with customized labels that improve the end-user experience, with information of sizing and usability.

1) Vertical members of the system.
2) Horizontal members of the system.

Multipurpose by design

- The rosettes allow further possibilities in terms of connecting ledgers, brackets or other components, which grants the system an outstanding flexibility for continual geometrical adjustments.
- The high load-bearing capacity of the system, up to 5.8 tons per leg, allows for a wide range of scaffold applications, from shoring and various working scaffolds through to access solutions.

All-round safe

- Tested anchorage points for fixing the safety harness enhance safety for scaffolders throughout assembly and disassembly.
- The possibility of adding guard-rails every 50 cm and toeboards covering the full perimeter enhance safety for the end-users of the scaffold.
- DokaScaff UNI complies with the European scaffolding standard EN 12 810-1, which includes the components being verified by qualified external testing bodies.

Quick assembly

- DokaScaff UNI uses base collars which allows for just one person to line-up the scaffold in safety.
- Once the first level is settled, no further levelling is required.
- Wedge-clamped joints with pre-settled angles to connect ledgers, and built-in spigots to stack standards, grant the system a high assembly rate.
- Regardless of the configuration, the assembly workflow is always the same, which reduces learning times and enhances the performance of scaffolders.

Cost-effective

- Reduces equipment investment since 80% of the parts can be re-used from one application to another.
- Reduces labour needs since, in replace of the time-consuming screwed connections of conventional scaffold, the joining process is simple and user-friendly.
- Reduces space consumption during transport and stocking in comparison with frame scaffolding.
- The lack of loose components, such as non-detachable wedges, coupled with the galvanized finish grant the system a longer durability.

Scaffold configurations

The following scaffold configurations are assembly examples for the most demanded range of uses. They are named after their area of application.

About this User Information

This document aims to walk the users through DokaScaff UNI's system, giving an overall understanding of its components, safe assemble workflows and correct use. The document is set up sequentially, starting from basic principles and afterwards tapering into each configuration's features, assembly steps, technical data and safety warnings.

Façade scaffold

DokaScaff UNI can be used for realizing safe and high load-bearing façade scaffolds. Façade scaffolds are usually narrow, standard widths are 73 cm or 109 cm, as they serve for working the front of a building, to which they are fixed.

The decking is placed directly onto the 73 cm or 109 cm ledgers, while the bay lengths are adjustable in increments.

Comprehensive range of assembly options is provided for optimum adaptation to irregular façades, such as cornices, cantilevers, bridging arrangements, walkways and niches.

Façade scaffold guidelines

For further information about façade scaffold using DokaScaff UNI, contact Doka.

Stair towers

When on-site temporary access is required, stair towers can quickly and safely be assembled using the standard components of the DokaScaff UNI and pre-assembled stairway elements.

As a result, different standard configurations are easily set up according to load and height requirements.

Birdcage scaffold

Birdcage scaffolds (or working platforms) serve to create safe access for construction activities to higher-positioned working areas, both on buildings or industrial facilities.

They can range from one-bay scaffolding towers to extensive accesses under ceilings or bridges, and can be used for both stationary and mobile applications.

Birdcage scaffold guidelines

For further information about birdcage scaffold using DokaScaff UNI, contact Doka.

Shoring

DokaSCaff UNI can be easily adapted to shoring applications using the core components and few extra accessories, such as secrew-jack U-heads and 4-ways screw-jack heads.

Shoring guidelines

For further information about shoring using DokaScaff UNI, contact Doka.

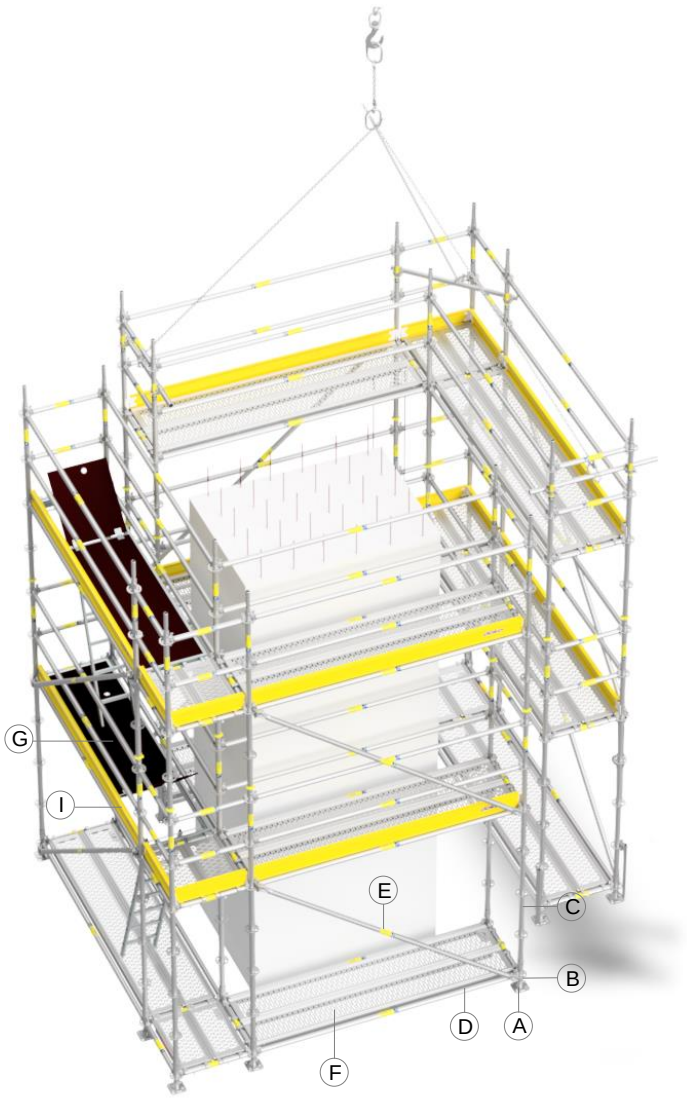
Rebar scaffold

Unimpeded access to the formwork or wall rebars is provided without requiring any anchors. Stability is achieved by widening the base (buttress) and, if required, by using counterweights.

Suitable bay lengths ensure that access is provided to all relevant components of the formwork, and the possibility of adapting the width allows complying with on-site space availability.

Inner guardrails and brackets create safe working conditions where there is a large gap to the wall.

Components walkthrough



The main components of the system, such standards, ledgers, diagonal braces, steel-decks, access decks and steel-toeboards, have several dimensions and varying purposes according to the requirements of the scaffold configuration. In turn, accessories, such as double ledgers, lattice girders, brackets, stairways, handrails and couplers, will always work in combination with the main components to achieve an optimized scaffolding design.

A	**DokaScaff UNI base jacks** Are used to ensure the correct transmission of loads to the ground and the compensation of slopes.
B	**DokaScaff UNI base collars** Are used at the base of the scaffold in conjunction with base jacks to ensure the connection between the standards and the ledgers/diagonals.
C	**DokaScaff UNI standards** Form the vertical members of the scaffold and incorporate distinctive rosettes which are welded at 50 cm intervals. At the top they have a pressed spigot that allows stacking further standards.
D	**DokaScaff UNI ledgers** Form the horizontal members of the scaffold. The wedge-clamped heads at both ends lock onto the rosettes of the standards to form bay sizes. They bear directly the loads of the decking or, when placed above the decking, serve also as guardrails.
E	**DokaScaff UNI diagonal braces** Form the vertical bracing of the scaffold and ensure its rigidity. Come in differing lengths to suit any combination of bay length and height. The swiveling wedge-clamped heads at both ends lock onto the rosette of the standards.
F	**DokaScaff UNI steel-decks** Are used to create safe platforms for working, with anti-slip surface. They laid directly on ledgers and come with anti-tilting devices, anti-icing and anti-dirt perforations. Standard width is 32 cm.
G	**DokaScaff UNI access decks** Are used to form openings within the working decking to allow access/egress between different levels. They laid directly on ledgers and come with anti-tilting devices and foldable ladders. Standard width is 61 cm.
I	**DokaScaff UNI steel-toeboards** Have special end-plates to fit the gap between the standards and the wedges and serve to prevent material from falling from the decking. Standard height is 15 cm.

Declaration of conformity

DokaScaff UNI is a scaffold system based on the trademarked Catari US®, which in its turn is approved under AENOR International S.A.U. approval A34/000035 as being class 3 scaffold in accordance with EN 12810-1. This standard specifies the performance requirements for structural design and assessment of prefabricated scaffolding systems and incorporates provisions of other publications that also have to be complied with. These publications are listed henceforth:

- EN 39, Loose steel tubes for tube and coupler scaffolds
- EN 74, Couplers, spigot pins and baseplates for use in falsework and scaffolds.
- EN 12810-2, Façade scaffolds made of prefabricated components. Part 2: Particular methods of structural design
- EN 12811-1, Temporary works equipment. Part 1: Scaffolds. Performance requirements and general design
- EN 12811-2, Temporary works equipment. Part 2: Information on materials
- EN 12811-3, Temporary works equipment. Part 3: Load testing
- ENV 1991-1, Eurocode 1 – Actions on structures
    - Part 1-1: Densities, self-weight, imposed loads for buildings.
    - Part 1-3: General actions. Snow loads
    - Part 1-4: General actions. Wind actions.
    - Part 1-4: General actions. Wind actions.
    - Part 1-6: General actions. Actions during execution
- ENV 1993-1, Eurocode 3 – Design of steel structures Part 1: General rules and rules for buildings
- ENV 1995-1, Eurocode 5 – Design of timber structures
- ENV 1999-2, Eurocode 9 – Design of aluminium structures. Part 2: Structures susceptible to fatigue
- ISO 1461, Hot dip galvanized coatings on fabricated iron and steel articles - Specifications and test methods

The following table compares the corresponding components and describes the conformity of parts differently designated and with varying article numbers.

Part Name	Catari article-number	Doka article-number
DokaScaff UNI standard with spigot 0.50m	US.VT.0500	698 001 010
DokaScaff UNI standard with spigot 1.00m	US.VT.1000	698 001 020
DokaScaff UNI standard with spigot 1.50m	US.VT.1500	698 001 030
DokaScaff UNI standard with spigot 2.00m	US.VT.2000	698 001 040
DokaScaff UNI standard with spigot 2.50m	US.VT.2500	698 001 050
DokaScaff UNI standard with spigot 3.00m	US.VT.3000	698 001 060
DokaScaff UNI standard without spigot 0.50m	US.VTS.0500	698 001 090
DokaScaff UNI standard without spigot 1.00m	US.VTS.1000	698 001 100
DokaScaff UNI standard without spigot 1.50m	US.VTS.1500	698 001 110
DokaScaff UNI standard without spigot 2.00m	US.VTS.2000	698 001 120
DokaScaff UNI ledger 0.42m	US.HZ.0420	698 002 010
DokaScaff UNI ledger 0.73m	US.HZ.0730	698 002 020
DokaScaff UNI ledger 1.09m	US.HZ.1090	698 002 030
DokaScaff UNI ledger 1.40m	US.HZ.1400	698 002 040
DokaScaff UNI ledger 1.57m	US.HZ.1570	698 002 050
DokaScaff UNI ledger 2.07m	US.HZ.2070	698 002 060
DokaScaff UNI ledger 2.57m	US.HZ.2570	698 002 070
DokaScaff UNI ledger 3.07m	US.HZ.3070	698 002 080
DokaScaff UNI ledger 0.50m	CO.HZ.0500	698 002 090
DokaScaff UNI ledger 1.00m	CO.HZ.1000	698 002 100
DokaScaff UNI double ledger 1.57m	US.VP.1570	698 002 160
DokaScaff UNI double ledger 2.07m	US.VP.2070	698 002 170
DokaScaff UNI double ledger 2.57m	US.VP.2570	698 002 180
DokaScaff UNI double ledger 3.07m	US.VP.3070	698 002 190
DokaScaff UNI intermediate transom deck 0.73m	US.HZ.PP.0730	698 002 200
DokaScaff UNI intermediate transom deck 1.09m	US.HZ.PP.1090	698 002 210
DokaScaff UNI intermediate transom tube 0.73m	US.HZ.TT.0730	698 002 220
DokaScaff UNI intermediate transom tube 1.09m	US.HZ.TT.1090	698 002 230
DokaScaff UNI lattice girder 40/300cm	AA.VP.3000	698 002 280
DokaScaff UNI lattice girder 40/400cm	AA.VP.4000	698 002 290
DokaScaff UNI lattice girder 40/500cm	AA.VP.5000	698 002 300
DokaScaff UNI lattice girder 40/600cm	AA.VP.6000	698 002 310
DokaScaff UNI lattice girder 75/500cm	AA.VP.5000.75	698 002 320
DokaScaff UNI lattice girder 75/600cm	AA.VP.6000.75	698 002 330
DokaScaff UNI lattice girder w/ wedge 5.14m	US.VS4T5140	698 002 340
DokaScaff UNI lattice girder w/ wedge 6.14m	US.VS4T6140	698 002 350
DokaScaff UNI left ledger 0.73m 35°	US.HZ.730.35.E	698 002 360
DokaScaff UNI right ledger 0.73m 35°	US.HZ.730.35.D	698 002 370
DokaScaff UNI diagonal brace 200/73cm	US.DG.2000.730	698 003 010
DokaScaff UNI diagonal brace 200/109cm	US.DG.2000.1090	698 003 020
DokaScaff UNI diagonal brace 200/140cm	US.DG.2000.1400	698 003 030
DokaScaff UNI diagonal brace 200/157cm	US.DG.2000.1570	698 003 040
DokaScaff UNI diagonal brace 200/207cm	US.DG.2000.2070	698 003 050
DokaScaff UNI diagonal brace 200/257cm	US.DG.2000.2570	698 003 060
DokaScaff UNI diagonal brace 200/307cm	US.DG.2000.3070	698 003 070
DokaScaff UNI diagonal brace 100/73cm	US.DG.1000.730	698 003 080
DokaScaff UNI diagonal brace 100/109cm	US.DG.1000.1090	698 003 090
DokaScaff UNI diagonal brace 100/157cm	US.DG.1000.1570	698 003 110
DokaScaff UNI diagonal brace 100/207cm	US.DG.1000.2070	698 003 120

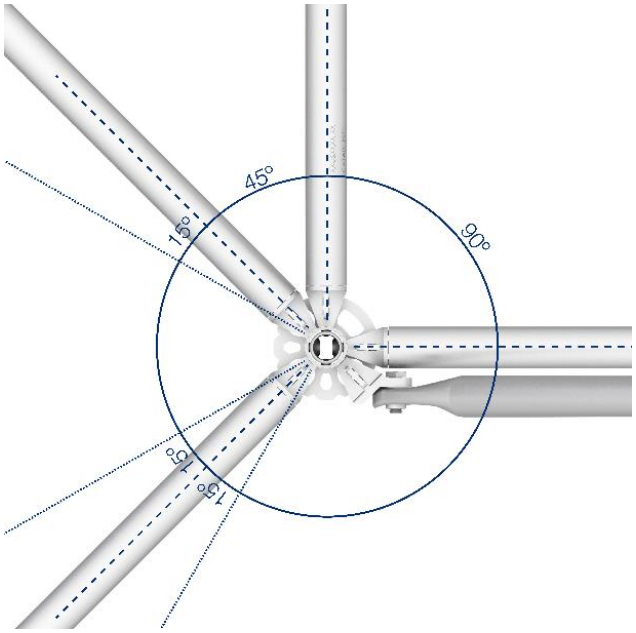
DokaScaff UNI diagonal brace 100/257cm	US.DG.1000.2570	698 003 130
DokaScaff UNI diagonal brace 100/307cm	US.DG.1000.3070	698 003 140
DokaScaff UNI diagonal brace 150/73cm	US.DG.1500.730	698 003 150
DokaScaff UNI diagonal brace 150/109cm	US.DG.1500.1090	698 003 160
DokaScaff UNI diagonal brace 150/157cm	US.DG.1500.1570	698 003 180
DokaScaff UNI diagonal brace 150/207cm	US.DG.1500.2070	698 003 190
DokaScaff UNI diagonal brace 150/257cm	US.DG.1500.2570	698 003 200
DokaScaff UNI diagonal brace 150/307cm	US.DG.1500.3070	698 003 210
DokaScaff UNI alu stairway 62/257cm	US.EP.2570	698 004 010
DokaScaff UNI alu stairway 62/307cm	US.EP.3070	698 004 020
DokaScaff UNI alu stairway 96/257cm	US.EP.2000.960.2570	698 004 030
DokaScaff UNI inner railing 2.57/3,07m	AA.CE.2000	698 004 040
DokaScaff UNI outer railing 2.57m	US.CE.EP.2570	698 004 050
DokaScaff UNI outer railing 3.07m	US.CE.EP.3070	698 004 060
DokaScaff UNI railing adjustable 257/307cm	US.CP	698 004 070
DokaScaff UNI stairway railing adaptor	US.AD.CE.EP	698 004 080
DokaScaff UNI steel stairway 88/257cm	US.E20A0880X2570	698 004 090
DokaScaff UNI steel-deck 19/109cm	US.PL.190.1090	698 005 010
DokaScaff UNI steel-deck 19/140cm	US.PL190X1400	698 005 020
DokaScaff UNI steel-deck 19/157cm	US.PL.190.1570	698 005 030
DokaScaff UNI steel-deck 19/207cm	US.PL.190.2070	698 005 040
DokaScaff UNI steel-deck 19/257cm	US.PL.190.2570	698 005 050
DokaScaff UNI steel-deck 19/307cm	US.PL.190.3070	698 005 060
DokaScaff UNI steel-deck 32/109cm	US.PL.1090	698 005 070
DokaScaff UNI steel-deck 32/140cm	US.PL.1400	698 005 080
DokaScaff UNI steel-deck 32/157cm	US.PL.1570	698 005 090
DokaScaff UNI steel-deck 32/207cm	US.PL.2070	698 005 100
DokaScaff UNI steel-deck 32/257cm	US.PL.2570	698 005 110
DokaScaff UNI steel-deck 32/307cm	US.PL.3070	698 005 120
DokaScaff UNI steel-deck 32/73cm	US.PL.0730	698 005 130
DokaScaff UNI steel-toeboard 0.73m	DK.US.RPM.0730	698 005 140
DokaScaff UNI steel-toeboard 1.09m	DK.US.RPM.1090	698 005 150
DokaScaff UNI steel-toeboard 1.40m	DK.US.RPM.1400	698 005 160
DokaScaff UNI steel-toeboard 1.57m	DK.US.RPM.1570	698 005 170
DokaScaff UNI steel-toeboard 2.07m	DK.US.RPM.2070	698 005 180
DokaScaff UNI steel-toeboard 2.57m	DK.US.RPM.2570	698 005 190
DokaScaff UNI steel-toeboard 3.07m	DK.US.RPM.3070	698 005 200
DokaScaff UNI access deck 61/157cm	US.PA1570	698 005 210
DokaScaff UNI access deck 61/207cm	US.PA.2070	698 005 220
DokaScaff UNI access deck w/ ladder 61/257cm	US.PA.2570	698 005 230
DokaScaff UNI access deck w/ ladder 61/307cm	US.PA.3070	698 005 240
DokaScaff UNI ladder for access deck 2.00m	AA.EA	698 005 250
DokaScaff UNI angular deck 0/45°	US.PL.CA 0/45	698 005 260
DokaScaff UNI corner-deck 0.73m	US.PL.CA.0730	698 005 270
DokaScaff UNI corner-deck 1.09m	US.PL.CA.1090	698 005 280
DokaScaff UNI corner-deck 90°	US.PL.CA.90	698 005 290
DokaScaff UNI steel-deck 19/73cm	US.PL190X0730	698 005 300
DokaScaff UNI base jack 50cm	AA.BN.500	698 006 010
DokaScaff UNI swivel base jack 65cm	AA.BNA.650	698 006 020
DokaScaff UNI 4-way screw-jack head 70cm	US.CR	698 006 030
DokaScaff UNI screw-jack U-head 70cm	US.CUR700	698 006 040
DokaScaff UNI base collar	US.CLSF	698 006 050
DokaScaff UNI base jack retention	US.FBV.I	698 006 060
DokaScaff UNI castor wheel 10kN	AA.RNT.1000	698 006 070
DokaScaff UNI castor wheel 7.5kN	AA.RNT.750	698 006 080
DokaScaff UNI bracket 0.42m	US.CL.320	698 006 090
DokaScaff UNI bracket 0.73m	US.CL.730	698 006 100
DokaScaff UNI bracket 1.09m	US.CL.1090	698 006 110
DokaScaff UNI bracket brace 2.00m	AA.TC	698 006 120
DokaScaff UNI coupler with spigot	US.AE.RP	698 006 130
DokaScaff UNI rosette coupler	AA.AROSE	698 006 140
DokaScaff UNI twin ledger end coupler	US.TD	698 006 150
DokaScaff UNI profile coupler with bolt	AA.AP	698 006 160
DokaScaff UNI double coupler for profile	AA.FT	698 006 170
DokaScaff UNI lattice girder coupler	AA.L	698 006 180
DokaScaff UNI spigot for lattice girder joint	AA.VP.EC	698 006 190
DokaScaff UNI spigot for standard joint	US.EC	698 006 200
DokaScaff UNI toeboard holder	US.SR35	698 006 210
DokaScaff UNI anchor tube 1.00m	AA.GA.1000	698 006 220
DokaScaff UNI anchor tube 1.50m	AA.GA.1500	698 006 230
DokaScaff UNI ring screw 12cm	AA.OL.120	698 006 240
DokaScaff UNI ring screw dowel	AA.BC.80	698 006 250
DokaScaff UNI pole ladder 2.00m	AA.EVA2000	698 006 260
DokaScaff UNI swing door 0.73m	DK.USPTASR0730	698 006 270
DokaScaff UNI swing door w/ toe board 1.00m	DK.USPTACR1000	698 006 280
DokaScaff UNI hinged pin 10x60	AA.PS.ML	698 006 320
DokaScaff UNI base jack 70cm	AA.BN.700	698 006 330
DokaScaff UNI adaptor for castor wheel	US.SPR	698 006 340
DokaScaff UNI universal pallet	TA.PUB0850X1200	698 007 010
DokaScaff UNI universal pallet w/ mesh crate	TA.PUR0850X1200	698 007 020
DokaScaff UNI bottom for UP	TA.PUE0850X1200	698 007 030

DokaScaff UNI central support for UP	TA.PUSC0850	698 007 040
DokaScaff UNI front mesh crate	TA.PUPF1200	698 007 050
DokaScaff UNI side mesh crate	TA.PUPL0850	698 007 060
DokaScaff UNI pallet for steel-decks	TA.PUB1025X1200	698 007 070
DokaScaff UNI central support for SD pallet	TA.PUSC1025	698 007 080
DokaScaff UNI rivet for wedge	CS.USCC	698 009 001
DokaScaff UNI wedge	CS.USC	698 009 002
Nut M16 for T-bolt	CS.ABRAPORC	698 009 003
T-bolt M16 for coupler	CS.ABRAPARA	698 009 004

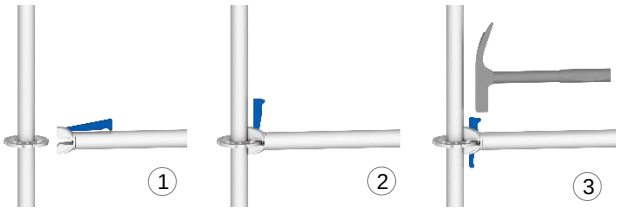
Basic principles

Understanding the rosette

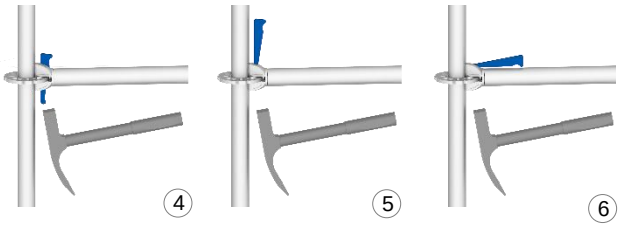
Rosettes are the joints where ledgers and diagonal braces can be locked. Each rosette has four narrow holes staggered by 90°, where ledgers are fastened if an exact right angle is to be achieved in the line-up, and four wide holes which serve to lock the diagonal braces and allow for a variable ledger connection of ±15°.



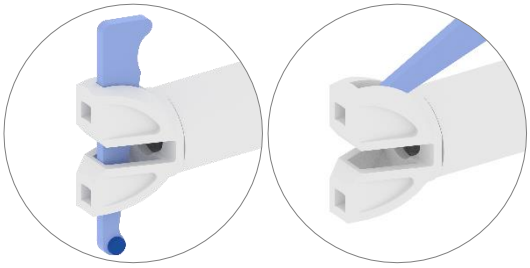
To fasten the wedge-clamped heads onto the rosettes, wedges have firstly to be inserted by hand, and then driven to locked-position with a hammer, until a rigid and secure connection by friction is achieved.



For unfasten, hammer the wedge out from below until it can be pulled out by hand.

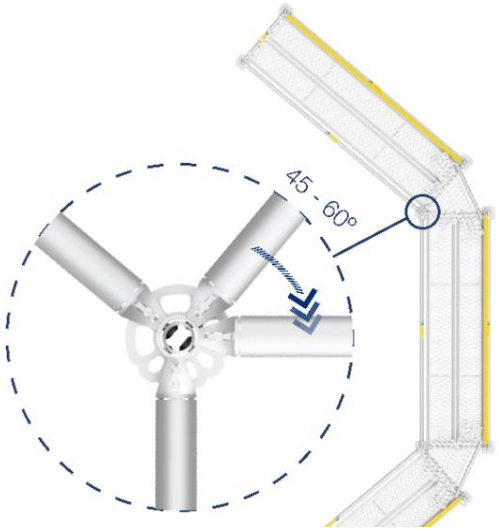


Every wedge is fixed to the heads by a rivet that prevent them to be accidentally detach and lost during transportation and handling.

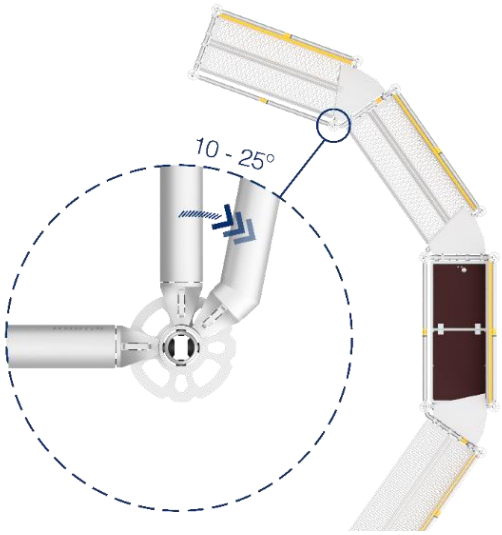


To explore multiple other configurations in size and shape, taking full advantage of the versatility of the system, other angles can be achieved using DokaScaff UNI ledgers 35°.

Max. angle variation using DokaScaf UNI ledgers



Max. angle variation using DokaScaf UNI ledgers 35º



Classes of access and working scaffolds

Scaffolds should be assembled according to the expected live load, which is directly related with the works that will be performed afterwards.

Class	Live load (kN/m^2)	Duty	Typical loading examples
1	0.75	Very light duty	Inspection, painting, light cleaning or access. One worker
2	1.50	Light duty	Light maintenance works, painting, cleaning or access. Two workers
3	2.00	General purpose	General maintenance works or access. Two workers + 50 Kg of equipment and materials
4	3.00	Heavy Duty	Heavier maintenance works Two workers + 100 Kg of equipment and materials
5	4.50	Special purpose	Heavy works with material storage
6	6.00	Special purpose	

General assembly workflow

Since the main components of every scaffold configuration are always the same, DokaScaff UNI follows just one logical assembly sequence, regardless of the application. As a result, any basic assembly can be achieved just repeating the few steps illustrated below.

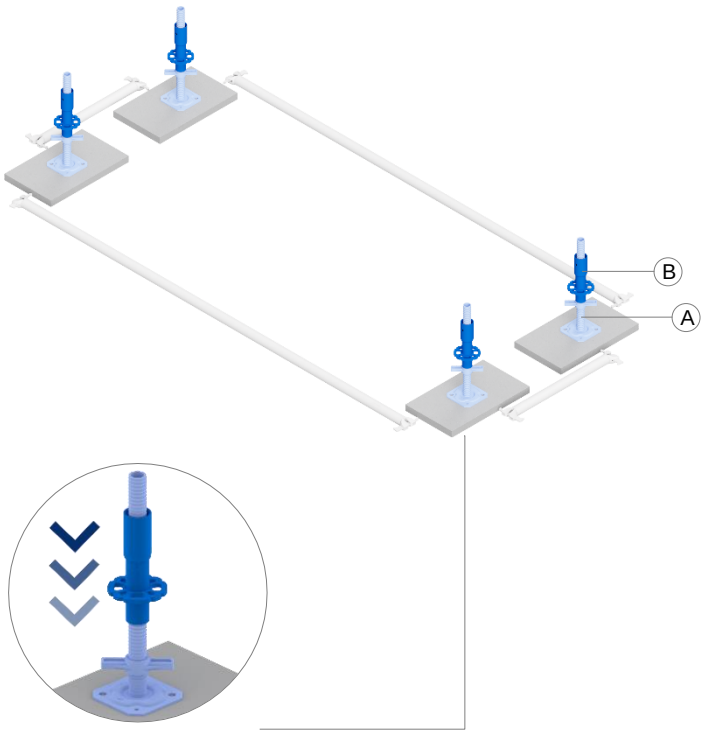
Prior to assembly

Check **Specific safety warnings**.

Assembling a basic setup

Follow the color grid

- Grey elements were previously assembled.
- Light blue elements are to be assembled first.
- Dark blue elements are to be assembled last.



- ▶ Adjust the nuts of the base jacks to their estimated height and insert the base collars.
- ▶ Lay down the ledgers in their approximate positions.

A DokaScaff UNI base jack

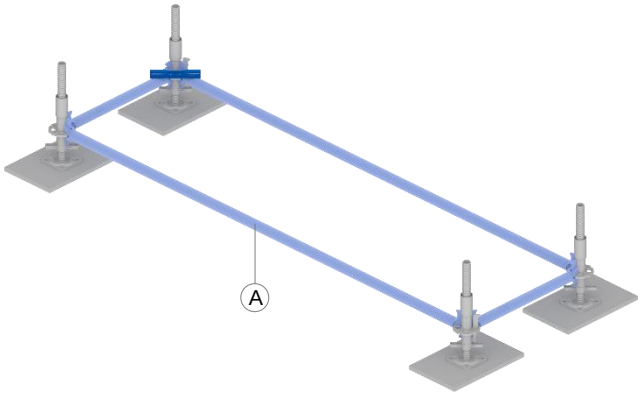
B DokaScaff UNI base collar

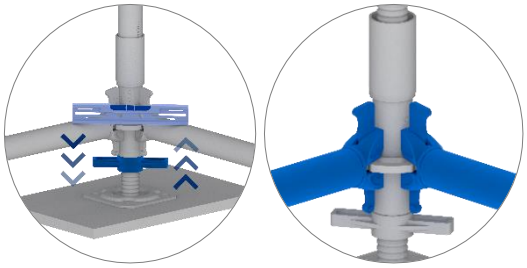
Placing the first base jacks

Start from the highest point and with the nut opened at its minimum height.

Supporting ground

Base jacks should be settled on surfaces capable of bearing the expected loads. If necessary, provide load-distributing sole plates, such as equalizing plates or timber planks. In case of slopes, use compensation plates or swivel base jacks.



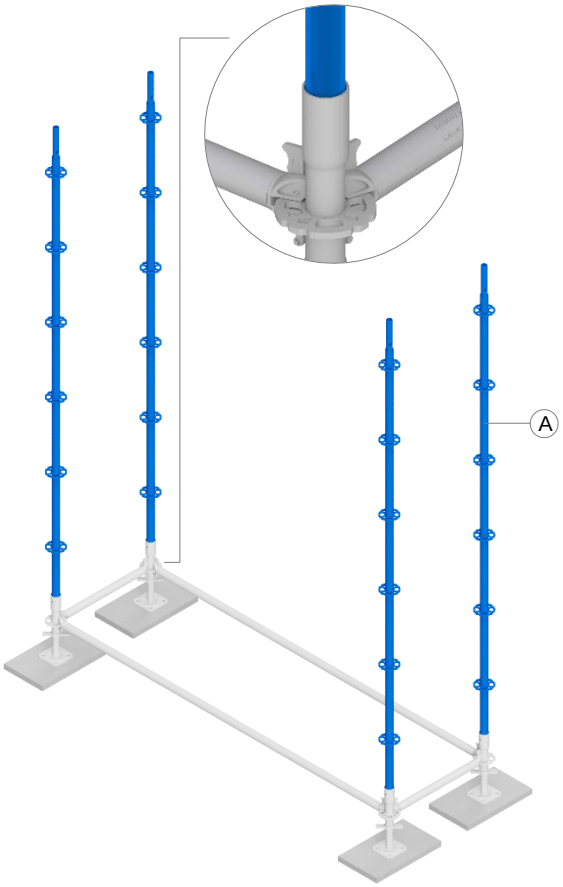


- Fit the wedge-clamped heads of the ledgers onto the rosette of the base collars and insert the wedges without hammering.
- Adjust the nut upwards or downwards until the scaffold is leveled.
- Hammer the wedges.

A DokaScaff UNI ledger

Lining-up the scaffold

Check the squareness between ledgers. After wedging, the scaffold has the appropriate layout and no major realignment will be further necessary.



- Insert the standards into the base collars.

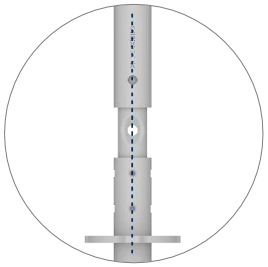
A DokaScaff UNI standard

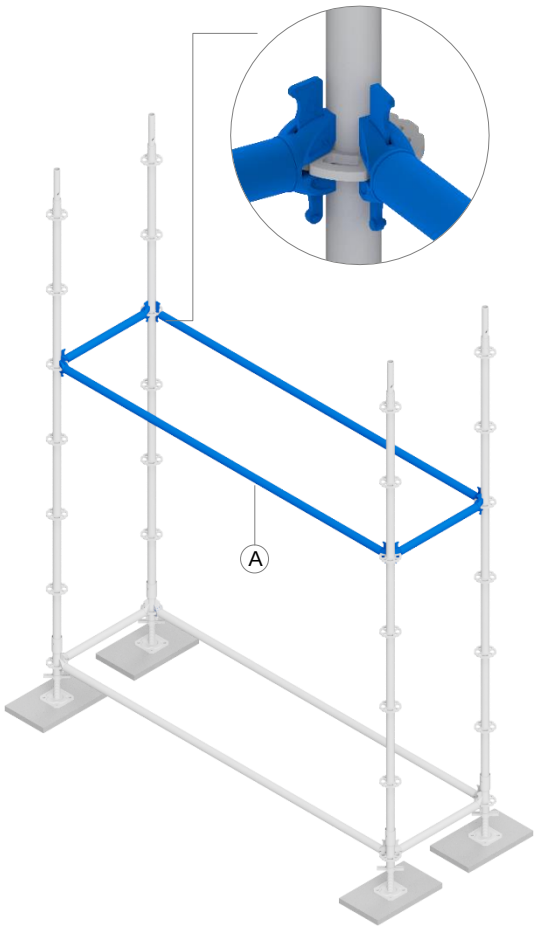
Starting standard

For scaffolds above 3 m height it is considered a good practice to start assembling with 3 m standards and then proceed with 2 m ones, so during the assembly there is always a rosette at 1 m above the last decking to hook the safety harness.

Stacking the following standards

Align the hole of the spigots with the one on the bottom of the standards, so later it is possible to insert a DokaScaff UNI hinged pin 10x60 to connect them both.



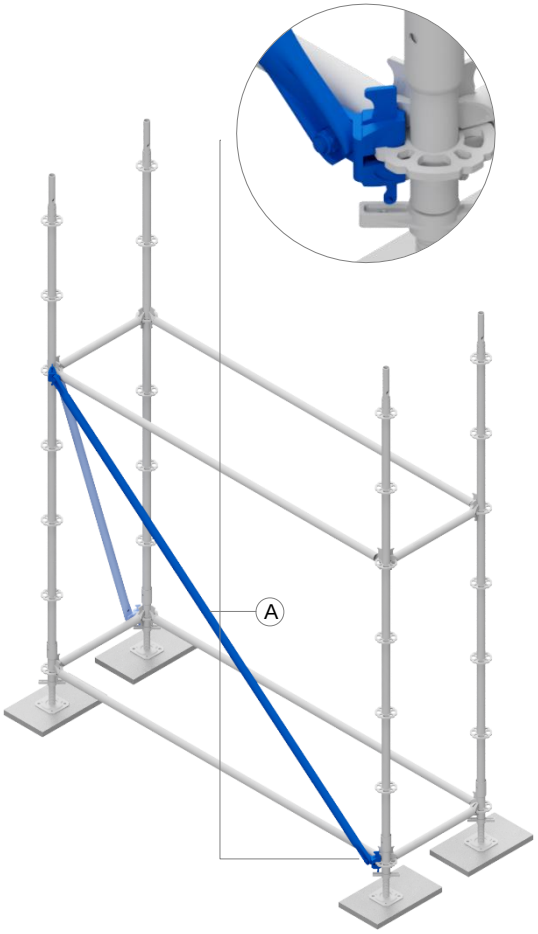


- Fit the wedge-clamped heads onto the rosette of the standards and once all the ledgers are in place, lock the wedges.

A DokaScaff UNI ledger

Decking at the bottom level

By design request or to ease the assembly of the first level, steel-decks and a guardrail at 1 m height may or may not be required on the ground level.

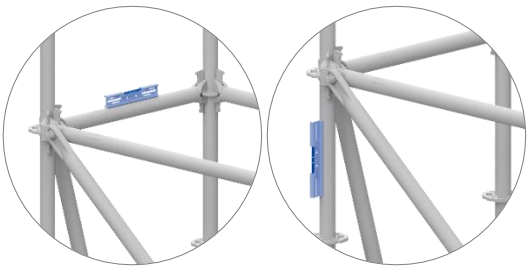


- Fit the swivel wedge-clamped heads of the diagonal braces into the wide holes of the rosettes and lock the wedges.

A DokaScaff UNI diagonal brace

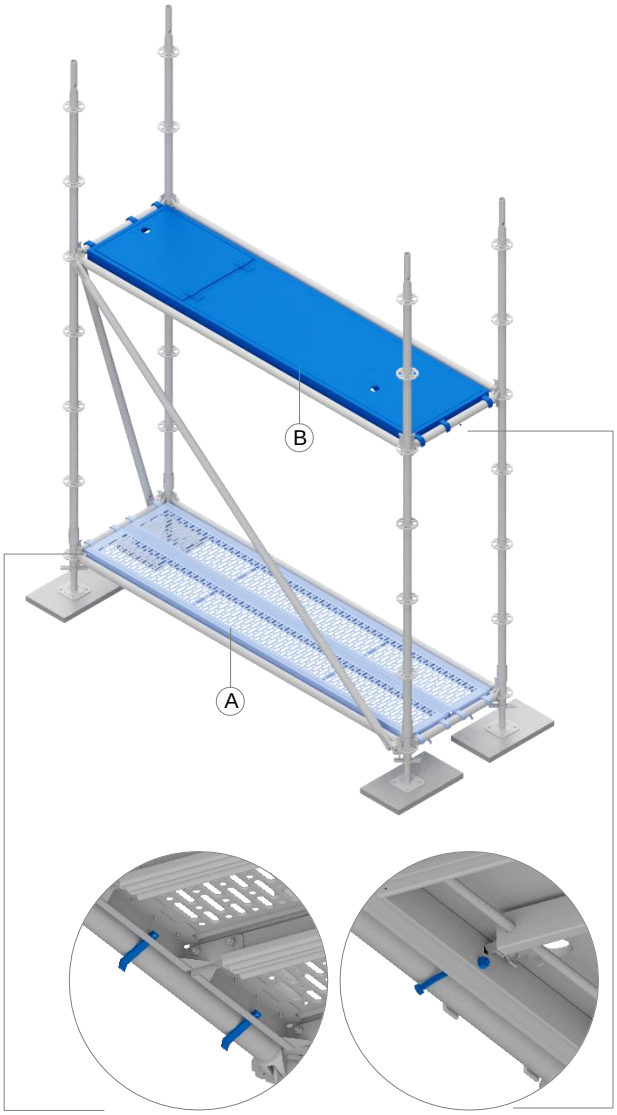
VERTICAL BRACING

The amount and arrangement of diagonal braces depends on the scaffold configuration, working loads, wind loads and anchors disposition.



Verify the levelling

At this point a verification shall be done to ensure that the structure is still properly leveled. If needed, adjust base jack's height. No such verification will be further necessary.



- Standing on the steel decks of the ground level, hook the access-deck directly onto the ledgers of the first level.
- Slide the detent beneath the ledger to lock the decks against any accidental uplift or tilting.

A DokaScaff UNI steel-deck

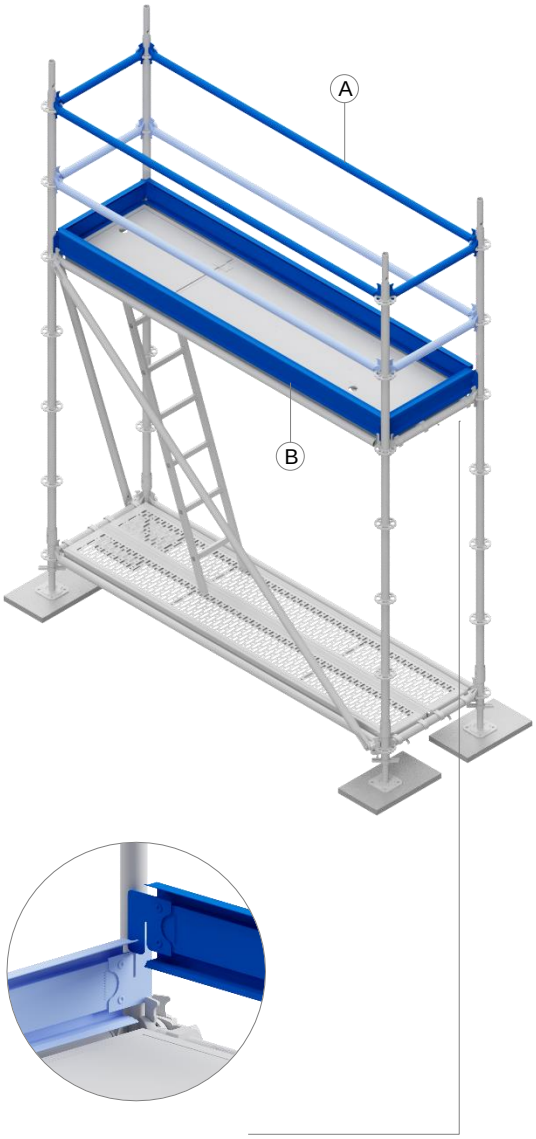
B DokaScaff UNI access deck

Ladder of the access decks

Access decks longer than 2.07 m have an integrated foldable ladder while for other dimensions the ladder is a separate component. Regardless, for the ladder to work safely, a decking underneath must always be used.

Position of the trapdoor

When possible, drive the exit of the trapdoor towards another bay avoiding it to face the edge of the scaffold.



- Move upwards and secure the working area by fastening the legers that serve as side protections (guardrails).
- Place the steel-toeboards.

A DokaScaff UNI ledger

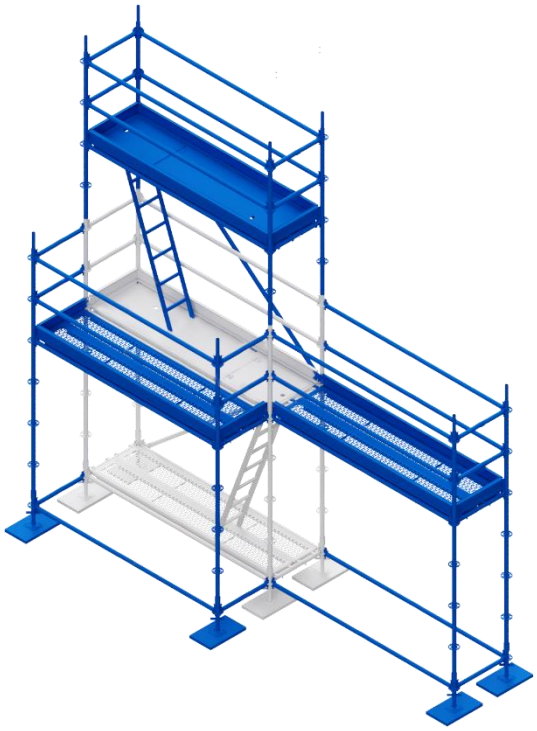
B DokaScaff UNI steel-toeboard

Follow sequentially

Place first all the knee rails, then proceed with the guardrails and only afterwards hammer the wedges.

EDGE PROTECTION

In the event the scaffold is not assembled near a building, guardrails, knee rails and toeboards shall be included around the full perimeter.



- To extend the scaffold to the required length and width, add to the existing bay as many base jacks as needed.
- For additionally levels, stack on the top of the spigots of the existing standards, new ones. Ledgers, decks and steel-toeboards are then used to create a safe working area.

STABILITY

Always ensure the scaffold is braced and anchored in accordance with the configurations set forth hereinafter, or as stated on the scaffold project.

Placing decks

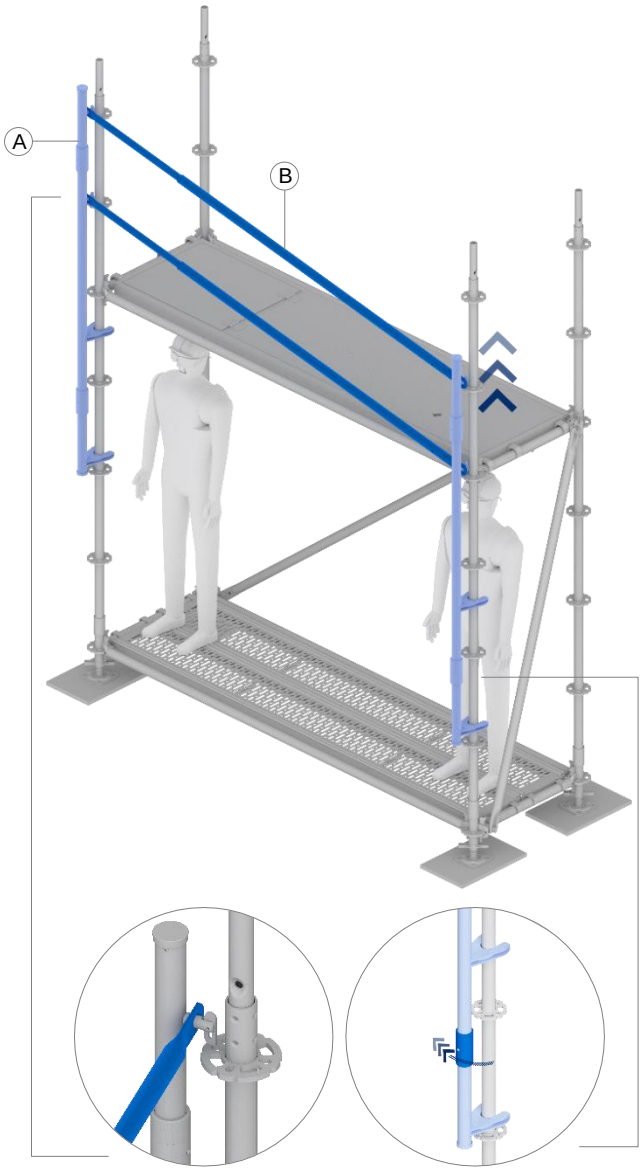
Place the decking of the following levels working from below, and always use stairways or ladders to move upwards.

Fall-arresting protection measures

To minimize the falling hazards during the assembling of the following scaffold levels, it is either recommended to:

- use a temporary guardrail;
- make use of the appropriate anchoring points of the scaffold for fixing the safety harness.

Using a temporary guardrail



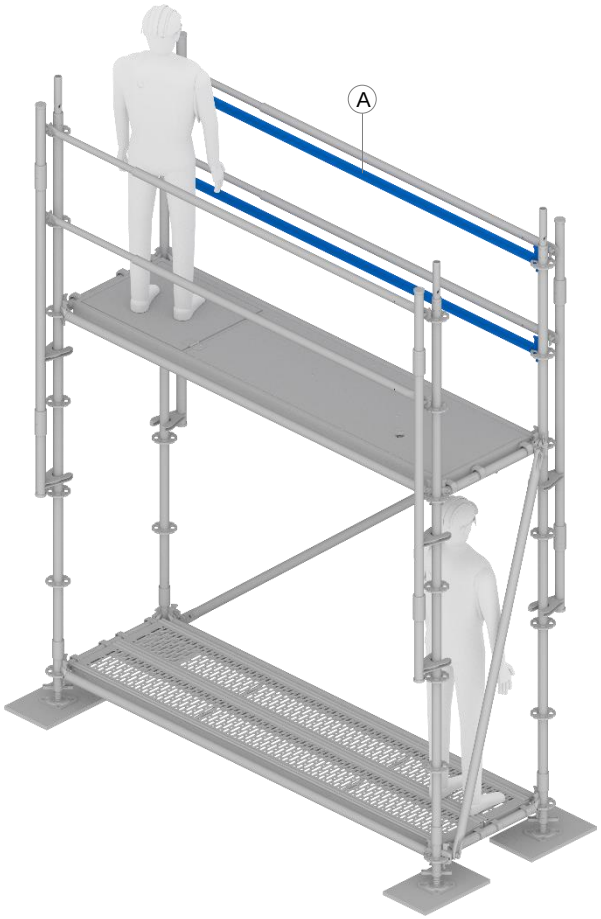
- Fix the temporary guardrails posts to the standards and slide-in the temporary guardrails.
- Move the temporary posts to a upper position.

A DokaScaff UNI temporary guardrail post

B DokaScaff UNI temporary guardrail

Placing the temporary guardrails

Since DokaScaff UNI temporary guardrails are telescopic, temporary guardrail posts can be moved by just one scaffolder, once at a time.



- Move upwards and secure the working bay by adding ledgers as permanent guardrails.
- Remove to the ground or move upwards the temporary guardrails and posts.

A DokaScaff UNI ledgers

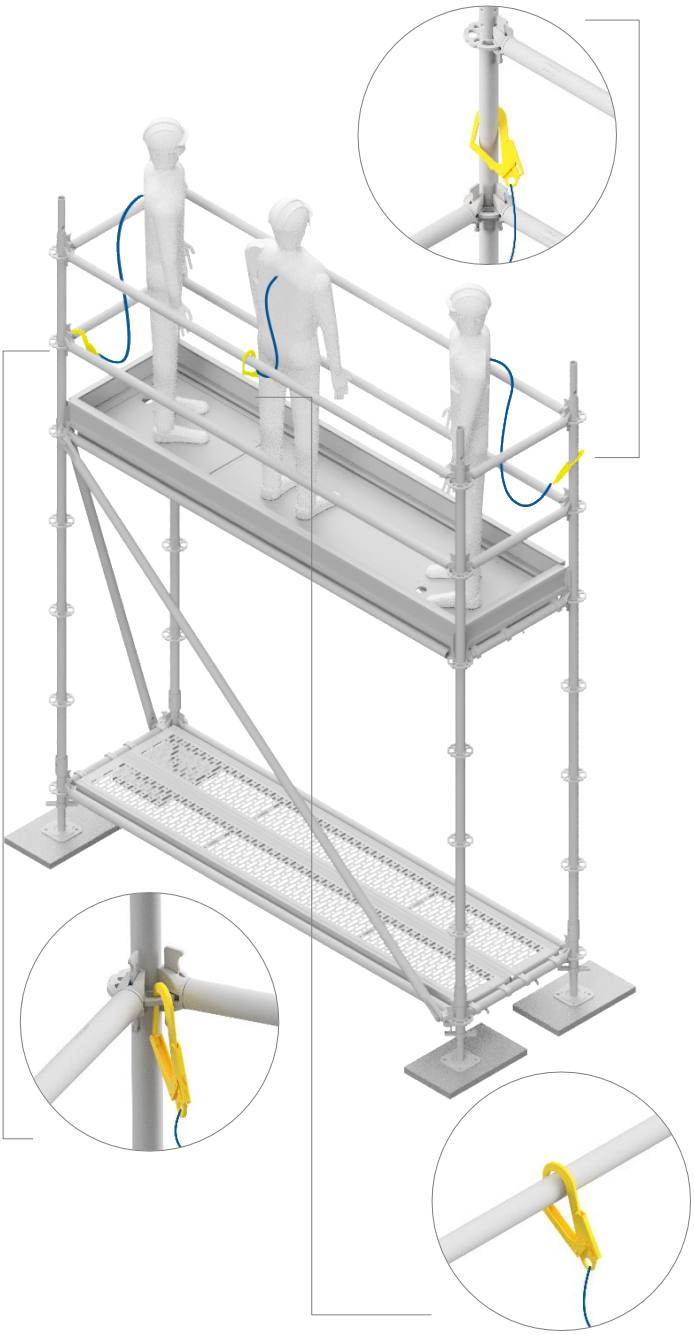
Safe workflow

Before moving upwards to fasten the permanent guardrails (ledgers), ensure that all temporary guardrails were previously displaced to the upper level.

Removing the temporary guardrails

Only remove or displace the temporary guardrails after a permanent one being in place.

Using the scaffold for anchoring the safety harness



- When first entering the new level, hook the safety harness to a rosette at the decking height.
- For further assembly work, the above anchoring points can also be used.

- The scaffold must be fixed or anchored.
- Free-standing standards must have the joint with the previous standards beneath the decking, otherwise must be fastened with a hinged pin.
- Part ends not connected to other parts are not allowed to be used as anchoring points.
- A height rescue plan is required on the construction site.

General disassembly workflow

The disassembling of a scaffold is to be performed in the exact reversed sequence of its assembly.

To minimize hazards, the following steps are to be complied with:

- Inspect the scaffold for its stability. Make sure that all components and anchors have not been interfered.
- Clear all decks of loose materials and debris.
- Mark the scaffold with “No entry for unauthorized persons" warning signs fixed on the access points.
- Start disassembling from the top downwards.
- Assemble temporary steel-decks to reach all edges in safety.
- Make use of the appropriate anchoring points of the scaffold for fixing the safety harness, use temporary guardrails or a combination of both.
- Pursue level by level and in any case move to another level before having disassembled completely the previous one.
- Remove the decks working from the below level.
- Remove the anchors only when they prevent the disassembly to pursue further.

THROWING COMPONENTS

Dismantled components are to be immediately removed by passing from hand to hand downwards, or by means of an appropriate safe lowering method, such as hand line, crane, hoist, etc.

Material on the ground

Ensure that the components are packed neatly and in a safe condition, ready for being transported.

Transport and storage

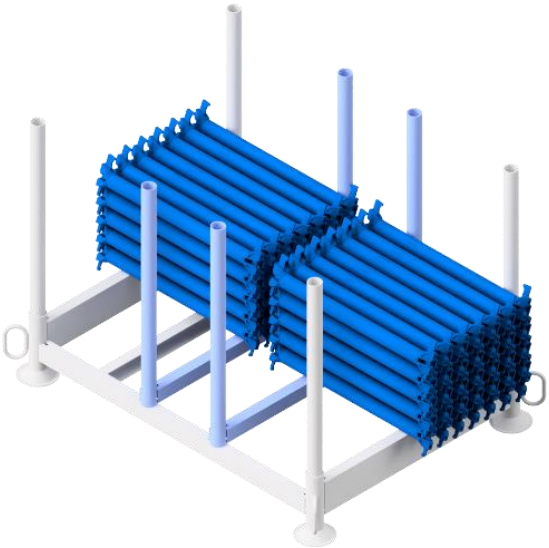
Use the following DokaScaff UNI universal pallets for transporting and storing the components:

- Universal pallet with mesh crate, for small items and accessories;
- Universal pallet with two central supports, for ledgers 0.73 m and 1.09 m;
- Universal pallet 1.03/1.20m, for steel-decks;
- Universal pallet 1.03/1.20m with two central supports, for steel-decks 0.73 m and 1.09 m;
- Universal pallet, for the remaining components.

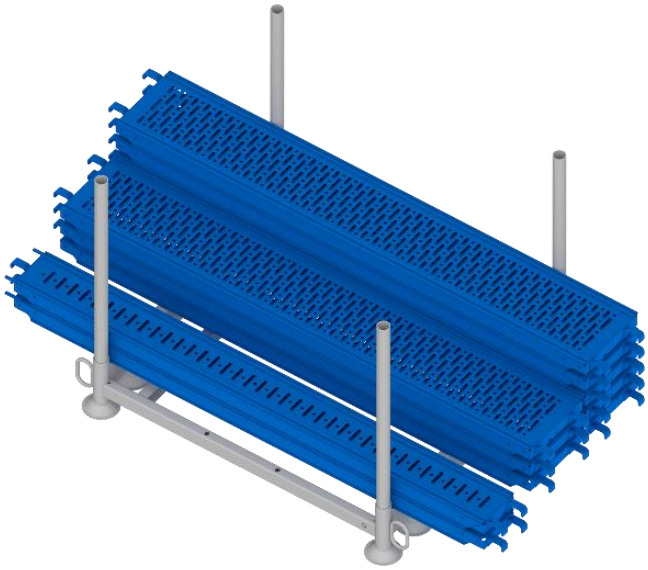
These multi-trip packaging keep everything in place and minimize time wasted searching for parts. Additionally, as they can be stack and repositioned with crane or lift-truck, its usage streamlines the storage and transport to and from the site.

Universal pallet with mesh crate

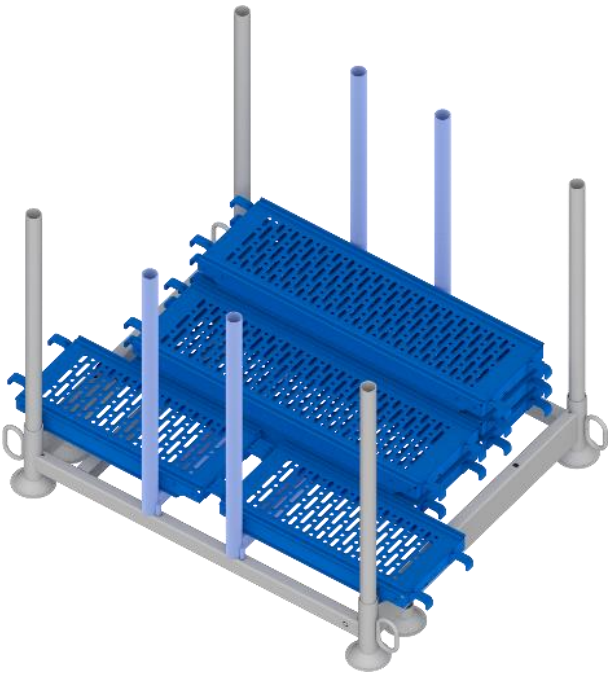
Universal pallet with two central supports



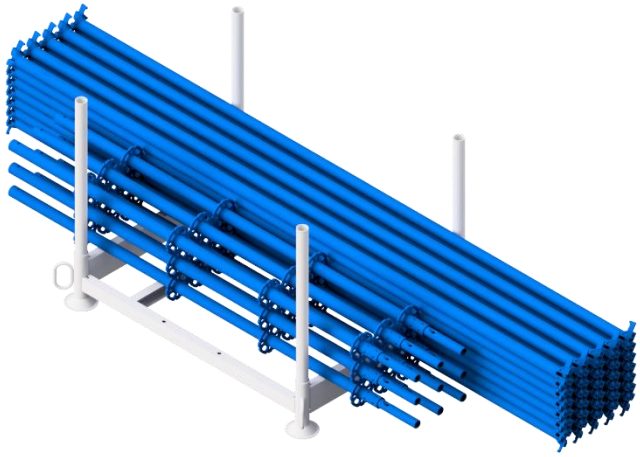
Universal pallet for steel-decks



Universal pallet for steel-decks w/ two central supports

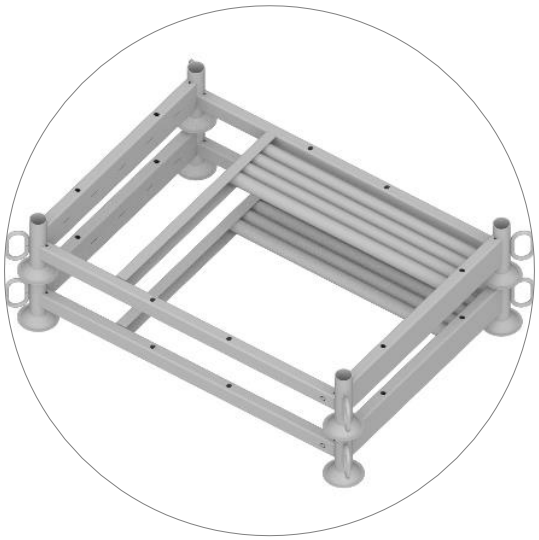


Universal pallet



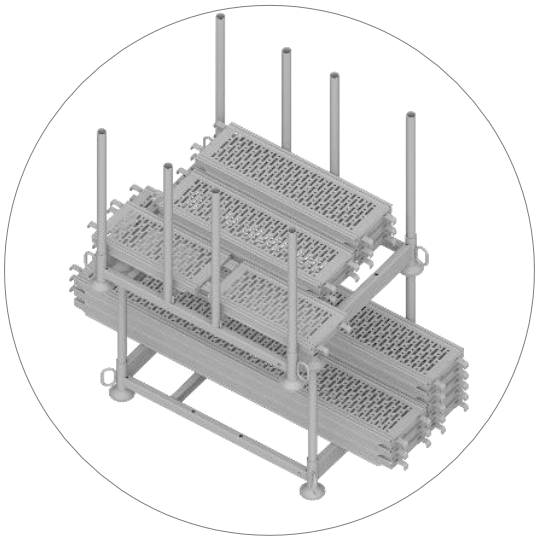
Save space on the truck

When no longer needed at the site, disassemble and repack the vertical tubes on the bottom frame of the universal pallets. before sending them back to storage.



Compatability between pallets

Due to its six feet, the Universal pallet for steel-decks is stackable on the top of the Universal pallets.



Stair Towers

When on-site temporary access is required, stair towers can quickly and safely be assembled using the standard components of the DokaScaff UNI and pre-assembled stairway elements.

As a result, different standard configurations are easily set up according to load and height requirements.

Standard configurations

Standard configurations include 4-leg and 8-leg stair towers. The 4-leg requires less material, thus is quickly assembled; the 8-leg is assembled with wider stairways and additional landing, which enhances the maneuvering of materials or tools, even in sites where two-way transit is expected.

Nº of legs	Ground plan dimensions (W x L)	Stairway Type	Stairway unit dimensions (W x H)	Inclination
4	140 x 257 cm	Aluminium	62 x 200 cm	47º
4	140 x 307 cm	Aluminium	62 x 200 cm	47º
8	207 x 475 cm	Aluminium	96 x 200 cm	47º
8	207 x 475 cm	Steel	88 x 200 cm	39º

Maximum loads

The standard configurations are designed to accommodate a maximum of 5 flights of stairways with live load, including landings and treads, over the complete stair tower.

They can be assembled from 2.20 m up to 80.20 m, though it is possible to go over, with project-specific planning (for more information check **Anchoring on the structure**).

Ground plan dimensions W x L	Max. live load		Max. number of persons per tower [3]
	Per stairway	Per tower [3]	
140 x 257 cm	2.0 kN/m²	19.2 kN	15 to 25
140 x 307 cm	2.0 kN/m²	23.0 kN	15 to 25
207 x 475 cm	2.0 kN/m²	44.5 kN	30 to 45
207 x 475 cm	3.0 kN/m²	63.7 kN	30 to 45

[3] These values are reached only after five flights of stairways (for more information check Anchoring on the structure).

Features overview

Aluminium stairways

The pre-built landings waives the assembly of additional steel decks for the passage between consecutive stairways.

Being lightweight, aluminium stairways are also easily handled, quickly assembled and allow higher structures.

Steel stairways

The lower inclination and the higher depth of treads makes the stair tower more convenient and comfortable.

The higher capacity makes steel stairways the best option whenever the stair tower is expected to be used for carrying materials.

Safety accessories

Tailored accessories complete the stair towers portfolio, granting safety all the way up during the assembly and for the end-user:

- inner and outer railings;
- top level railing.

Cost-efficient

- No special tools are needed for assembling and disassembling stair towers.
- Stair towers are craneable, which guarantees the quickest repositioning in the construction site.

Convenient

- Getting up and down requires less time than on ladders.
- All stairways have anti-slip surface and allow all steps to be quickly assembled at once.
- Best option for situations where crews have to carry materials or transit is expected.
- Intermediate exits to the building openings can quickly be included on the stair tower.

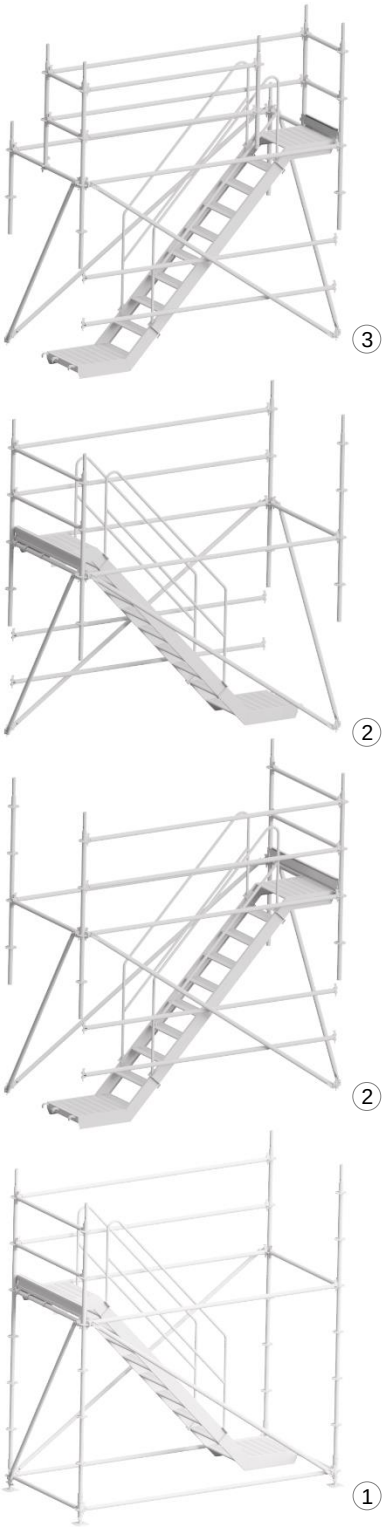
Assembling a 4-leg stair tower

By way of example, the assembly sequence shown hereof is presented divided in sections, where each section corresponds to 2 m of stair tower (one level). This sequence is meant to be performed in safety by a two-person crew, and it's expected to be completed in less than 3 hours. Any other height can be reached by repeating the assembly sequence for the middle sections, as many times as needed.

Standard set-up

Stair tower 140x257 Vs 140x307

The assembly sequence hereof shows just one size for the components. However, within the standard configurations it is applicable for all sizes of components.

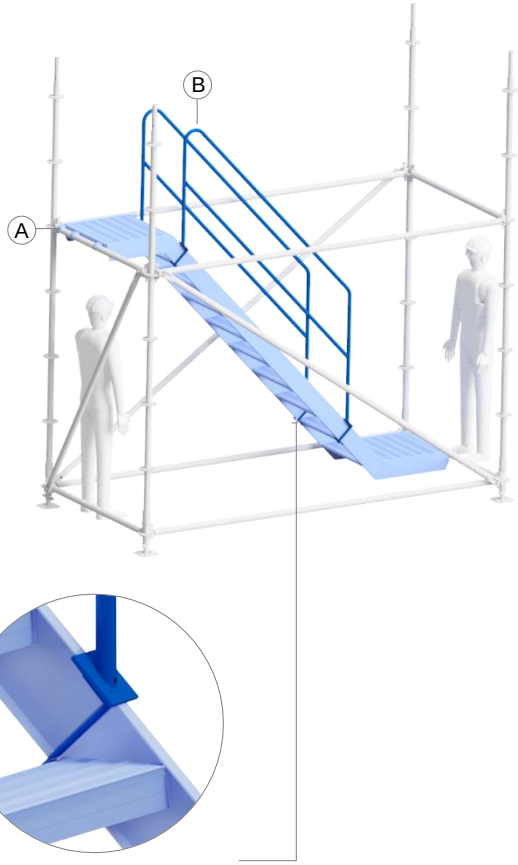


1	Base section
2	Middle section
3	Top section

Assembling the first section

Assembling DokaScaff UNI base components

Check **General assembly workflow** when in doubt regarding joining the base components of the system.



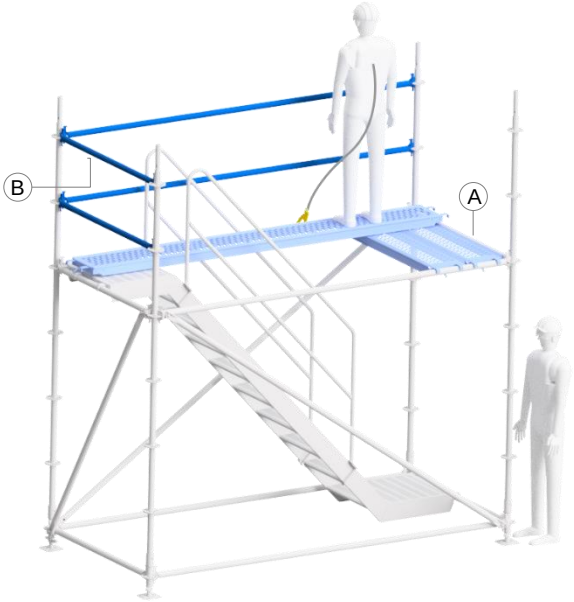
- Level the scaffold adjusting the nuts of the base jacks.
- Place the aluminium stairway and slide in the inner railings.

A DokaScaff UNI aluminium stairway

B DokaScaff UNI inner railing

3 m standards

Start assembling with 3 m standards and then proceed with 2 m ones, so during the assembly there is always a rosette at 1 m above the previous stairway to hook the safety harness.



- Standing on the ground, place the temporary steel-decks.
- Move upwards and fasten the ledgers that serve as guardrails.

A DokaScaff UNI steel-deck

B DokaScaff UNI ledger

STABILITY

Base jacks and anchors should be settled on surfaces capable of bearing the expected loads. Additionally, place the anchors immediately after the recommended height is reached.

Before start assembling check **Anchoring on the structure**.

FALL ARREST PROTECTION

The stair tower must be fixed.

For more information check **General assembly workflow**.

First section complete

The assembly of the first section is completed, and safety is granted for the upcoming sections.

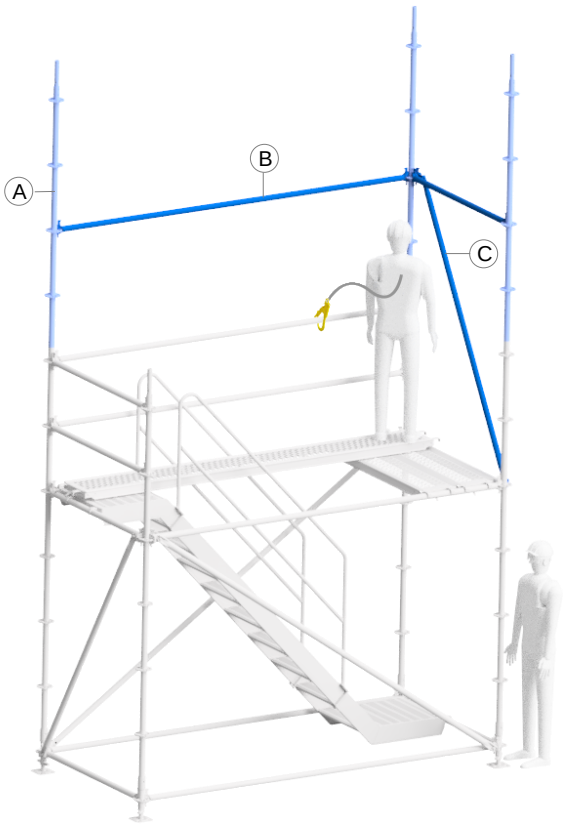
Assembling the middle sections

To reach other heights rather than the one stated on this example, repeat the assembly sequence for the middle sections as many times as needed. To determine the number of sections, consider increments of 2 m per section.

Stair tower with 4 m height

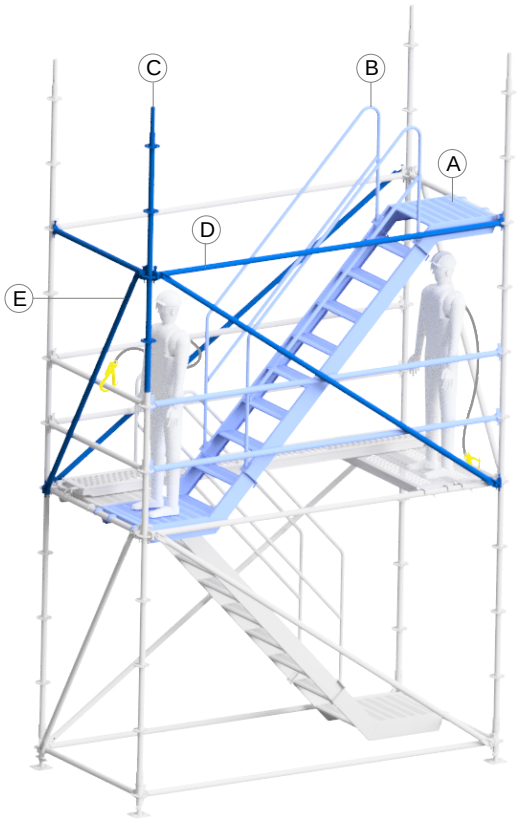
For this height please move directly to **Assembling the top section**.

Assembling the first middle section



- Standing on the temporary steel-decks, stack the standards on the top of existing ones.
- Fasten the remaining components.

A	DokaScaff UNI standard with spigot
B	DokaScaff UNI ledger
C	DokaScaff UNI diagonal brace

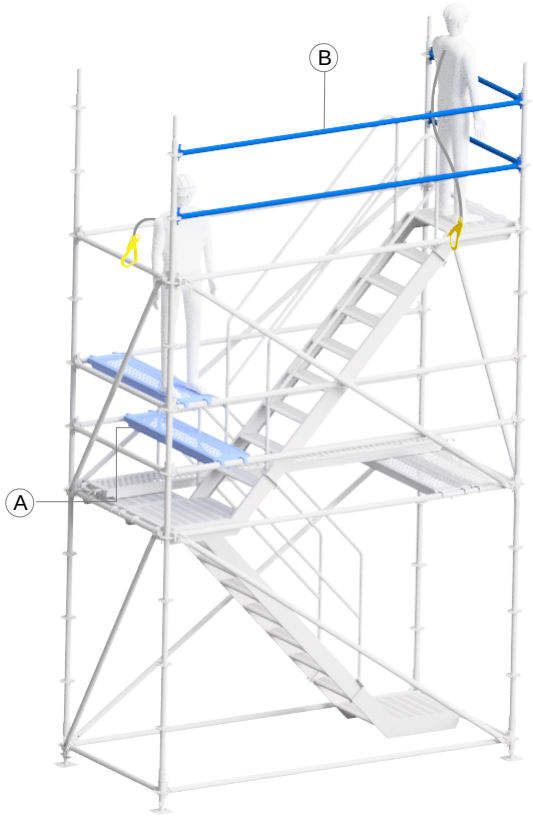


- Place the aluminium stairway and slide in the inner railings.
- Standing on the landing of the stairway, fasten the ledgers that serve as guardrails.
- On the same edge, stack a standard and fasten the remaining components.

A	DokaScaff UNI aluminium stairway
B	DokaScaff UNI inner railing
C	DokaScaff UNI standard with spigot
D	DokaScaff UNI ledger
E	DokaScaff UNI diagonal brace

Scaffold crew positions

The illustrations suggest a correct position for the crew during assembly.



- Using additonal temporary steel-decks, fasten the ledgers of the upper level that serve as guardrails.

A	DokaScaff UNI steel-deck
B	DokaScaff UNI ledger

Assembling further middle sections

Stair tower with 6 m height

For this height please move directly to **Assembling the top section**.

- From the third section upwards, each section (level) is to be assembled as described in **Assembling the first middle section,** but in a symmetric way, i.e. at 180º at one another.

Middle sections complete

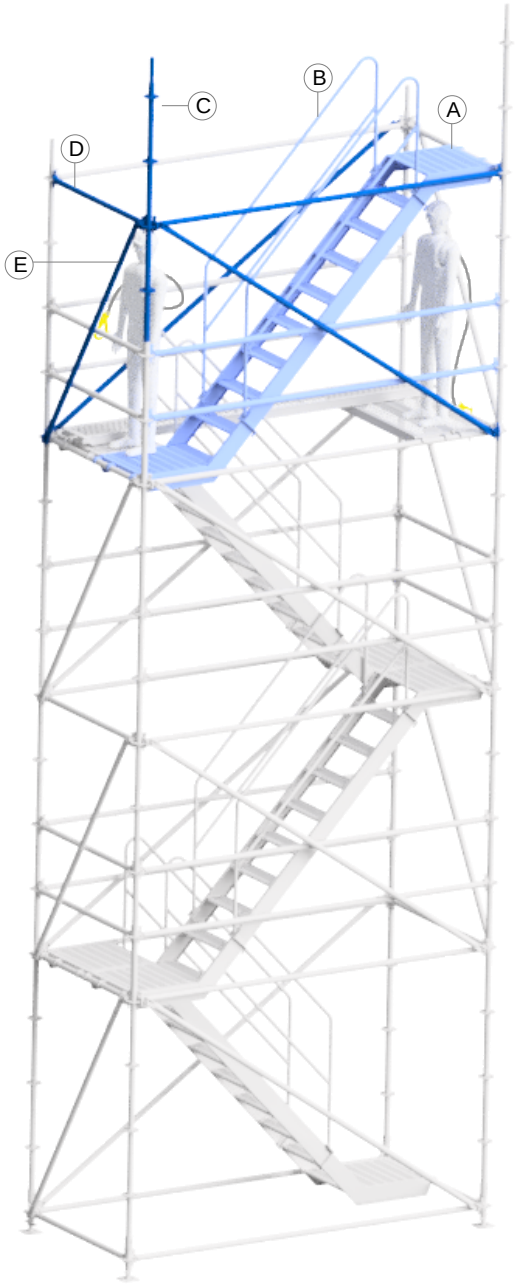
The assembly of the middle sections is completed, and safety is granted for the upcoming sections.
Whenever the stair tower is higher than the provided example, this section is to be repeated as many times as the number of additional middle sections.
To determine its number, consider that any additional middle section is the equivalent to an increment of 2 m, or check **Items needed for stair towers 140x257 / 140x307**.

Assembling the top section

The top section of the stair tower concerns the upper exit.

- Shift the temporary steel-decks upwards and stack the standards on the top of the existing ones.
- Fasten the remaining components.

A	DokaScaff UNI steel-deck
B	DokaScaff UNI standard with spigot
C	DokaScaff UNI ledger
D	DokaScaff UNI diagonal brace

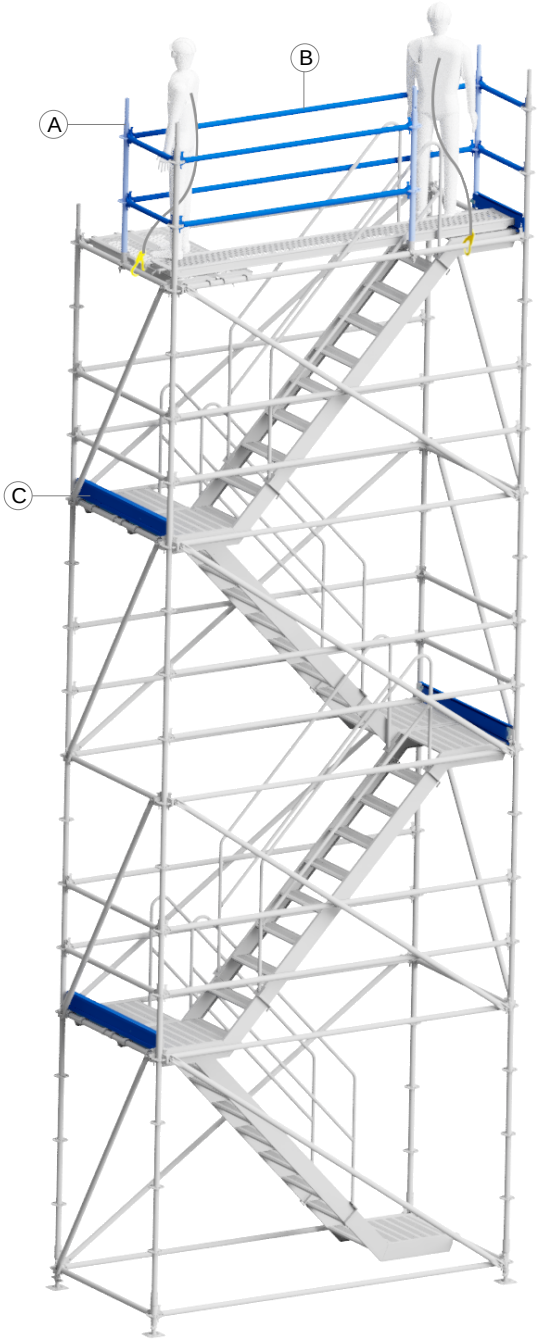


- Place the aluminium stairway and slide in the inner railings.
- Standing on the landing of the stairway, fasten the ledgers that serve as guardrails.
- On the same edge, stack a standard and fasten the remaining components.

A	DokaScaff UNI aluminium stairway
B	DokaScaff UNI inner railing
C	DokaScaff UNI standard with spigot
D	DokaScaff UNI ledger
E	DokaScaff UNI diagonal brace

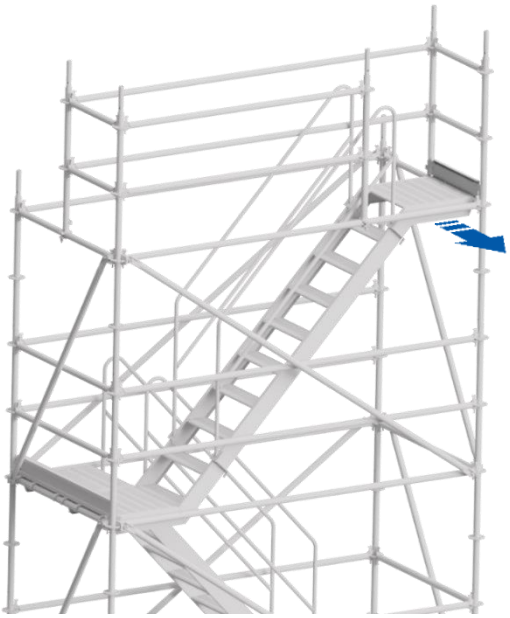
- Shift the temporary steel-decks one level upwards.
- Fasten the couplers with spigot.

A	DokaScaff UNI steel-deck
B	DokaScaff UNI coupler with spigot



- Fit the standards onto the couplers with spigot and fasten the ledgers that serve as guardrails.
- Place the steel-toeboards.

A	DokaScaff UNI standard with spigot
B	DokaScaff UNI ledger
C	DokaScaff UNI steel-toeboard



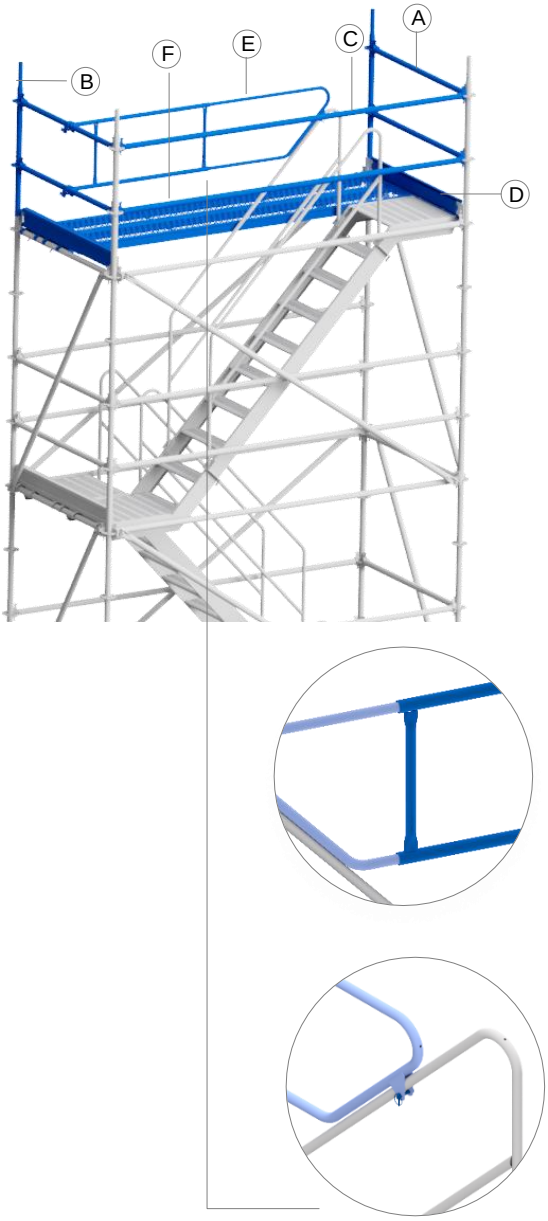
- Remove the temporary steel-decks, or other loose items, and place them on the ground.
- Place a scaffold tag at all access points, with mention to the loading data according to the intended use (for more information check **Inspection and tagging**).

Stair tower complete

The assembly of the stair tower is completed, and safety is granted when exiting to the right side after coming up on the stairway.

Exit with steel-decks

According with the position of the exit regarding the last stairway (left or right), additional steel-decks need to be consider.

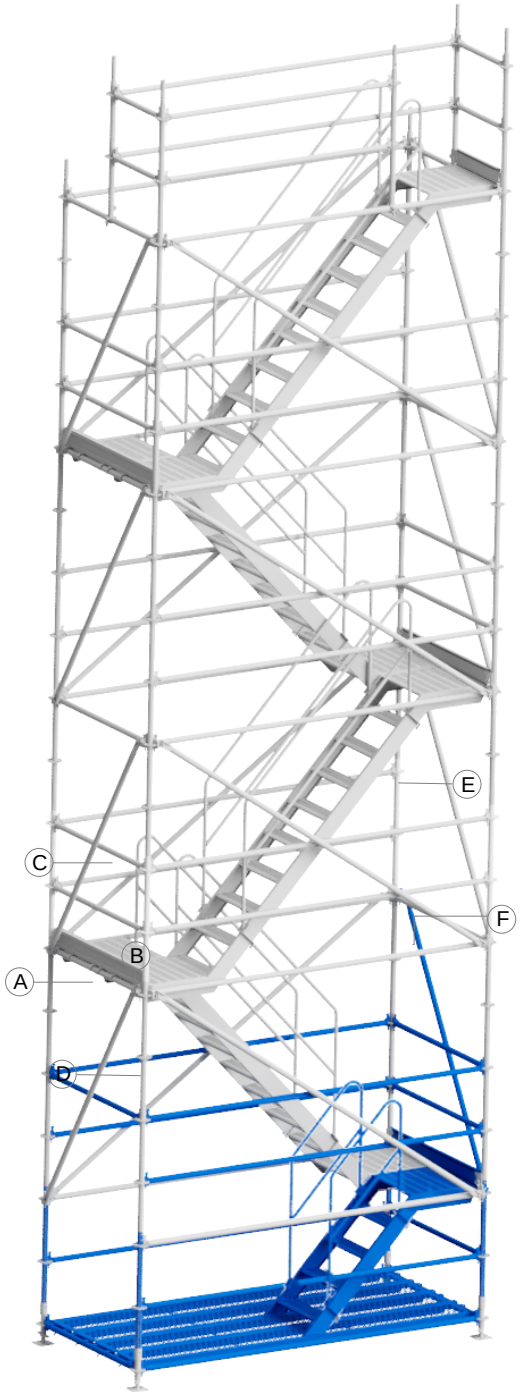


- Add the components pointed in the illustration above after following the standard sequence described previously.

A	4x DokaScaff UNI ledger 1.40m
B	2x DokaScaff UNI standard 1.00m
C	2x DokaScaff UNI ledger (L= 2.57 m or 3.07 m)
D	2x DokaScaff UNI steel-toeboard 1.40m
E	1x DokaScaff UNI railing adjustable
F	2x DokaScaff UNI steel-deck (L= 2.57 m or 3.07 m)

Using 1.00 m stairways

For situations in which the exit height does not match the flights of stairs, a stairway of 1 m height may be used (e.g. a stair tower of 9 m height).

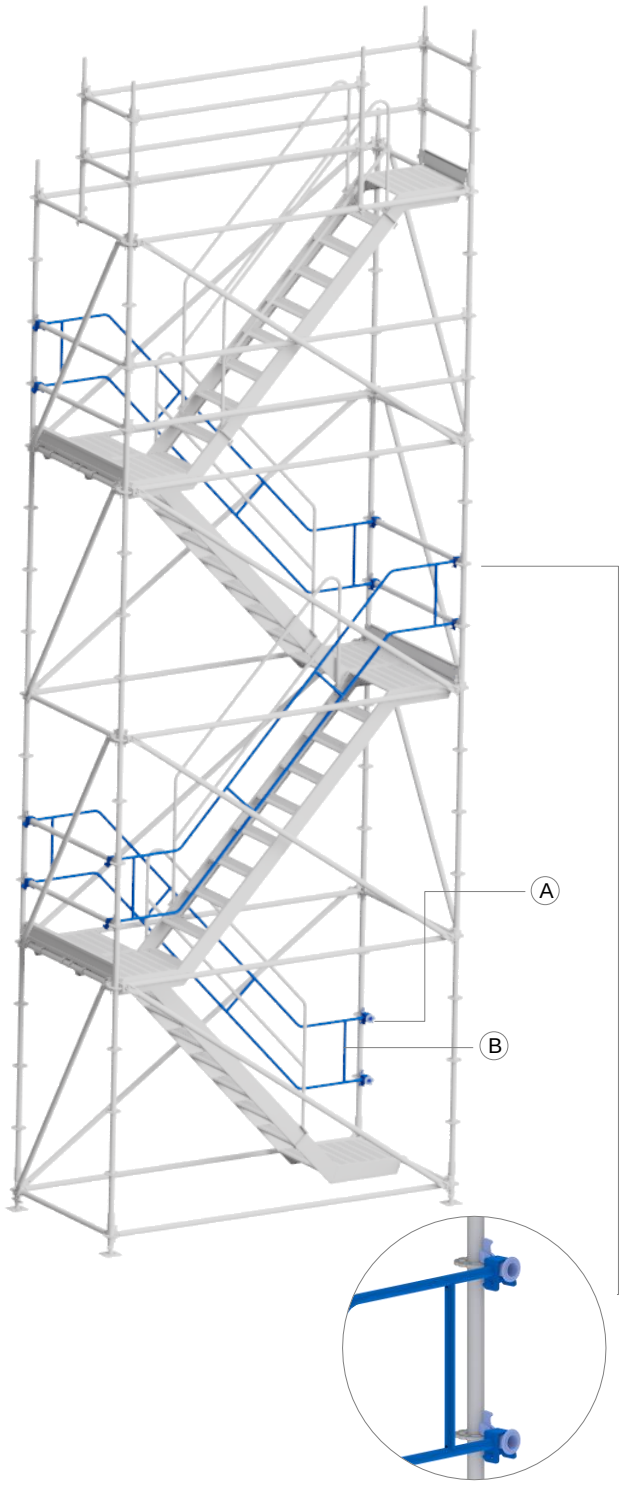


- Add the components pointed in the illustration above and only then follow the sequence described previously, starting from **Assembling the first section**.

A	4x DokaScaff UNI standard with spigot 1.00m
B	8x DokaScaff UNI ledgers (L=2.57m or 3.07m)
C	5x DokaScaff UNI ledgers 1.40m
D	4x DokaScaff UNI steel-deck (same length as B)
E	1x DokaScaff UNI diagonal brace 200/140cm
F	1x DokaScaff UNI aluminium stairway 1.00m, 62cm
G	2x DokaScaff UNI railing aluminium stairway 1.00m

Using outer railings

Outer railings can be used as exterior handrails, instead of the inner railings in combination with ledgers, with the advantage of less items being required.



- Follow the standard sequence described previously considering that every outer railing replaces two ledgers and one inner railing.
- At the ground add a railing adaptor to hook the outer railing.

A	3x DokaScaff UNI outer railing (L=2.57m or 3.07m)
B	2x DokaScaff UNI stairway railing adaptor

Items needed for stair towers 140x257 / 140x307

Exit height (m)	Base jack 50cm	Base collar	Standard w/ spigot 1.00m	Standard w/ spigot 2.00m	Standard w/ spigot 3.00m	Hinged pin 10x60 [1]	Ledger 0.73m	Ledger 1.40m	Ledger 1.57 or **2.07m** [3]	Steel-toeboard 0.73m	Steel-toeboard 1.40m	Ledger 2.57 **or 3.07m** [2]	Diagonal brace 200/140cm	Diagonal brace 200/257 **or 200/307cm** [2]	Aluminium stairway 62/257 **or 62/307cm** [2]	Inner railing 2.57/3.07m	Coupler w/ spigot	**Number of middle sections**
4.2	4	4	5	2	4	7	4	8	2	1	1	12	3	4	2	4	3	**0**
6.2	4	4	5	6	4	11	4	12	2	1	2	18	5	6	3	6	3	**1**
8.2	4	4	5	10	4	15	4	16	2	1	3	24	7	8	4	8	3	**2**
10.2	4	4	5	14	4	19	4	20	2	1	4	30	9	10	5	10	3	**3**
12.2	4	4	5	18	4	23	4	24	2	1	5	36	11	12	6	12	3	**4**
14.2	4	4	5	22	4	27	4	28	2	1	6	42	13	14	7	14	3	**5**
16.2	4	4	5	26	4	31	4	32	2	1	7	48	15	16	8	16	3	**6**
18.2	4	4	5	30	4	35	4	36	2	1	8	54	17	18	9	18	3	**7**
20.2	4	4	5	34	4	39	4	40	2	1	9	60	19	20	10	20	3	**8**
22.2	4	4	5	38	4	43	4	44	2	1	10	66	21	22	11	22	3	**9**
24.2	4	4	5	42	4	47	4	48	2	1	11	72	23	24	12	24	3	**10**
26.2	4	4	5	46	4	51	4	52	2	1	12	78	25	26	13	26	3	**11**
28.2	4	4	5	50	4	55	4	56	2	1	13	84	27	28	14	28	3	**12**
30.2	4	4	5	54	4	59	4	60	2	1	14	90	29	30	15	30	3	**13**
32.2	4	4	5	58	4	63	4	64	2	1	15	96	31	32	16	32	3	**14**
34.2	4	4	5	62	4	67	4	68	2	1	16	102	33	34	17	34	3	**15**
36.2	4	4	5	66	4	71	4	72	2	1	17	108	35	36	18	36	3	**16**
38.2	4	4	5	70	4	75	4	76	2	1	18	114	37	38	19	38	3	**17**
40.2	4	4	5	74	4	79	4	80	2	1	19	120	39	40	20	40	3	**18**
42.2	4	4	5	78	4	83	4	84	2	1	20	126	41	42	21	42	3	**19**
44.2	4	4	5	82	4	87	4	88	2	1	21	132	43	44	22	44	3	**20**
46.2	4	4	5	86	4	91	4	92	2	1	22	138	45	46	23	46	3	**21**
48.2	4	4	5	90	4	95	4	96	2	1	23	144	47	48	24	48	3	**22**
50.2	4	4	5	94	4	99	4	100	2	1	24	150	49	50	25	50	3	**23**
52.2	4	4	5	98	4	103	4	104	2	1	25	156	51	52	26	52	3	**24**
54.2	4	4	5	102	4	107	4	108	2	1	26	162	53	54	27	54	3	**25**
56.2	4	4	5	106	4	111	4	112	2	1	27	168	55	56	28	56	3	**26**
58.2	4	4	5	110	4	115	4	116	2	1	28	174	57	58	29	58	3	**27**
60.2	4	4	5	114	4	119	4	120	2	1	29	180	59	60	30	60	3	**28**
62.2	4	4	5	118	4	123	4	124	2	1	30	186	61	62	31	62	3	**29**
64.2	4	4	5	122	4	127	4	128	2	1	31	192	63	64	32	64	3	**30**
66.2	4	4	5	126	4	131	4	132	2	1	32	198	65	66	33	66	3	**31**
68.2	4	4	5	130	4	135	4	136	2	1	33	204	67	68	34	68	3	**32**
70.2	4	4	5	134	4	139	4	140	2	1	34	210	69	70	35	70	3	**33**
72.2	4	4	5	138	4	143	4	144	2	1	35	216	71	72	36	72	3	**34**
74.2	4	4	5	142	4	147	4	148	2	1	36	222	73	74	37	74	3	**35**
76.2	4	4	5	146	4	151	4	152	2	1	37	228	75	76	38	76	3	**36**
78.2	4	4	5	150	4	155	4	156	2	1	38	234	77	78	39	78	3	**37**
80.2	4	4	5	154	4	159	4	160	2	1	39	240	79	80	40	80	3	**38**

[1] These components are mandatory only when considering lifting the tower by crane. For more information check **Repositioning by crane**.

[2] For stair towers 140x257 consider 257 cm sizes, and for stair towers 140x307 consider 307 cm sizes.

[3] For stair towers 140x257 consider 157 cm, and for stair towers 140x307 consider 207 cm .

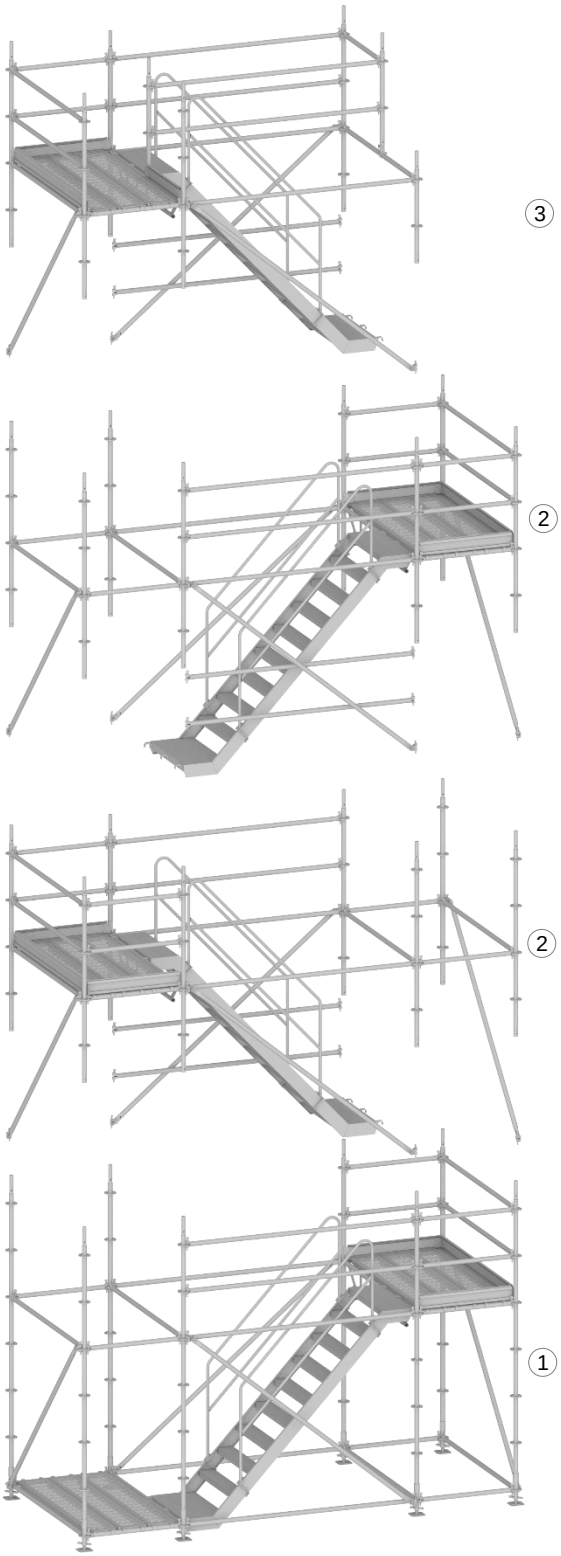
Assembling a 8-leg stair tower

By way of example, the assembly sequence shown hereof is presented divided in sections, where each section corresponds to 2 m of stair tower (one level). This sequence is meant to be performed in safety by a two-person crew, and it's expected to be completed in less than 5 hours. Any other height can be reached by repeating the assembly sequence for the middle sections, as many times as needed.

Standard set-up

Steel stairways

Check **Using steel stairways**.

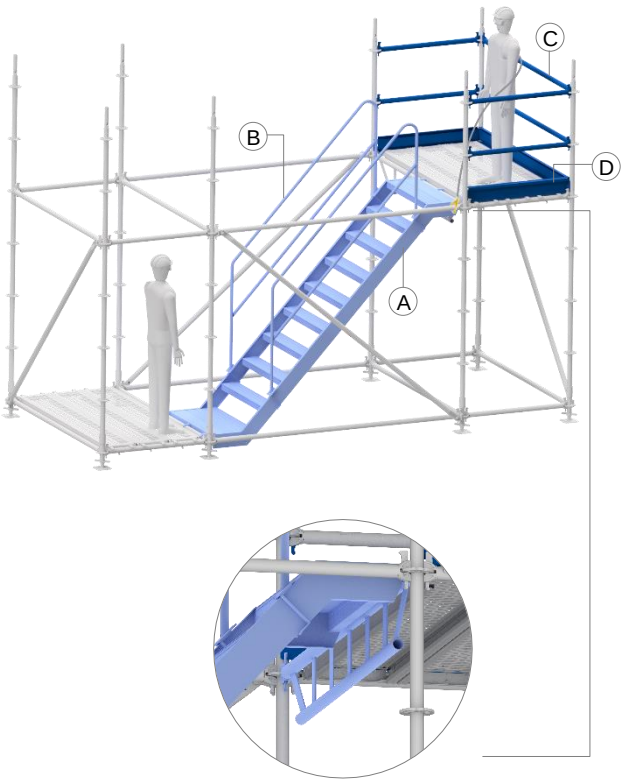


1	Base section
2	Middle section
3	Top section

Assembling the first section

Assembling DokaScaff UNI

Check **General assembly workflow** when in doubt regarding joining the base components of the system.

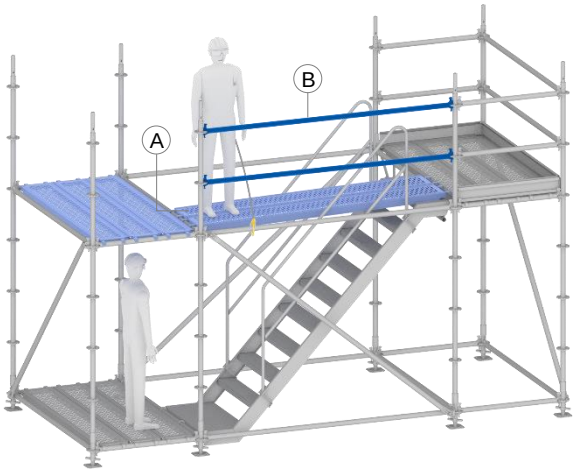


- Level the scaffold adjusting the nuts of the base jacks.
- Place the aluminium stairway and slide in the inner railings.
- Fasten the ledgers that serve as guardrails and place the toeboards.

A	DokaScaff UNI aluminium stairway
B	DokaScaff UNI inner railing
C	DokaScaff UNI ledger
D	DokaScaff UNI steel-toeboard

3 m standards

Start assembling with 3 m standards and then proceed with 2 m ones, so during the assembly there is always a rosette at 1 m above the previous stairway to hook the safety harness.



- Standing on the ground, place the temporary steel-decks.
- Move upwards and fasten the ledgers that serve as guardrails.

A	DokaScaff UNI steel-deck
B	DokaScaff UNI ledger

STABILITY

Base jacks and anchors should be settled on surfaces capable of bearing the expected loads.

Additionally, place the anchors immediately after the recommended height is reached.

Before start assembling check **Anchoring on the structure**.

FALL ARREST PROTECTION

The stair tower must be fixed.

For more information check **General assembly workflow**.

Double ledger

At the ground level use a ledger instead of a double ledger for supporting the aluminium stairway.

First section complete

The assembly of the first section is completed, and safety is granted for the upcoming sections.

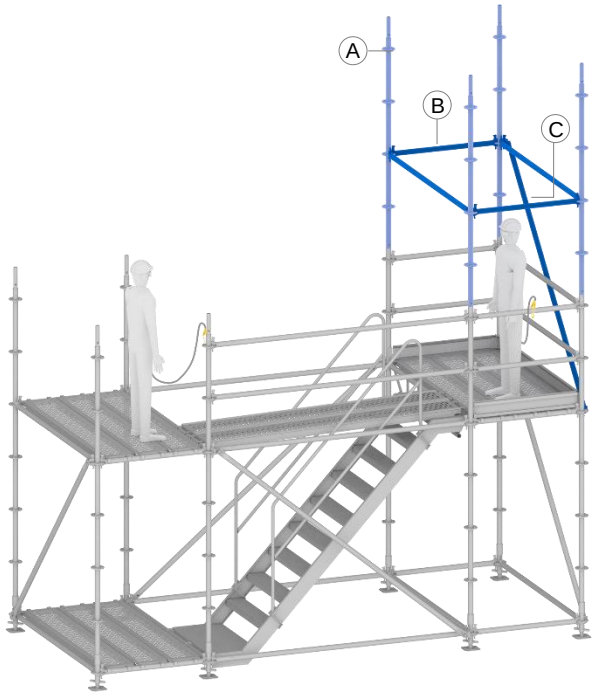
Assembling the middle sections

To reach other heights rather than the one stated on this example, repeat the assembly sequence for the middle sections as many times as needed. To determine the number of sections, consider increments of 2 m per section.

Assembling the first middle section

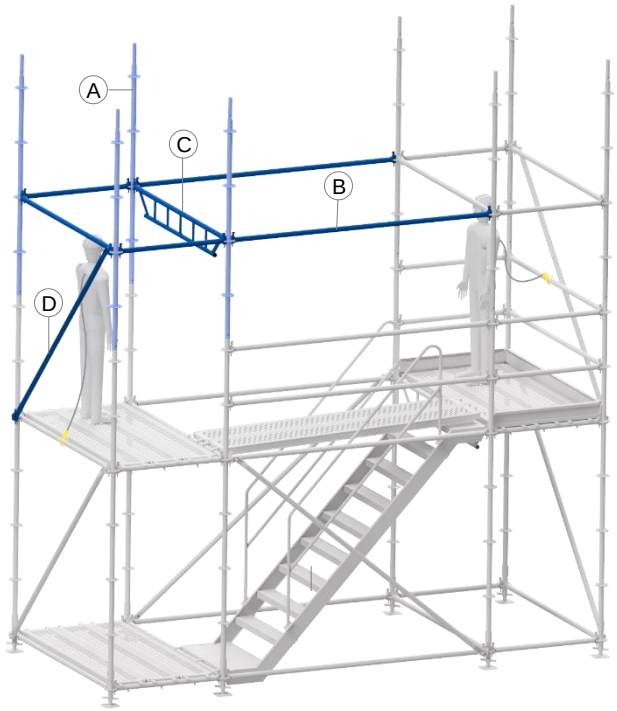
Stair tower with 4 m height

For this height please move directly to **Assembling the top section**.



- Stack the standards on the top of existing ones.
- Fasten the remaining components.

A	DokaScaff UNI standard with spigot
B	DokaScaff UNI ledger
C	DokaScaff UNI diagonal brace



- Move to the other side of the stair tower, stack the standards and fasten the remaining components.

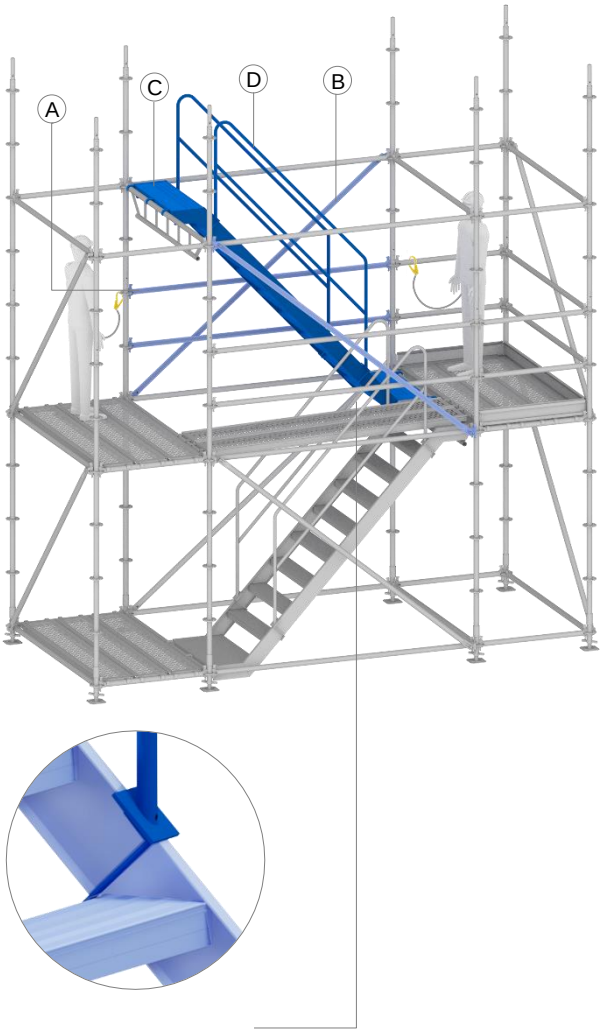
A	DokaScaff UNI standard with spigot
B	DokaScaff UNI ledger
C	DokaScaff UNI double ledger
D	DokaScaff UNI diagonal brace

DOUBLE LEDGER

For supporting two aluminium stairways always consider a double ledger.

Scaffold crew positions

The illustrations suggest a correct position for the crew during assembly.



- Fasten the diagonal braces and the ledgers that serve as guardrail.
- Place the aluminium stairway and slide in the inner railings.

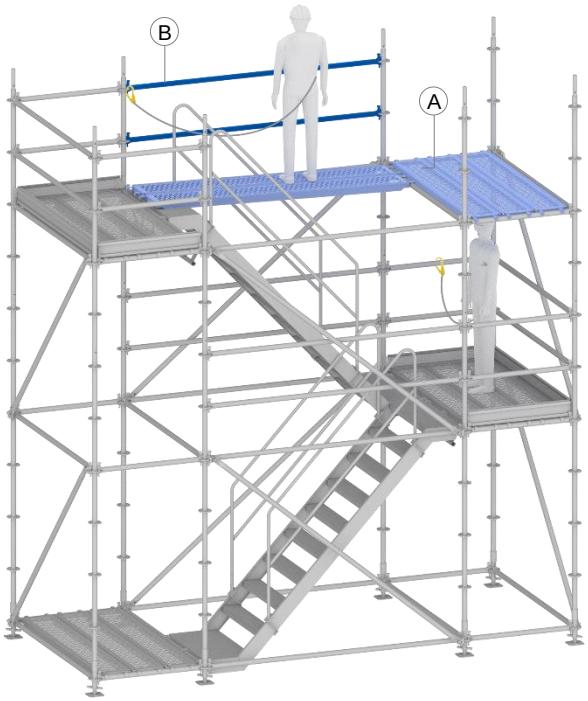
A	DokaScaff UNI ledger
B	DokaScaff UNI diagonal brace
C	DokaScaff UNI aluminium stairway
D	DokaScaff UNI inner railing

- Standing on the temporary steel-decks, place the steel-decks of the upper level.
- Move upwards and fasten the ledgers that serve as guardrails.
- Place the toeboards.

A	DokaScaff UNI steel-deck
B	DokaScaff UNI ledger
C	DokaScaff UNI steel-toeboard

Placing the steel decks

After laying the steel-decks on the ledgers, slide the detent beneath the ledger to lock them against any accidental uplift or tilting.



- Shift the temporary steel-decks one level upwards.
- Fasten the ledgers that serve as guardrails.

A	DokaScaff UNI steel-deck
C	DokaScaff UNI ledger

Assembling further middle sections

Stair tower with 6 m height

For this height please move directly to **Assembling the top section**.

- From the third section upwards, each section (level) is to be assembled as described in **Assembling the first middle section,** but in a symmetric way, i.e. at 180º at one another.

Middle sections complete

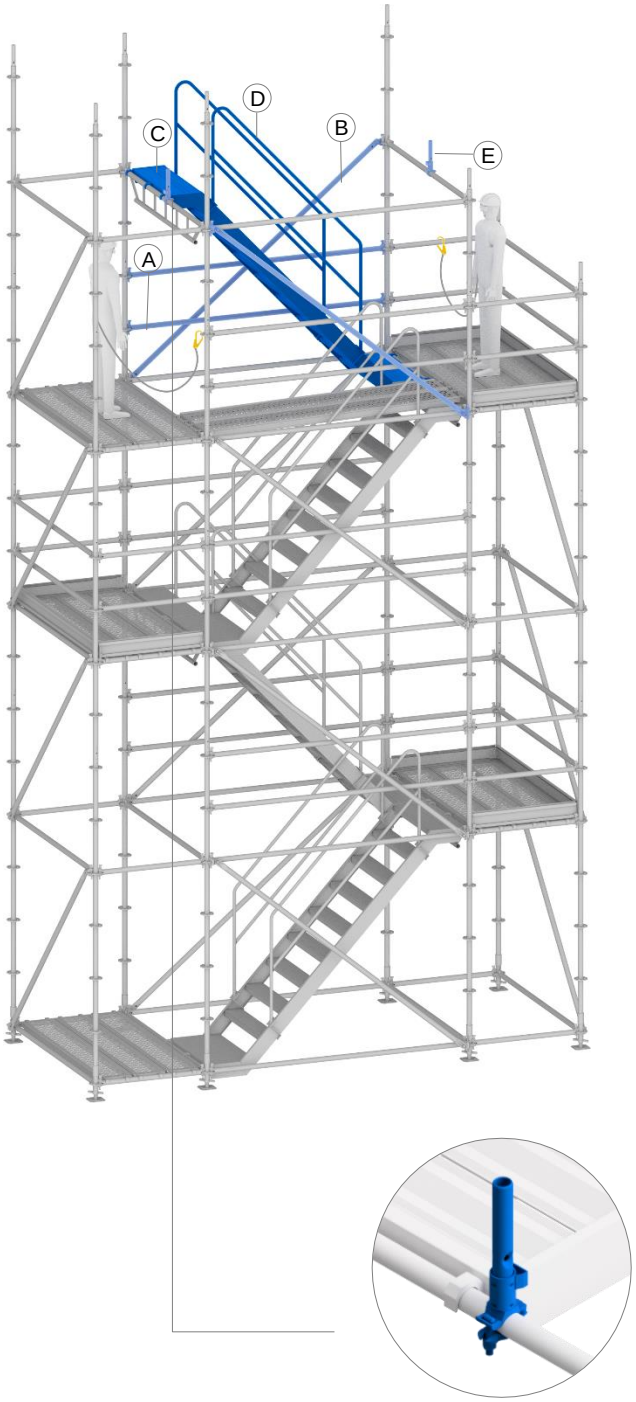
The assembly of the middle section is completed, and safety is granted for the upcoming sections.
Whenever the stair tower is higher than the provided example, this section is to be repeated as many times as the number of additional middle sections.
To determine its number, consider that any additional middle section is the equivalent to an increment of 2 m or check **Items needed for stair tower 207x425 cm**.

Assembling the top section

The top section of the stair tower concerns the upper exit.

- Shift the temporary steel-decks one level upwards.
- Standing on the temporary steel-decks, stack the standards and fasten the remaining components.

A	DokaScaff UNI standard with spigot
B	DokaScaff UNI ledger
C	DokaScaff UNI double ledger
D	DokaScaff UNI diagonal brace



- Fasten the diagonal braces and the ledgers that serve as guardrail.
- Place the aluminium stairway and slide in the inner railings.
- Fasten the couplers with spigot.

A	DokaScaff UNI ledger
B	DokaScaff UNI diagonal brace
C	DokaScaff UNI aluminium stairway
D	DokaScaff UNI inner railing
E	DokaScaff UNI coupler with spigot

- Shift the temporary steel-decks upwards only after placing the steel-decks of the upper level.
- Stack the standards onto the couplers with spigot and fasten the ledgers that serve as guardrails.

A	DokaScaff UNI steel-deck
B	DokaScaff UNI standard with spigot
C	DokaScaff UNI ledger

- Fasten one scaffold tube at 0.5 m height and another at 1 m.
- Place the toeboards.
- Remove the temporary components or other loose items and place them on the ground.
- Place a scaffold tag at all access points, with mention to the loading data according to the intended use (for more information check **Inspection and tagging**).

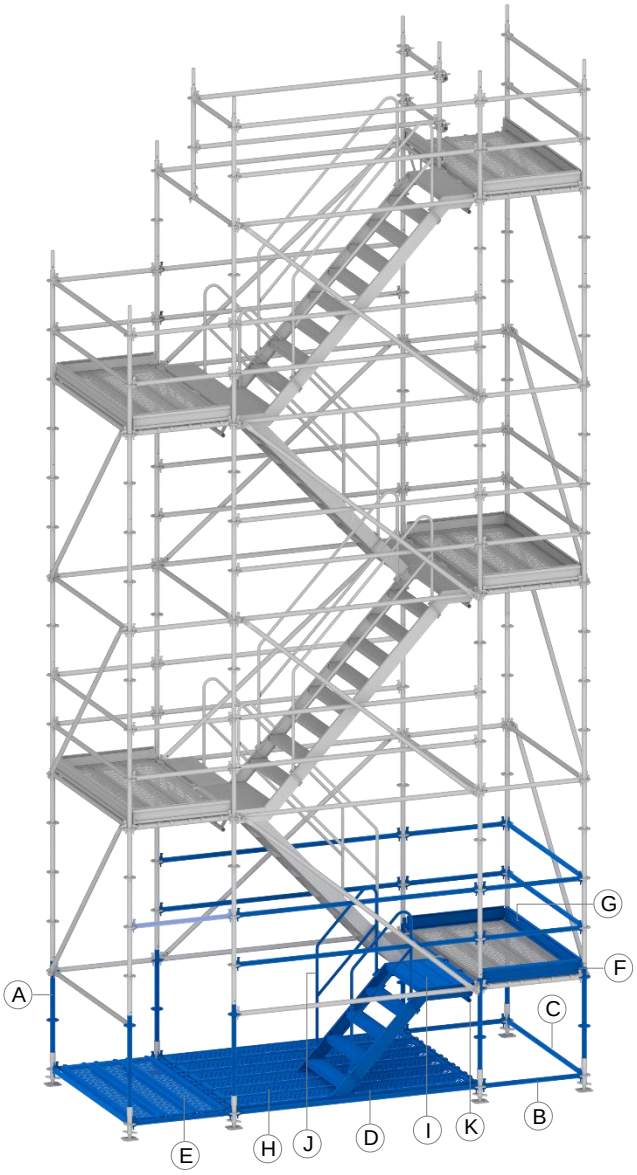
A	DokaScaff UNI steel-toeboard
B	Scaffold tube 48.3x3.2 mm (L= 1.5 m)
C	Normal coupler 48.3 mm

Stair tower complete

The assembly of the stair tower is completed, and safety is granted.

Using 1.00 m stairways

For situations in which the exit height does not match the flights of stairs, a stairway of 1 m height may be used (e.g. a stair tower of 9 m height).



- Add the components pointed in the illustration above and only then follow the standard sequence described previously, starting from **Assembling the first section**.

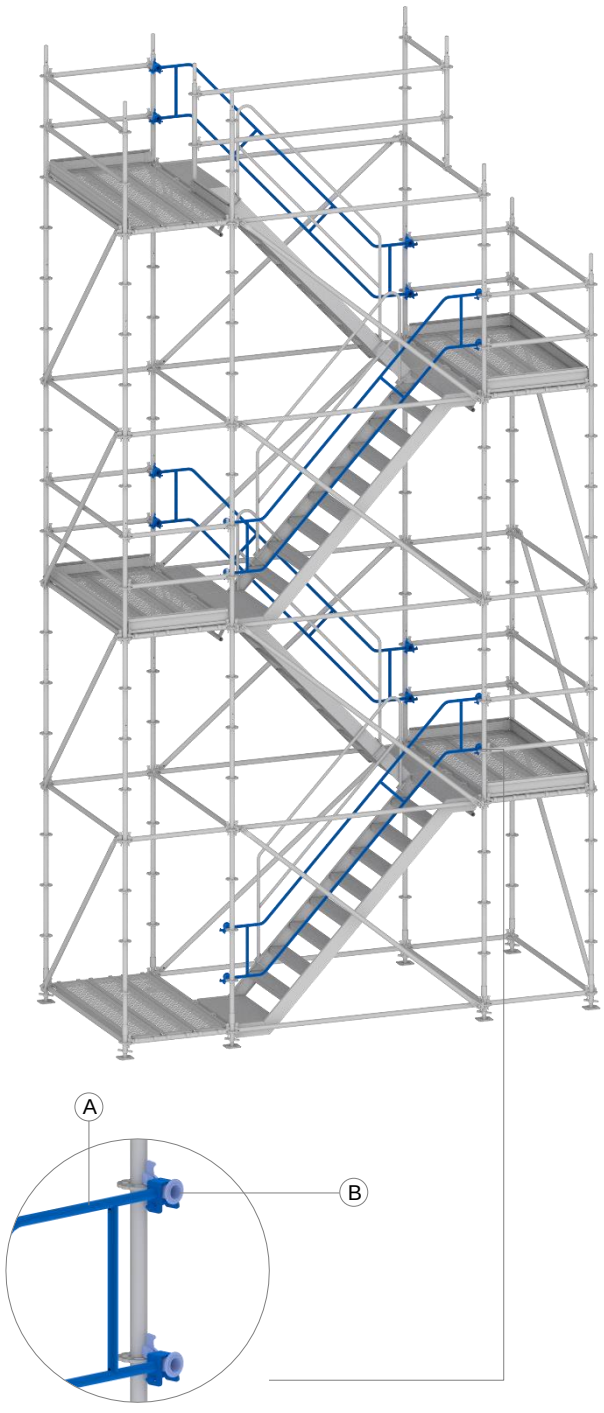
DOUBLE LEDGER

For supporting the aluminium stairway 1.00 m consider a double ledger.

A	8x DokaScaff UNI standard with spigot 1.00 m
B	9x DokaScaff UNI ledgers 1.09 m
C	6x DokaScaff UNI ledgers 2.07
D	6x DokaScaff UNI ledgers 2.57 m
E	3x DokaScaff UNI steel-deck 32/207 cm
F	2x DokaScaff UNI steel-toeboard 1.09 m
G	1x DokaScaff UNI steel-toeboard 2.07 m
H	6x DokaScaff UNI steel-deck 32/257 cm
I	1x DokaScaff UNI aluminium stairway 1.00 m. 96 cm
J	2x DokaScaff UNI railing aluminium stairway 1.00 m
K	1x DokaScaff UNI double ledger 2.07 m

Using outer railings

Outer railings can be used as exterior handrails, instead of the inner railings in combination with ledgers, with the advantage of less items being required.

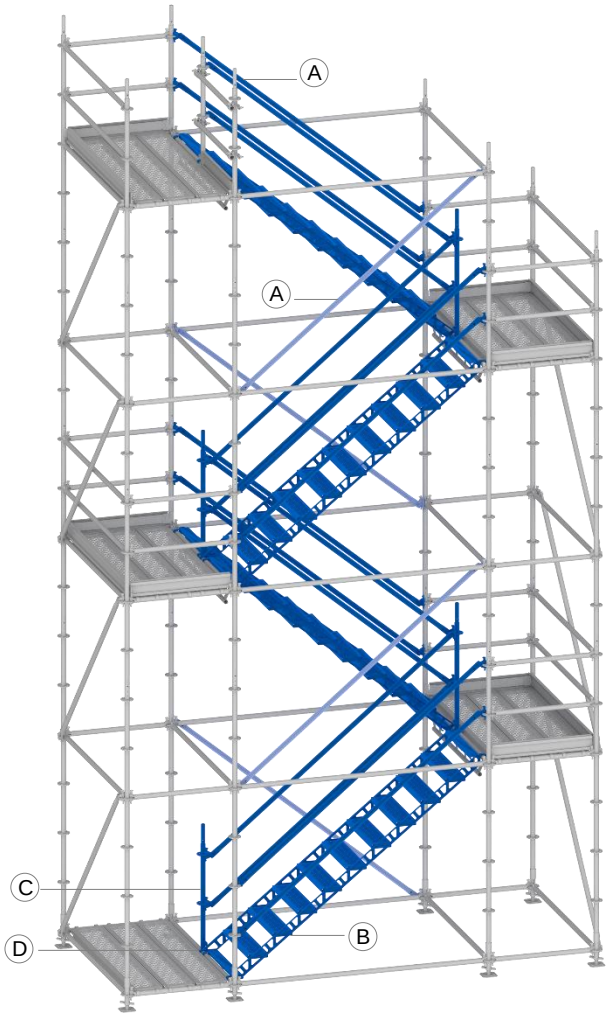


- Follow the standard sequence described previously considering that every outer railing replaces two ledgers and one inner railing.
- At the ground add a railing adaptor to hook the outer railing.

A	3x DokaScaff UNI outer railing (L=2.57 m or 3.07 m)
B	2x DokaScaff UNI stairway railing adaptor

Using steel stairways

Steel stairways can be assembled instead of the aluminium stairways, using the exact same supportive scaffold. Being more convenient in terms of inclination and width of the steps, they also have higher load-bearing capacity, which can be an advantage if it is expected the stair tower to be used for carrying materials.



- Follow the sequence described previously considering that two diagonal braces will replace two the inner railings in the inside, and two inner railings plus two ledgers on the outside.
- To fix the diagonal braces between the stairways, firstly fasten a coupler with spigot and stack on it a standard 1 m.
- Since diagonal braces are used to serve as railings, diagonal braces on that side are no longer necessary.

A	DokaScaff UNI diagonal brace 257/200cm
B	DokaScaff UNI steel stairway
C	DokaScaff UNI standard 1.00m
D	DokaScaff UNI coupler with spigot

Check **Items needed for stair tower 207x425 cm using steel stairways**.

Items needed for stair tower 207x425 cm using aluminium stairways

Exit height (m)	Base jack 50 cm	Base collar	Standard w/ spigot 1.00m	Standard w/ spigot 2.00m	Standard w/ spigot 3.00m	Hinged pin 10x60 [1]	Ledger 1.09m	Ledger 2.07m	Ledger 2.57m	Double ledger 2.07m	Diagonal brace 200/207cm	Diagonal brace 200/257cm	Steel-deck 32/207cm	Aluminium stairway. 96/257cm	Inner railing 2.57/3.07m	Steel-toeboard 1.00m	Steel-toeboard 1.09m	Steel-toeboard 2.07m	Coupler w/ spigot	Normal coupler 48.3 mm	Scaffold tube 48.3x3.2 mm, 1.50m	Number of middle sections
4.2	8	8	3	5	8	8	17	13	14	2	3	4	9	2	4	1	3	2	2	4	2	**0**
6.2	8	8	3	13	8	16	25	18	20	3	5	6	12	3	6	1	5	3	2	4	2	**1**
8.2	8	8	3	21	8	24	33	23	26	4	7	8	15	4	8	1	7	4	2	4	2	**2**
10.2	8	8	3	29	8	32	41	28	32	5	9	10	18	5	10	1	9	5	2	4	2	**3**
12.2	8	8	3	37	8	40	49	33	38	6	11	12	21	6	12	1	11	6	2	4	2	**4**
14.2	8	8	3	45	8	48	57	38	44	7	13	14	24	7	14	1	13	7	2	4	2	**5**
16.2	8	8	3	53	8	56	65	43	50	8	15	16	27	8	16	1	15	8	2	4	2	**6**
18.2	8	8	3	61	8	64	73	48	56	9	17	18	30	9	18	1	17	9	2	4	2	**7**
20.2	8	8	3	69	8	72	81	53	62	10	19	20	33	10	20	1	19	10	2	4	2	**8**
22.2	8	8	3	77	8	80	89	58	68	11	21	22	36	11	22	1	21	11	2	4	2	**9**
24.2	8	8	3	85	8	88	97	63	74	12	23	24	39	12	24	1	23	12	2	4	2	**10**
26.2	8	8	3	93	8	96	105	68	80	13	25	26	42	13	26	1	25	13	2	4	2	**11**
28.2	8	8	3	101	8	104	113	73	86	14	27	28	45	14	28	1	27	14	2	4	2	**12**
30.2	8	8	3	109	8	112	121	78	92	15	29	30	48	15	30	1	29	15	2	4	2	**13**
32.2	8	8	3	117	8	120	129	83	98	16	31	32	51	16	32	1	31	16	2	4	2	**14**
34.2	8	8	3	125	8	128	137	88	104	17	33	34	54	17	34	1	33	17	2	4	2	**15**
36.2	8	8	3	133	8	136	145	93	110	18	35	36	57	18	36	1	35	18	2	4	2	**16**
38.2	8	8	3	141	8	144	153	98	116	19	37	38	60	19	38	1	37	19	2	4	2	**17**
40.2	8	8	3	149	8	152	161	103	122	20	39	40	63	20	40	1	39	20	2	4	2	**18**
42.2	8	8	3	157	8	160	169	108	128	21	41	42	66	21	42	1	41	21	2	4	2	**19**
44.2	8	8	3	165	8	168	177	113	134	22	43	44	69	22	44	1	43	22	2	4	2	**20**
46.2	8	8	3	173	8	176	185	118	140	23	45	46	72	23	46	1	45	23	2	4	2	**21**
48.2	8	8	3	181	8	184	193	123	146	24	47	48	75	24	48	1	47	24	2	4	2	**22**
50.2	8	8	3	189	8	192	201	128	152	25	49	50	78	25	50	1	49	25	2	4	2	**23**
52.2	8	8	3	197	8	200	209	133	158	26	51	52	81	26	52	1	51	26	2	4	2	**24**
54.2	8	8	3	205	8	208	217	138	164	27	53	54	84	27	54	1	53	27	2	4	2	**25**
56.2	8	8	3	213	8	216	225	143	170	28	55	56	87	28	56	1	55	28	2	4	2	**26**
58.2	8	8	3	221	8	224	233	148	176	29	57	58	90	29	58	1	57	29	2	4	2	**27**
60.2	8	8	3	229	8	232	241	153	182	30	59	60	93	30	60	1	59	30	2	4	2	**28**
62.2	8	8	3	237	8	240	249	158	188	31	61	62	96	31	62	1	61	31	2	4	2	**29**
64.2	8	8	3	245	8	248	257	163	194	32	63	64	99	32	64	1	63	32	2	4	2	**30**
66.2	8	8	3	253	8	256	265	168	200	33	65	66	102	33	66	1	65	33	2	4	2	**31**
68.2	8	8	3	261	8	264	273	173	206	34	67	68	105	34	68	1	67	34	2	4	2	**32**
70.2	8	8	3	269	8	272	281	178	212	35	69	70	108	35	70	1	69	35	2	4	2	**33**
72.2	8	8	3	277	8	280	289	183	218	36	71	72	111	36	72	1	71	36	2	4	2	**34**
74.2	8	8	3	285	8	288	297	188	224	37	73	74	114	37	74	1	73	37	2	4	2	**35**
76.2	8	8	3	293	8	296	305	193	230	38	75	76	117	38	76	1	75	38	2	4	2	**36**
78.2	8	8	3	301	8	304	313	198	236	39	77	78	120	39	78	1	77	39	2	4	2	**37**
80.2	8	8	3	309	8	312	321	203	242	40	79	80	123	40	80	1	79	40	2	4	2	**38**

[1] These components are mandatory only when considering lifting the tower by crane. For more information check **Repositioning by crane**.

Items needed for stair tower 207x425 cm using steel stairways

Exit height (m)	Base jack 50cm	Base collar	Standard w/ spigot 1.00m	Standard w/ spigot 2.00m	Standard w/ spigot 3.00m	Hinged pin 10x60 [1)]	Ledger 1.09m	Ledger 2.07m	Ledger 2.57m	Double ledger 2.07m	Diagonal brace 200/207cm	Diagonal brace 200/257cm	Steel-deck 32/207cm	Steel-stair 88/257cm	Steel-toeboard 1.00m	Steel-toeboard 1.09m	Steel-toeboard 2.07m	Coupler w/ spigot	Normal coupler 48.3 mm	Scaffold tube 48.3x3.2 mm, 1.50m	Number of middle sections
4.2	8	8	5	4	8	9	16	13	6	2	3	10	9	2	1	3	2	3	4	2	**0**
6.2	8	8	6	12	8	18	24	18	8	3	5	15	12	3	1	5	3	4	4	2	**1**
8.2	8	8	7	20	8	27	32	23	10	4	7	20	15	4	1	7	4	5	4	2	**2**
10.2	8	8	8	28	8	36	40	28	12	5	9	25	18	5	1	9	5	6	4	2	**3**
12.2	8	8	9	36	8	45	48	33	14	6	11	30	21	6	1	11	6	7	4	2	**4**
14.2	8	8	10	44	8	54	56	38	16	7	13	35	24	7	1	13	7	8	4	2	**5**
16.2	8	8	11	52	8	63	64	43	18	8	15	40	27	8	1	15	8	9	4	2	**6**
18.2	8	8	12	60	8	72	72	48	20	9	17	45	30	9	1	17	9	10	4	2	**7**
20.2	8	8	13	68	8	81	80	53	22	10	19	50	33	10	1	19	10	11	4	2	**8**
22.2	8	8	14	76	8	90	88	58	24	11	21	55	36	11	1	21	11	12	4	2	**9**
24.2	8	8	15	84	8	99	96	63	26	12	23	60	39	12	1	23	12	13	4	2	**10**
26.2	8	8	16	92	8	108	104	68	28	13	25	65	42	13	1	25	13	14	4	2	**11**
28.2	8	8	17	100	8	117	112	73	30	14	27	70	45	14	1	27	14	15	4	2	**12**
30.2	8	8	18	108	8	126	120	78	32	15	29	75	48	15	1	29	15	16	4	2	**13**
32.2	8	8	19	116	8	135	128	83	34	16	31	80	51	16	1	31	16	17	4	2	**14**
34.2	8	8	20	124	8	144	136	88	36	17	33	85	54	17	1	33	17	18	4	2	**15**
36.2	8	8	21	132	8	153	144	93	38	18	35	90	57	18	1	35	18	19	4	2	**16**
38.2	8	8	22	140	8	162	152	98	40	19	37	95	60	19	1	37	19	20	4	2	**17**
40.2	8	8	23	148	8	171	160	103	42	20	39	100	63	20	1	39	20	21	4	2	**18**
42.2	8	8	24	156	8	180	168	108	44	21	41	105	66	21	1	41	21	22	4	2	**19**
44.2	8	8	25	164	8	189	176	113	46	22	43	110	69	22	1	43	22	23	4	2	**20**

[1)] These components are mandatory only when considering lifting the tower by crane. For more information check **Repositioning by crane**.

Anchoring on the structure

Stair towers require a compression-resistance and tension proof anchorage, in order to be stable.

The standard arrangements given hereof provide a statically proved solution according to the distance to the structure and the wind loads.

The load-bearing capacity of the anchoring structure itself is to be verified on-site according to the tables hereof.

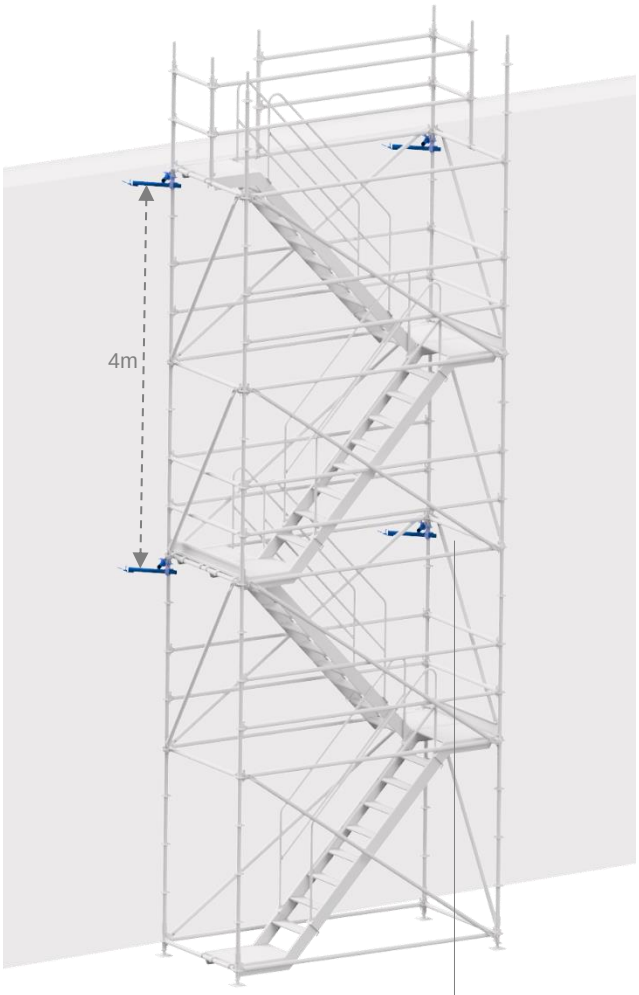
Distance to the structure up to 30 cm

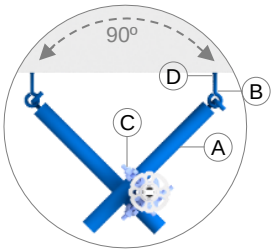
For this arrangement of anchors, the assembly is carried out with the longer side of the stair tower parallel to the structure, keeping a maximum distance of 30 cm.

- Place the first two anchors at a height of 4 m.
- Place the following anchors at 4 m from the previous ones.
- Comply with the maximum heights set forth on the following tables.
- Fasten the anchor tubes to the standards immediately beneath the rosette (maximum distance of 20 cm) as shown on the following illustrations.

Anchors position on a 4-leg stair tower

Anchors position on an 8-leg stair tower





A	2x DokaScaff UNI anchor tube 0.50 m (per set of anchors)
B	2x DokaScaff UNI ring screw 12 cm (per set of anchors)
C	2x Normal coupler 48.3 mm (per set of anchors)
D	2x DokaScaff UNI ring screw dowel (per set of anchors)

USING A 1.00 M STAIRWAYS

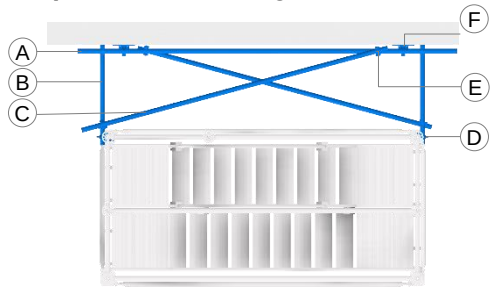
Place the **first two anchors at a height of 5 m** and the following ones at a distance of 4 m.

Distance to the structure up to 200 cm

For this arrangement of anchors, scaffold tubes and anchor shoes are used.

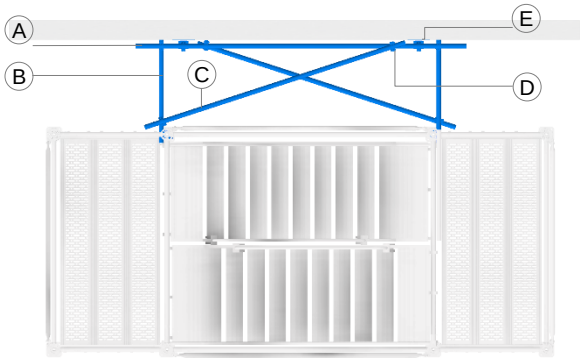
- Place the first two anchors at a height of 4 m.
- Place the following anchors at 4 m from the previous ones.
- Comply with the maximum heights set forth on the following tables.
- Fasten the scaffold tubes to the standards immediately beneath the rosette (maximum distance of 20 cm) as shown on the following illustrations.

Anchors position on a 4-leg stair tower

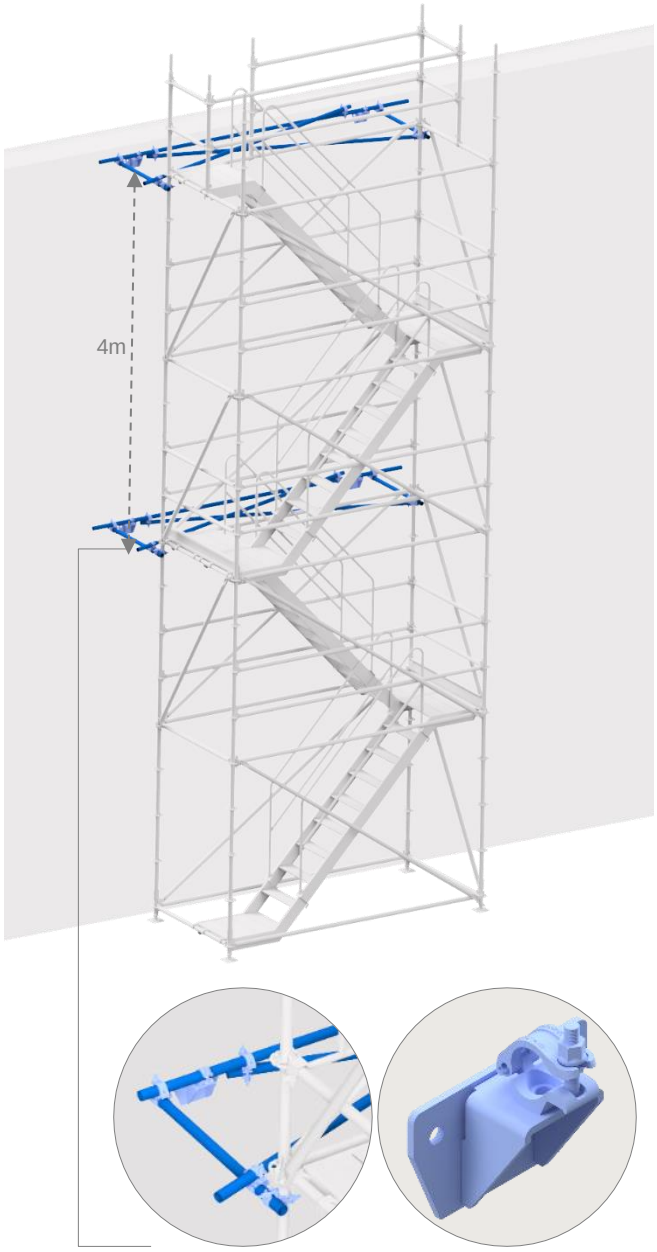


A	1x Scaffold tube 48.3 (L≥ 3.5 m)
B	2x Scaffold tube 48.3 (L≤ dist. to the structure)
C	2x Scaffold tube 48.3 (L approx. 3.5 m)
D	4x Normal coupler 48.3 mm
E	4x Swivel coupler 48.3 mm
F	2x Anchoring shoe for stair tower

Anchors position on an 8-leg stair tower



A	1x Scaffold tube 48.3 (L≥ 3.5 m)
B	2x Scaffold tube 48.3 (L≤ dist. to the structure)
C	2x Scaffold tube 48.3 (L approx. 3.5 m)
D	4x Swivel coupler 48.3 mm
E	2x Anchoring shoe for stair tower



USING A 1.00 M STAIRWAYS

Place the **first two anchors at a height of 5 m** and the following ones at a distance of 4 m.

Fixing the anchoring shoe

Use Doka Express Anchor or any other type of drilling bolts.

Maximum forces on base jacks[1)]

For determining, in 4-leg stair towers, the maximum forces on base jacks, it was considered that live loads are distributed in an unfavorable arrangement of 75% over one side of the tower.

In which regards the 8-leg stair tower, it was considered that live loads are distributed in an unfavorable arrangement of 60% over one side of the tower.

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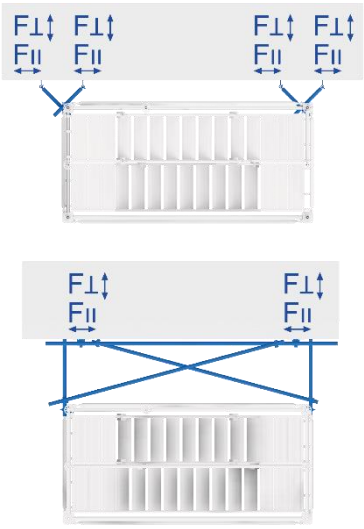
Exit height (m)	Stair tower 140x257 cm			Stair tower 140x307 cm			Stair tower 207x425 cm					
							Aluminium stairways			Steel stairways		
	Dead weight (kN)	Max. live load (kN)	Max. reaction on base jacks (kN)	Dead weight (kN)	Max. live load (kN)	Max. reaction on base jacks (kN)	Dead weight (kN)	Max. live load (kN)	Max. reaction on base jacks (kN)	Dead weight (kN)	Max. live load (kN)	Max. reaction on base jacks (kN)
4.2	4.9	9.7	4.9	5.3	11.5	5.7	8.9	17.8	4.9	8.8	25.5	6.0
6.2	6.9	12.9	6.5	7.5	15.4	7.6	12.6	26.7	7.2	12.5	38.2	8.9
8.2	8.9	16.0	8.2	9.6	19.2	9.6	16.3	35.6	9.4	16.2	51.0	11.7
10.2	10.9	19.2	9.9	11.8	23.0	11.6	20.0	44.5	11.7	19.9	63.7	14.5
12.2	12.8	19.2	10.4	13.9	23.0	12.1	23.7	44.5	12.6	23.6	63.7	15.5
14.2	14.8	19.2	10.9	16.1	23.0	12.6	27.4	44.5	13.5	27.3	63.7	16.4
16.2	16.8	19.2	11.4	18.3	23.0	13.2	31.1	44.5	14.4	31.0	63.7	17.3
18.2	18.8	19.2	11.9	20.4	23.0	13.7	34.8	44.5	15.4	34.7	63.7	18.2
20.2	20.8	19.2	12.4	22.6	23.0	14.3	38.5	44.5	16.3	38.4	63.7	19.2
22.2	22.7	19.2	12.9	24.7	23.0	14.8	42.1	44.5	17.2	42.1	63.7	20.1
24.2	24.7	19.2	13.4	26.9	23.0	15.3	45.8	44.5	18.1	45.8	63.7	21.0
26.2	26.7	19.2	13.9	29.0	23.0	15.9	49.5	44.5	19.1	49.5	63.7	21.9
28.2	28.7	19.2	14.4	31.2	23.0	16.4	53.2	44.5	20.0	53.2	63.7	22.9
30.2	30.7	19.2	14.9	33.3	23.0	16.9	56.9	44.5	20.9	56.9	63.7	23.8
32.2	32.6	19.2	15.4	35.5	23.0	17.5	60.6	44.5	21.8	60.6	63.7	24.7
34.2	34.6	19.2	15.9	37.6	23.0	18.0	64.3	44.5	22.8	64.3	63.7	25.6
36.2	36.6	19.2	16.4	39.8	23.0	18.6	68.0	44.5	23.7	68.0	63.7	26.6
38.2	38.6	19.2	16.9	42.0	23.0	19.1	71.7	44.5	24.6	71.7	63.7	27.5
40.2	40.5	19.2	17.3	44.1	23.0	19.6	75.4	44.5	25.5	75.4	63.7	28.4
42.2	42.5	19.2	17.8	46.3	23.0	20.2	79.1	44.5	26.5	79.1	63.7	29.3
44.2	44.5	19.2	18.3	48.4	23.0	20.7	82.8	44.5	27.4	82.8	63.7	30.3
46.2	46.5	19.2	18.8	50.6	23.0	21.3	86.5	44.5	28.3	86.5	63.7	31.2
48.2	48.5	19.2	19.3	52.7	23.0	21.8	90.2	44.5	29.2	-	-	-
50.2	50.4	19.2	19.8	54.9	23.0	22.3	93.9	44.5	30.1	-	-	-
52.2	52.4	19.2	20.3	57.0	23.0	22.9	97.5	44.5	31.1	-	-	-
54.2	54.4	19.2	20.8	59.2	23.0	23.4	101.2	44.5	32.0	-	-	-
56.2	56.4	19.2	21.3	61.3	23.0	23.9	104.9	44.5	32.9	-	-	-
58.2	58.4	19.2	21.8	63.5	23.0	24.5	108.6	44.5	33.8	-	-	-
60.2	60.3	19.2	22.3	65.7	23.0	25.0	112.3	44.5	34.8	-	-	-
62.2	62.3	19.2	22.8	67.8	23.0	25.6	116.0	44.5	35.7	-	-	-
64.2	64.3	19.2	23.3	70.0	23.0	26.1	119.7	44.5	36.6	-	-	-
66.2	66.3	19.2	23.8	72.1	23.0	26.6	123.4	44.5	37.5	-	-	-
68.2	68.3	19.2	24.3	74.3	23.0	27.2	127.1	44.5	38.5	-	-	-
70.2	70.2	19.2	24.8	76.4	23.0	27.7	130.8	44.5	39.4	-	-	-
72.2	72.2	19.2	25.3	78.6	23.0	28.3	134.5	44.5	40.3	-	-	-
74.2	74.2	19.2	25.8	80.7	23.0	28.8	138.2	44.5	41.2	-	-	-
76.2	76.2	19.2	26.3	82.9	23.0	29.3	141.9	44.5	42.1	-	-	-
78.2	78.2	19.2	26.7	85.0	23.0	29.9	145.6	44.5	43.1	-	-	-
80.2	80.1	19.2	27.2	87.2	23.0	30.4	149.3	44.5	44.0	-	-	-

[1)] Values considering γM = 1.1 and γF = 1.5

Max. forces on anchors for stair towers 140x257 / 140x307 cm [1)]



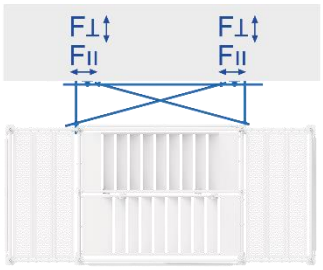
Wind velocity (km/h)	Wind load (kN)	Distance to the structure up to 30 cm						Distance to the structure up to 200 cm					
		With net [2)]			Without net			With net [2)]			Without net		
		Max. exit height (m)	Max. forces per anchor tube (kN)		Max. exit height (m)	Max. forces per anchor tube (kN)		Max. exit height (m)	Max. forces per anchor shoe (kN)		Max. exit height (m)	Max. forces per anchor shoe (kN)	
0 [3)]	0.00	80.2	0.9	⊥ 0.6 ∥ 0.6	80.2	0.9	⊥ 0.6 ∥ 0.6	80.2	-	⊥ 0.9 ∥ 1.9	80.2	-	⊥ 0.9 ∥ 1.9
65	0.20	80.2	1.3	⊥ 0.9 ∥ 0.9	80.2	1.0	⊥ 0.7 ∥ 0.7	80.2	-	⊥ 1.1 ∥ 0.6	80.2	-	⊥ 1.0 ∥ 0.5
70	0.24	80.2	1.5	⊥ 1.1 ∥ 1.1	80.2	1.2	⊥ 0.8 ∥ 0.8	80.2	-	⊥ 1.3 ∥ 0.7	80.2	-	⊥ 1.2 ∥ 0.6
75	0.27	80.2	1.8	⊥ 1.2 ∥ 1.2	80.2	1.3	⊥ 0.9 ∥ 0.9	80.2	-	⊥ 1.5 ∥ 0.8	80.2	-	⊥ 1.3 ∥ 0.7
80	0.31	80.2	2.0	⊥ 1.4 ∥ 1.4	80.2	1.5	⊥ 1.1 ∥ 1.1	80.2	-	⊥ 1.7 ∥ 0.9	80.2	-	⊥ 1.5 ∥ 0.8
85	0.35	80.2	2.3	⊥ 1.6 ∥ 1.6	80.2	1.7	⊥ 1.2 ∥ 1.2	80.2	-	⊥ 1.9 ∥ 1.0	80.2	-	⊥ 1.7 ∥ 0.9
90	0.39	80.2	2.5	⊥ 1.8 ∥ 1.8	80.2	1.9	⊥ 1.4 ∥ 1.4	80.2	-	⊥ 2.1 ∥ 1.1	80.2	-	⊥ 1.9 ∥ 1.0
100	0.48	80.2	3.1	⊥ 2.2 ∥ 2.2	80.2	2.4	⊥ 1.7 ∥ 1.7	80.2	-	⊥ 2.6 ∥ 1.4	80.2	-	⊥ 2.4 ∥ 1.3
110	0.58	80.2	3.8	⊥ 2.7 ∥ 2.7	80.2	2.9	⊥ 2.0 ∥ 2.0	50.2	-	⊥ 3.2 ∥ 1.7	80.2	-	⊥ 2.9 ∥ 1.5
120	0.69	80.2	4.5	⊥ 3.2 ∥ 3.2	80.2	3.4	⊥ 2.4 ∥ 2.4	50.2	-	⊥ 3.8 ∥ 2.0	80.2	-	⊥ 3.4 ∥ 1.8
130	0.82	80.2	5.3	⊥ 3.8 ∥ 3.8	80.2	4.0	⊥ 2.8 ∥ 2.8	40.2	-	⊥ 4.5 ∥ 2.3	80.2	-	⊥ 4.0 ∥ 2.2
140	0.95	70.2	6.2	⊥ 4.3 ∥ 4.3	80.2	4.7	⊥ 3.3 ∥ 3.3	-	-	- -	-	-	- - - -
150	1.09	70.2	7.1	⊥ 5.0 ∥ 5.0	80.2	5.3	⊥ 3.8 ∥ 3.8	-	-	- -	-	-	- - - -
160	1.23	68.2	8.0	⊥ 5.7 ∥ 5.7	80.2	6.1	⊥ 4.3 ∥ 4.3	-	-	- -	-	-	- - - -
170	1.39	40.2	8.9	⊥ 6.3 ∥ 6.3	60.2	6.9	⊥ 4.9 ∥ 4.9	-	-	- -	-	-	- - - -
180	1.56	-	-	- - - -	40.2	7.7	⊥ 5.4 ∥ 5.4	-	-	- - - -	-	-	- - - -

1) Values considering: γM = 1.1 and γF = 1.5.

2) It is considered a net with a permeability of 65%.

3) Anchors should be able to sustain, at any given working level, an accidental load per working sector of 0.3 kN.

Max. forces on anchors for stair towers 207x425 cm[1)] using aluminum stairways



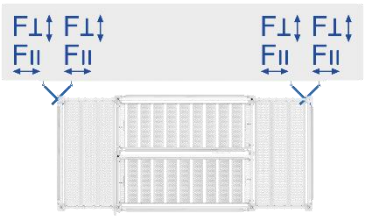
Wind velocity (km/h)	Wind load (kN)	Distance to the structure up to 30 cm						Distance to the structure up to 200 cm		
		With net [2)]			Without net					
		Max. exit height (m)	Max. forces per anchor tube (kN)		Max. exit height (m)	Max. forces per anchor tube (kN)		Max. exit height (m)	Max. forces per anchor shoe (kN)	
0 [3)]	0.00	80.2	1.4	⊥ 1.0 ∥ 1.0	80.2	1.4	⊥ 1.0 ∥ 1.0	80.2	-	⊥ 0.8 ∥ 2.1
65	0.20	64.2	1.4	⊥ 1.0 ∥ 1.0	64.2	1.1	⊥ 0.8 ∥ 0.8	48.2	-	⊥ 1,8 ∥ 0.7
70	0.24	64.2	1.6	⊥ 1.2 ∥ 1.2	64.2	1.3	⊥ 0.9 ∥ 0.9	48.2	-	⊥ 2.1 ∥ 0.8
75	0.27	64.2	1.9	⊥ 1.3 ∥ 1.3	64.2	1.5	⊥ 1.1 ∥ 1.1	48.2	-	⊥ 2.4 ∥ 1.0
80	0.31	64.2	2.2	⊥ 1.5 ∥ 1.5	64.2	1.7	⊥ 1.2 ∥ 1.2	48.2	-	⊥ 2.8 ∥ 1.1
85	0.35	64.2	2.4	⊥ 1.7 ∥ 1.7	64.2	1.9	⊥ 1.4 ∥ 1.4	48.2	-	⊥ 3.1 ∥ 1.2
90	0.39	64.2	2.7	⊥ 1.9 ∥ 1.9	64.2	2.2	⊥ 1.5 ∥ 1.5	48.2	-	⊥ 3.5 ∥ 1.4
100	0.48	64.2	3.4	⊥ 2.4 ∥ 2.4	58.2	2.7	⊥ 1.9 ∥ 1.9	48.2	-	⊥ 4.3 ∥ 1.7
110	0.58	48.2	4.1	⊥ 2.9 ∥ 2.9	58.2	3.2	⊥ 2.3 ∥ 2.3	48.2	-	⊥ 5.3 ∥ 2.1
120	0.69	48.2	4.8	⊥ 3.4 ∥ 3.4	58.2	3.8	⊥ 2.7 ∥ 2.7	48.2	-	⊥ 6.3 ∥ 2.5
130	0.82	36.2	5.7	⊥ 4.0 ∥ 4.0	58.2	4.5	⊥ 3.2 ∥ 3.2	-	-	- - - -
140	0.95	36.2	6.6	⊥ 4.7 ∥ 4.7	48.2	5.2	⊥ 3.7 ∥ 3.7	-	-	- - - -
150	1.09	36.2	7.6	⊥ 5.4 ∥ 5.4	40.2	6.0	⊥ 4.3 ∥ 4.3	-	-	- - - -
160	1.23	12.2	8.6	⊥ 6.1 ∥ 6.1	24.2	6.8	⊥ 4.8 ∥ 4.8	-	-	- - - -
170	1.39	-	-	- - - -	16.2	7.7	⊥ 5.5 ∥ 5.5	-	-	- - - -
180	1.56	-	-	- - - -	12.2	8.7	⊥ 6.1 ∥ 6.1	-	-	- - - -

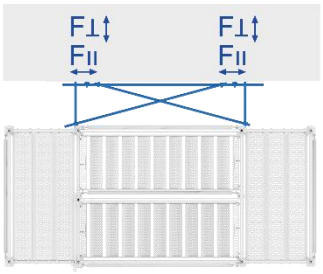
1) Values considering: γM = 1.1 and γF = 1.5.

2) It is considered a net with a permeability of 65%.

3) Anchors should be able to sustain, at any given working level, an accidental load per working sector of 0.3 kN.

Max. forces on anchors for stair towers 207x425 cm[1)] using steel stairways





Wind velocity (km/h)	Wind load (kN)	Distance to the structure up to 30 cm						Distance to the structure up to 200 cm			
		With net [2)]				Without net					
		Max. exit height (m)	Max. forces per anchor tube (kN)			Max. exit height (m)	Max. forces per anchor tube (kN)			Max. exit height (m)	Max. forces per anchor shoe (kN)
0 [3)]	0.00	46.2	1.4	⊥	1.0	46.2	1.4	⊥	1.0	36.2	- ⊥ 2.1
				∥	1.0			∥	1.0		- ∥ 0.8
65	0.20	36.2	1.4	⊥	1.0	44.2	1.4	⊥	1.0	36.2	- ⊥ 2.4
				∥	1.0			∥	1.0		- ∥ 0.9
70	0.24	36.2	1.6	⊥	1.1	44.2	1.6	⊥	1.1	36.2	- ⊥ 2.7
				∥	1.1			∥	1.1		- ∥ 1.1
75	0.27	36.2	1.8	⊥	1.3	44.2	1.8	⊥	1.3	36.2	- ⊥ 3.1
				∥	1.3			∥	1.3		- ∥ 1.2
80	0.31	36.2	2.1	⊥	1.5	44.2	2.1	⊥	1.5	36.2	- ⊥ 3.5
				∥	1.5			∥	1.5		- ∥ 1.4
85	0.35	36.2	2.3	⊥	1.6	44.2	2.3	⊥	1.6	36.2	- ⊥ 3.9
				∥	1.6			∥	1.6		- ∥ 1.5
90	0.39	36.2	2.6	⊥	1.8	44.2	2.6	⊥	1.8	36.2	- ⊥ 4.9
				∥	1.8			∥	1.8		- ∥ 1.9
100	0.48	36.2	3.2	⊥	2.3	44.2	3.2	⊥	2.3	36.2	- ⊥ 5.9
				∥	2.3			∥	2.3		- ∥ 2.3
110	0.58	36.2	3.9	⊥	2.8	44.2	3.9	⊥	2.8	32.2	- ⊥ 7.0
				∥	2.8			∥	2.8		- ∥ 2.8
120	0.69	36.2	4.6	⊥	3.3	44.2	4.6	⊥	3.3	-	- - ⊥ -
				∥	3.3			∥	3.3		- ∥ -
130	0.82	36.2	5.4	⊥	3.8	44.2	5.4	⊥	3.8	-	- - ⊥ -
				∥	3.8			∥	3.8		- ∥ -
140	0.95	32.2	6.3	⊥	4.5	40.2	6.3	⊥	4.5	-	- - ⊥ -
				∥	4.5			∥	4.5		- ∥ -
150	1.09	32.2	7.2	⊥	5.1	40.2	7.2	⊥	5.1	-	- - ⊥ -
				∥	5.1			∥	5.1		- ∥ -
160	1.23	20.2	8.2	⊥	5.8	24.2	8.2	⊥	5.8	-	- - ⊥ -
				∥	5.8			∥	5.8		- ∥ -
170	1.39	-	-	-	-	-	-	-	-	-	- - ⊥ -
				-	-			-	-		- ∥ -
180	1.56	-	-	-	-	-	-	-	-	-	- - ⊥ -
				-	-			-	-		- ∥ -

1) Values considering: γM = 1.1 and γF = 1.5.

2) It is considered a net with a permeability of 65%.

3) Anchors should be able to sustain, at any given working level, an accidental load per working sector of 0.3 kN.

Repositioning by crane

DokaScaff UNI stair towers are craneable, which guarantees the quickest repositioning in the construction site.

MAXIMUM LENGTH THAT CAN BE REPOSITIONED BY CRANE

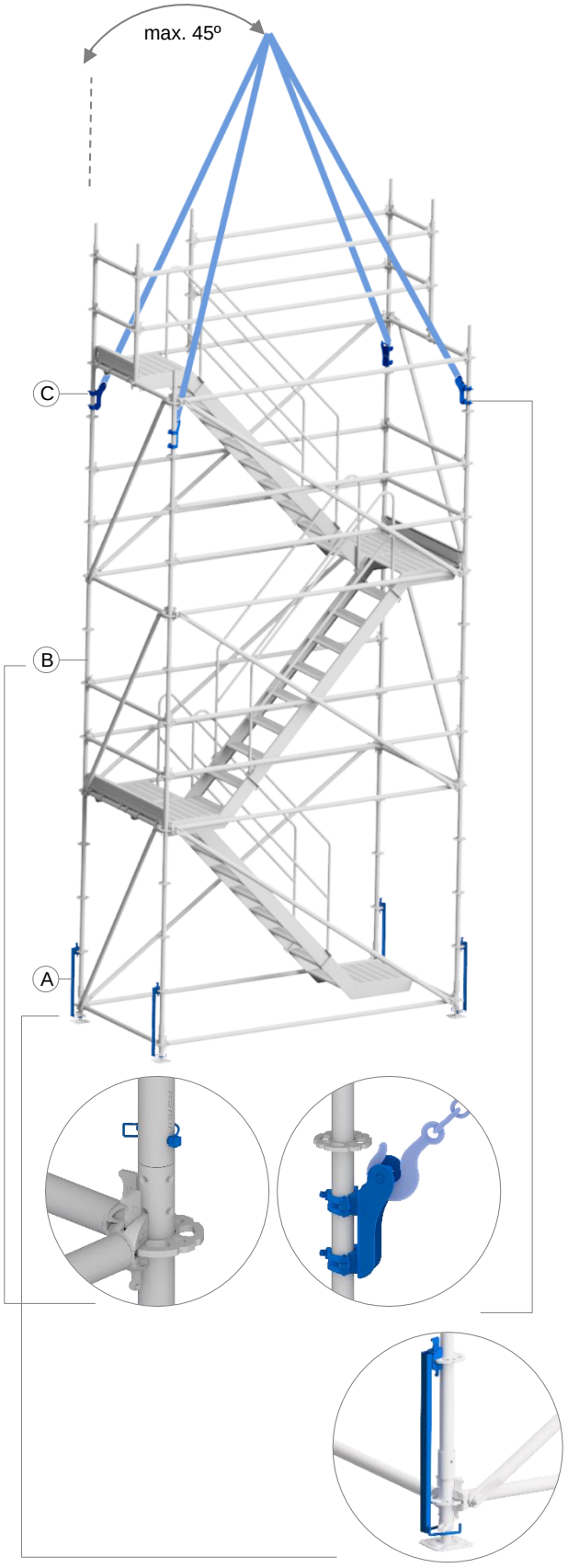
For stair towers higher than 10 m, a specific hazard analysis shall be produced for checking, as well as supplementary assembly instructions.

For a safe operation, comply with the following steps:

- Clear all decks of loose materials.
- Check if every wedge is duly locked.
- Fix the base jacks using base jack retention.
- Connect the standards with hinged pins 10x60 mm or bolts M12 class 8.8 and self-locking nuts (check **Items needed**).
- Fix the crane straps/chains below the rosettes of the top level using lifting couplers.
- Remove anchors or other connections, keeping the straps/cables tensioned.
- Use ropes or other devises to guide the scaffold and to prevent its rotation.
- Hoist the tower as minimum as possible to the ground.
- Bring the scaffold to the new position.
- Place the anchors or other fixations that have been previously removed, keeping the straps/chains tensioned.
- Check the scaffold for its stability.
- Detach the crane/chain cables.

Position of the crane straps on a 4-leg stair tower

Position of the crane straps on a 8-leg stair tower



A	DokaScaff UNI base jack retention (1x per base jack)
B	DokaScaff UNI hinged pin 10x60 (1x per joint)
C	DokaScaff UNI coupler for lifting (4x per stair tower)

Straps length

Use straps of a suitable length to form an angle of inclination less than 45º.

Rebar scaffold

Unimpeded access to the formwork or wall rebars is provided without requiring any anchors. Stability is achieved by widening the base (buttress) and, if required, by using counterweights.

Suitable bay lengths ensure that access is provided to all relevant components of the formwork, and the possibility of adapting the width allows complying with on-site space availability.

Inner guardrails and brackets create safe working conditions where there is a large gap to the wall.

Features overview

Secure perimeter

The use of guardrails and toe boards on the front, rear side and edges of the scaffold provide a working area with a fully enclosed perimeter for an enhance protection of the site workers.

Access decks

The foldable ladders of the access decks waive the assembly of additional scaffold bays, whereas the trapdoors ensure a safe corridor with no gaps.

Quick response

The use of core components only and the ready-to-use parts list given herein, overpass the commissioning of quantities for a quick on-site response.

Components commissioning

Check **Items needed for rebar scaffold** for a detailed parts list per configuration.

Fast repositioning

The possibility of lifting rebar scaffolds with crane allows to keep pace with the concrete pouring without wasting time disassembling and reassembling the scaffold.

Standard configurations

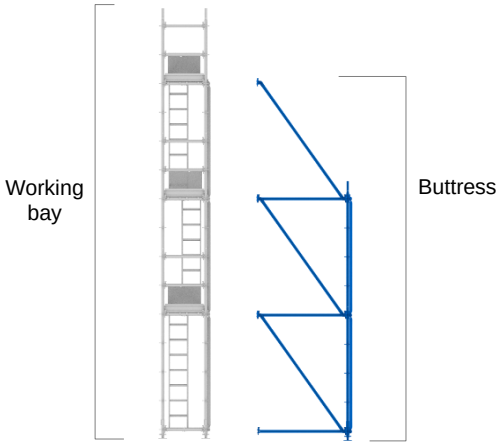
Standard configurations include four predefined heights combined with the bay widths of 73 or 109 cm and varying bay lengths according to the required steel-deck size. Scaffold bays can be added as many as needed (for more information check **Additional bays**).

Once the rebar scaffold is correctly assembled with the matching buttress and counterweight, a working load of 2.0 kN/m^2 is assured at any working level.

Other combinations of height, bay widths, buttress and working loads can be achievable with project-specific planning.

Rebar scaffold height	Working height	Working width	Buttress width
2.20 m	4.20 m	73 or 109 cm	73 cm
4.20 m	6.20 m	73 or 109 cm	109 cm
6.20 m	8.20 m	73 or 109 cm	157 cm
8.20 m	10.20 m	73 or 109 cm	207 cm

Working bays and buttress

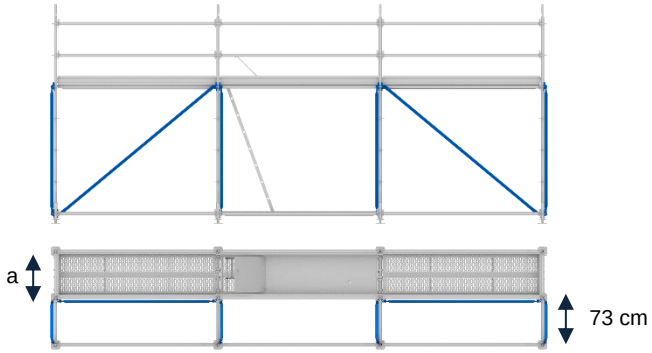


Self-standing scaffold

The counterweights and dimensions of the buttress presented herein cover the situation where neither the formwork nor the wall rebars are in place at the time of assembly of the scaffold.

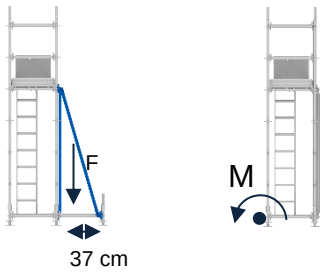
Rebar scaffold 2.20 m height

Position of the diagonal braces



[a] 73 or 109 cm.

Counterweights and overturning moment



Regardless of the wind velocity, a buttress with a minimum width of 73 cm should be erected, formed by diagonal braces connected to the working scaffold at every bay.

On the direction parallel to the formwork, diagonal braces are to be considered every two bays, as shown on the illustrations above.

In case there isn't enough space available on-site to erect the buttress, replace it by struts or an equivalent solution, using as basis for the calculation the overturning moment (**M**).

Using struts

In case there isn't enough space available on-site to erect the buttress, replace it by struts or an equivalent solution, using as basis for the calculation the overturning moment (**M**).

Wind velocity (km/h)	Wind load (kN)	2.07 m[1]		2.57 m		3.07 m	
		Counterweight **F** (kg)	Overturning moment **M** (kN.m)	Counterweight **F** (kg)	Overturning moment **M** (kN.m)	Counterweight **F** (kg)	Overturning moment **M** (kN.m)
0	0.00	0	0.0	0	0.0	0	0.0
65	0.20	0	0.4	0	0.6	0	0.7
70	0.24	0	0.6	0	0.8	10	0.9
75	0.27	20	0.7	20	1.0	30	1.2
80	0.31	35	0.9	40	1.2	50	1.4
85	0.35	50	1.1	60	1.4	75	1.7
90	0.39	70	1.3	80	1.6	100	2.0
100	0.48	110	1.7	130	2.2	155	2.6
110	0.58	150	2.2	180	2.7	220	3.2
120	0.69	200	2.7	240	3.4	285	4.0
130	0.82	250	3.3	300	4.1	360	4.8
140	0.95	305	3.9	370	4.8	440	5.6
150	1.09	365	4.6	440	5.6	525	6.6
160	1.23	430	5.3	520	6.4	615	7.6
170	1.39	500	6.0	600	7.3	710	8.6
180	1.56	570	6.8	690	8.3	815	9.7

[1] These values also apply for scaffold bays with lengths inferior than 2.07 m.

COUNTERWEIGHTS

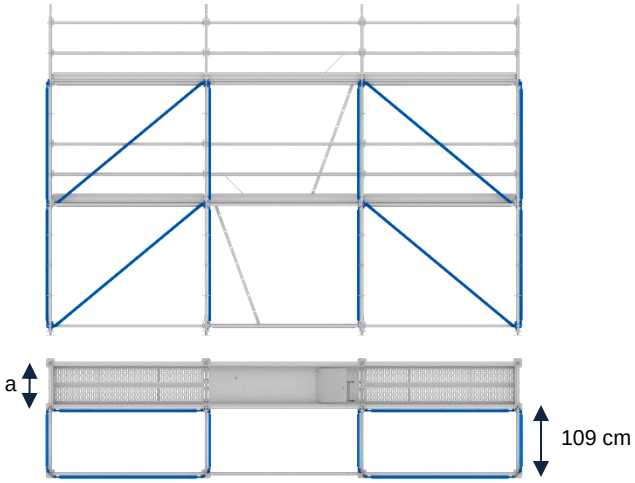
Counterweights (**F**) shall be installed at **every bay**. Prior of installing them, check **Placing the counterweights**.

REBAR SCAFFOLD LENGHT

Always ensure a minimum length of **a + 0.73** m.

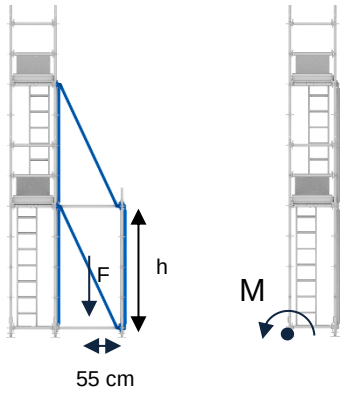
Rebar scaffold 4.20 m height

Position of the diagonal braces



[a] 73 or 109 cm.

Counterweights and overturning moment



Regardless of the wind velocity, a buttress with a minimum width of 109 cm should be erected up to a height of 2.20 m (**h**).

On the direction parallel to the formwork, diagonal braces are to be considered every two bays, both on the working bays and on the buttress, as shown on the illustrations above. On the other direction, diagonal braces are required to be assembled every bay and level of the buttress.

Using struts

In case there isn't enough space available on-site to erect the buttress, replace it by struts or an equivalent solution, using as basis for the calculation the overturning moment (**M**).

Wind velocity (km/h)	Wind load (kN)	2.07 m[2]		2.57 m		3.07 m	
		Counterweight **F** (kg)	Overturning moment **M** (kN.m)	Counterweight **F** (kg)	Overturning moment **M** (kN.m)	Counterweight **F** (kg)	Overturning moment **M** (kN.m)
0	0.00	0	0.0	0	0.0	0	0.0
65	0.20	50	1.9	70	2.3	95	2.7
70	0.24	85	2.3	115	2.8	145	3.3
75	0.27	125	2.8	165	3.4	200	4.0
80	0.31	170	3.3	215	4.0	260	4.8
85	0.35	215	3.9	270	4.7	325	5.5
90	0.39	260	4.5	330	5.4	395	6.4
100	0.48	365	5.8	455	6.9	540	8.2
110	0.58	485	7.2	595	8.6	705[1]	10.1
120	0.69	610	8.7	745[1]	10.5	880[1]	12.3
130	0.82	750[1]	10.4	915[1]	12.5	1075[1]	14.7
140	0.95	895[1]	12.2	1090[1]	14.7	1285[1]	17.2
150	1.09	1055[1]	14.2	1285[1]	17.1	1510[1]	20.0
160	1.23	1230[1]	16.2	1490[1]	19.6	1750[1]	22.9
170	1.39	1410[1]	18.5	1710[1]	22.2	2000[1]	26.0
180	1.56	1600[1]	20.8	1940[1]	25.1	2275[1]	29.3

[1] Counterweights must be installed on the ground.

[2] For scaffold bays w/ lengths inferior to 2.07m use the same values.

COUNTERWEIGHTS

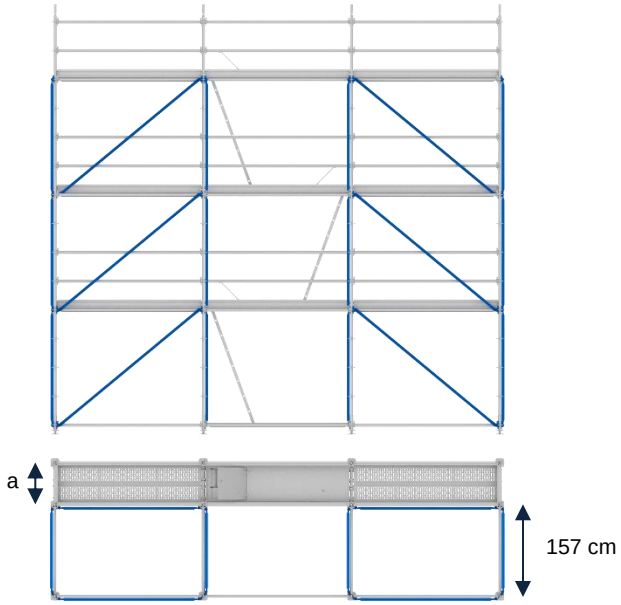
Counterweights (**F**) shall be installed at **every bay**. Prior of installing them, check **Placing the counterweights**.

REBAR SCAFFOLD LENGHT

Always ensure a minimum length of **a + 1.09** m.

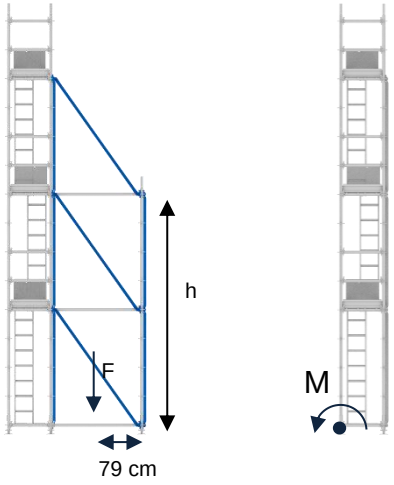
Rebar scaffold 6.20 m height

Position of the diagonal braces



[a] 73 or 109 cm.

Counterweights and overturning moment



Regardless of the wind velocity, a buttress with a minimum width of 157 cm should be erected up to a height of 4.20 m (**h**).

On the direction parallel to the formwork, diagonal braces are to be considered every two bays, both on the working bays and on the buttress, as shown on the illustrations above. On the other direction, diagonal braces are required to be assembled every bay and level of the buttress.

Wind velocity (km/h)	Wind load (kN)	2.07 m[3]		2.57 m		3.07 m	
		Counterweight **F** (kg)	Overturning moment **M** (kN.m)	Counterweight **F** (kg)	Overturning moment **M** (kN.m)	Counterweight **F** (kg)	Overturning moment **M** (kN.m)
0	0.00	0	0.0	0	0.0	0	0.0
65	0.20	125	4.4	165	5.1	205	6.1
70	0.24	180	5.3	225	6.2	275	7.3
75	0.27	235	6.3	295	7.4	360	8.7
80	0.31	300	7.4	370	8.6	445[1]	10.1
85	0.35	360	8.5	450[1]	10.0	540[1]	11.7
90	0.39	435[1]	9.7	535[1]	11.4	635[1]	13.3
100	0.48	585[1]	12.4	715[1]	14.4	850[1]	16.9
110	0.58	750[1]	15.2	920[1]	17.8	1085[2]	20.8
120	0.69	935[1]	18.4	1150[2]	21.5	1340[2]	25.2
130	0.82	1130[2]	21.8	1375[2]	25.5	1620[2]	29.9
140	0.95	1350[2]	25.5	1630[2]	29.9	1920[2]	34.9
150	1.09	1575[2]	29.5	1910[2]	34.5	2245[2]	40.4
160	1.23	1825[2]	33.8	2210[2]	39.5	2590[2]	46.2
170	1.39	2090[2]	38.3	2520[2]	44.8	2960[2]	52.4
180	1.56	2365[2]	43.1	2860[2]	50.5	3350[2]	59.0

[1] The use of double ledgers is mandatory.

[2] Counterweights must be installed on the ground.

[3] For scaffold bays w/ lengths inferior to 2.07m use the same values.

COUNTERWEIGHTS

Counterweights (**F**) shall be installed at **every bay**. Prior of installing them, check **Placing the counterweights**.

REBAR SCAFFOLD LENGHT

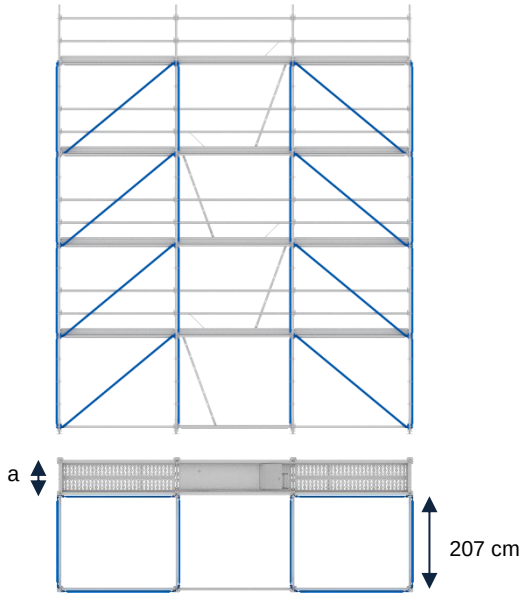
Always ensure a minimum length of **a + 1.57** m.

Using struts

In case there isn't enough space available on-site to erect the buttress, replace it by struts or an equivalent solution, using as basis for the calculation the overturning moment (**M**).

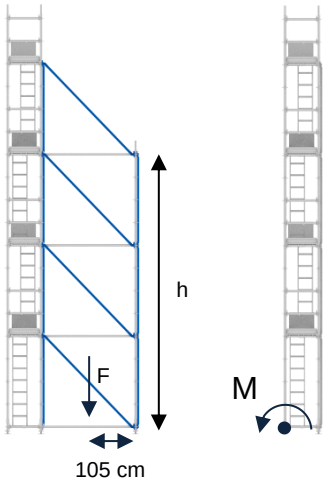
Rebar scaffold 8.20 m height

Position of the diagonal braces



[a] 73 or 109 cm.

Counterweights and overturning moment



Regardless of the wind velocity, a buttress with a minimum width of 207 cm should be erected up to a height of 6.20 m (**h**).

On the direction parallel to the formwork, diagonal braces are to be considered every two bays, both on the working bays and on the buttress, as shown on the illustrations above. On the other direction, diagonal braces are required to be assembled every bay and level of the buttress.

Wind velocity (km/h)	Wind load (kN)	2.07 m[3]		2.57 m		3.07 m	
		Counterweight **F** (kg)	Overturning moment **M** (kN.m)	Counterweight **F** (kg)	Overturning moment **M** (kN.m)	Counterweight **F** (kg)	Overturning moment **M** (kN.m)
0	0.00	0	0.0	0	0.0	0	0.0
65	0.20	210	7.6	265[1]	9.1	330[1]	10.7
70	0.24	280[1]	9.1	350[1]	10.9	425[1]	12.8
75	0.27	360[1]	10.7	445[1]	12.9	535[1]	15.1
80	0.31	445[1]	12.4	545[1]	14.9	650[1]	17.5
85	0.35	530[1]	14.3	650[1]	17.1	770[1]	20.0
90	0.39	625[1]	16.2	765[1]	19.5	905[2]	22.8
100	0.48	825[2]	20.5	1000[2]	24.5	1185[2]	28.7
110	0.58	105[2]	25.1	1275[2]	30.2	1500[2]	35.2
120	0.69	1300[2]	30.3	1650[2]	36.3	1840[2]	42.4
130	0.82	1565[2]	35.8	1885[2]	43.0	2210[2]	50.2
140	0.95	1855[2]	41.8	2230[2]	50.2	2610[2]	58.6
150	1.09	2165[2]	48.3	2600[2]	57.9	3050[2]	67.6
160	1.23	2500[2]	55.2	3000[2]	66.2	3505[2]	77.3
170	1.39	2850[2]	62.5	3420[2]	75.0	4000[2]	87.5
180	1.56	3225[2]	70.3	3870[2]	84.3	4520[2]	98.4

[1] The use of double ledgers is mandatory.

[2] Counterweights must be installed on the ground.

[3] For scaffold bays w/ lengths inferior to 2.07m use the same values.

COUNTERWEIGHTS

Counterweights (**F**) shall be installed at **every bay**. Prior of installing them, check **Placing the counterweights**.

REBAR SCAFFOLD LENGHT

Always ensure a minimum length of 3.07 m.

Using struts

In case there isn't enough space available on-site to erect the buttress, replace it by struts or an equivalent solution, using as basis for the calculation the overturning moment (**M**).

Assembling a rebar scaffold

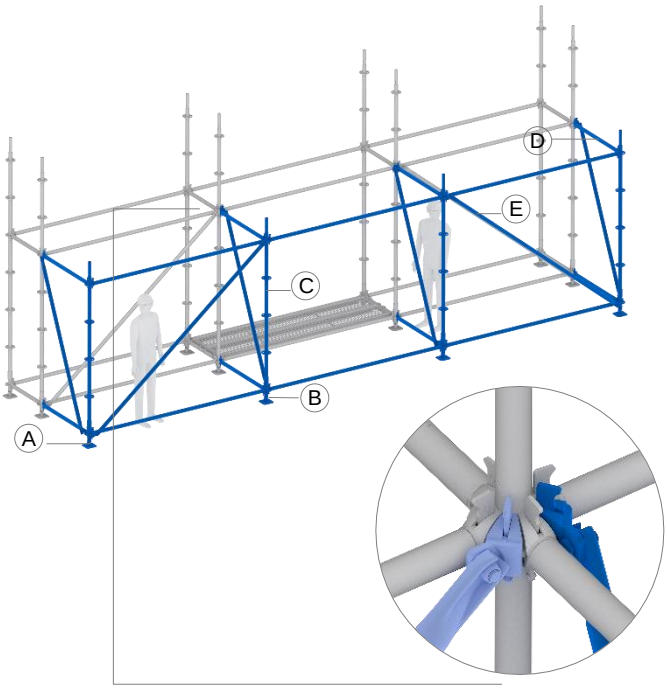
By way of example, the standard assembly steps of a rebar scaffold are presented using a 4.20 m height rebar scaffold with three 2.57 m bays. Any other standard configuration previously provided can be reached by repeating this sequence, and by widening or narrowing the buttress according to the height.

Rebar scaffold with 73 or 109 cm of bay width

The example shows the case of a working bay with 73 cm of width. However, within the standard configurations the same steps are applicable also for working bays with 109 cm of width.

Standard assembly steps

The following sequence is meant to be performed in safety by a two-person crew, and it's expected to be completed in less than 2 hours.



- Lay down the base jacks that form the buttress in their approximate position.
- Proceed assembling the rest of the components that form the buttress.

A	DokaScaff UNI base jack
B	DokaScaff UNI base collar
C	DokaScaff UNI standard with spigot
D	DokaScaff UNI ledger
E	DokaScaff UNI diagonal brace

3 m standards

Start assembling with 3 m standards and then proceed with 2 m ones, so during the assembly there is always a rosette at 1 m above the level to hook the safety harness.

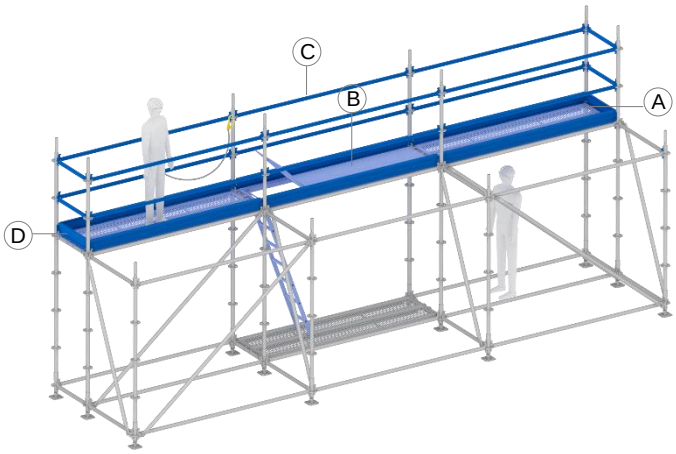
STABILITY

Base jacks should be settled on surfaces capable of bearing the expected loads, which also shall include the counterweights (for more information about counterweights check **Standard configurations**).

When counterweights are needed, place them immediately after the first level of the buttress is assembled.

Assembling DokaScaff UNI base components

Check **General assembly workflow** when in doubt regarding joining the base components of the system.

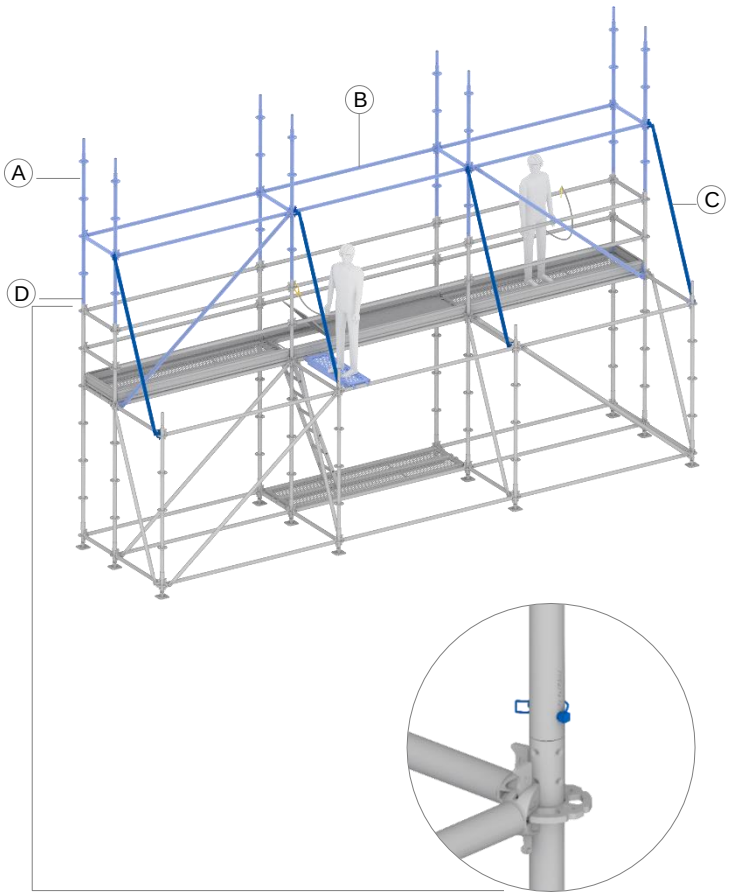


- Standing on the ground, place the steel-decks and access decks.
- Move upwards and fasten the ledgers and the toeboards that enclosed the working perimeter.

A	DokaScaff UNI steel-deck
B	DokaScaff UNI access deck
C	DokaScaff UNI ledger
D	DokaScaff UNI steel-toeboard

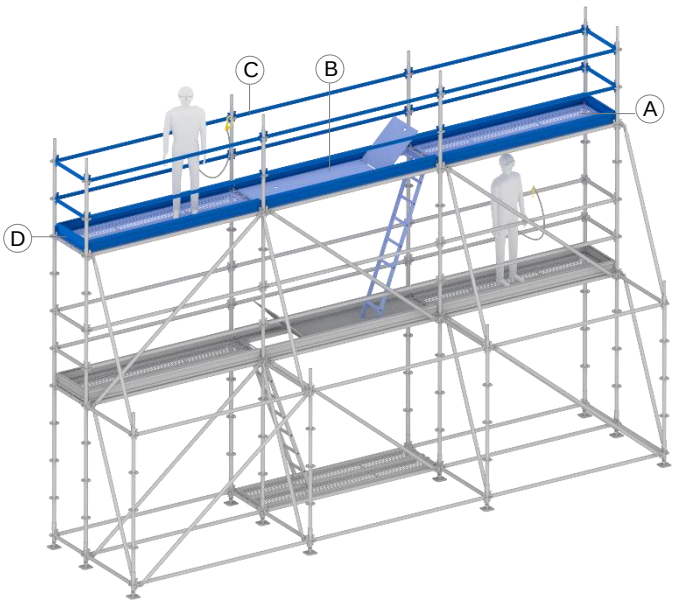
Ladder of the access decks

For the ladder to work safely, decks underneath must always be used.



- Standing on the first level, stack the standards on the top of the existing ones and pin the joint using either hinged pins or bolts M12 and self-locking nuts.
- Fasten the ledgers that connect the standards and the diagonal braces parallel to the formwork.
- Use temporary steel-decks to reach in safety the standards that form the buttress, and then fasten the remaining diagonal braces.

A	DokaScaff UNI standard with spigot
B	DokaScaff UNI ledger
C	DokaScaff UNI diagonal brace
D	DokaScaff UNI hinged pin 10x60



- Place the steel-decks and access decks of the upper level.
- Move upwards and fasten the ledgers and the toeboards that enclosed the working perimeter.

A	DokaScaff UNI steel-deck
B	DokaScaff UNI access deck
C	DokaScaff UNI ledger
D	DokaScaff UNI steel-toeboard

Assembly complete

The assembly of the rebar scaffold is completed, and safety is granted.

Extending the working area

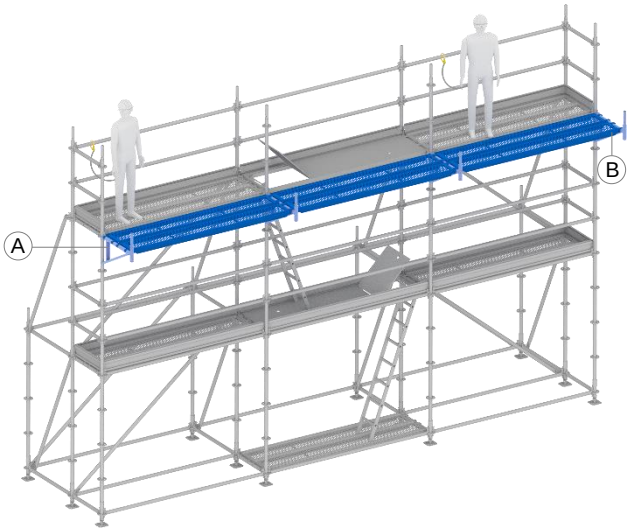
To overcome large gaps to the formwork or wall rebars, brackets can be attached at any level, keeping unchanged the working load of 2.0 kN/m2.

Brackets 0.42 m extend the working bay by one steel-deck, whereas brackets 0.73 m grant an extension of two steel-decks outside the line-up.

Inner guardrails and toeboards can still be fastened to create an enclosed perimeter by fixing additional standards.

MINIMAL COUNTERWEIGHT

To ensure the stability of the scaffold, a minium counterweight of **110 kg** per bay shall be observed at all times when using brackets.

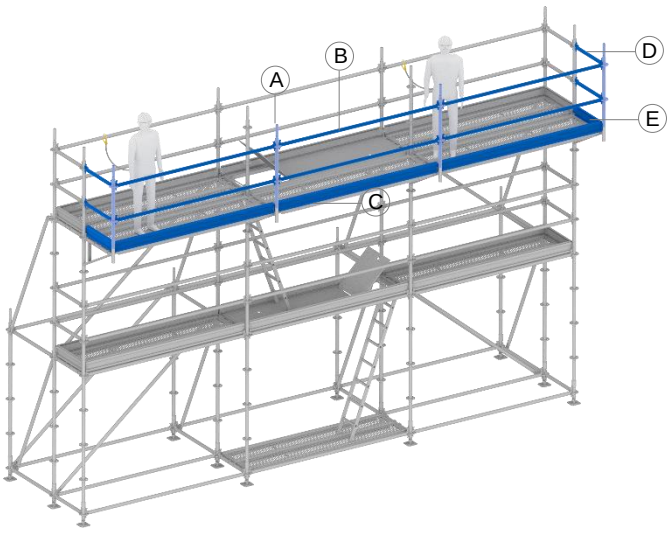


- Standing within the enclosed perimeter of the working bays, hook the brakects and lay the steel-decks.

A	DokaScaff UNI bracket 0.42m or 0.73m
B	DokaScaff UNI steel-decks

Adjusting the brackets

Brackets can be fixed in other rosettes rather than the ones at the decking level. Doing so, always ensure a continuous guardrail at 1 m height in regards to the highest steel-deck.

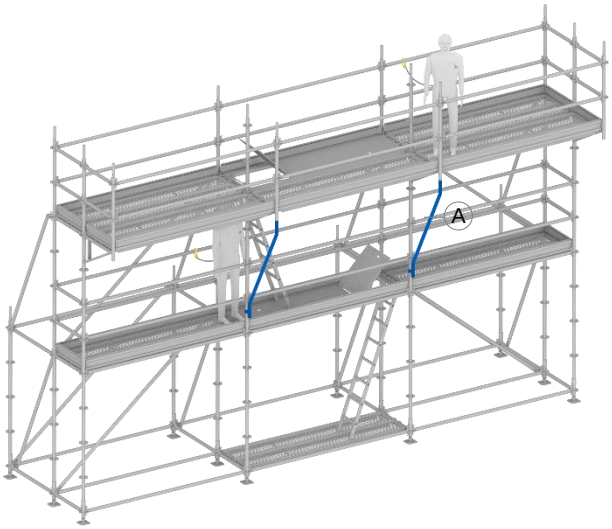


- Stack 1 m standards onto the spigot of the brackets and shift the frontwards the ledgers and the toeboards.
- Add 0.73 or 0.42 ledgers and toeboards to enclose the perimeter.

A	DokaScaff UNI standard with spigot 1.0m (1 per bracket)
B	DokaScaff UNI ledgers 0.42m or 0.73m
C	DokaScaff UNI toeboard
D	DokaScaff UNI ledger 042m or 073m (2 per edge)
E	DokaScaff UNI toeboard 042m or 073m (2 per edge)

Bracket brace 2.00 m

For consecutive bays with 2.57 or 3.07 m of length, reinforce the 0.73 m brackets by using a Bracket brace 2.00 m.



A	DokaScaff UNI bracket brace 2.00 m (1 per bracket)

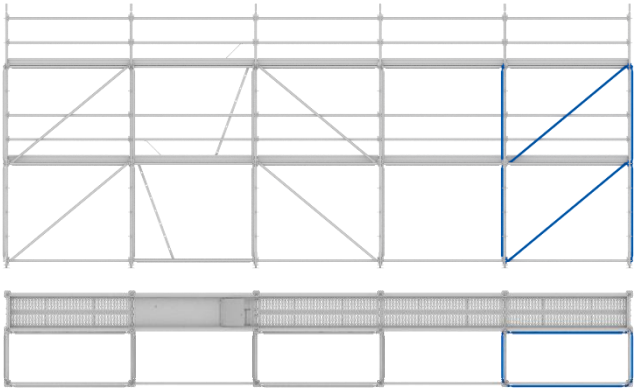
Additional bays

Additional working bays can be considered for rebar scaffolds, rather than the three considered on the **Standard assembly steps**.

For those cases follow the sequence described previously considering, in terms of placing the diagonal braces, that:

- One in every two additional working bays shall be braced on the direction parallel to the formwork.
- On the other direction, diagonal braces are required to be assembled on every bay and level of the buttress.

Position of the diagonal braces on additional bays



Reducing the number of bays

Likewise, considering less bays than the three considered on the example is possible. In those situations, check **Rebar scaffold length** in order to ensure the stability of the scaffold.

For a quick list of materials up to ten working bays, check **Items needed for rebar scaffold**.

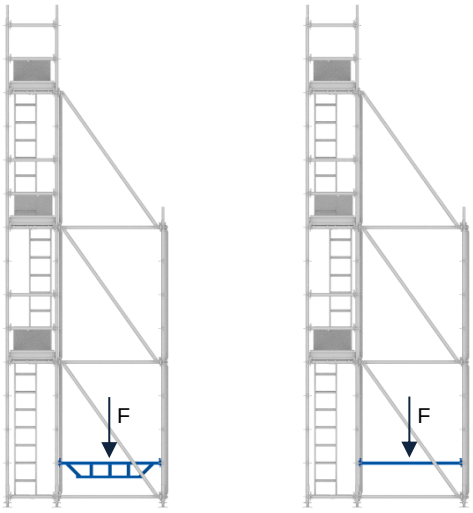
Placing the counterwights

Counterweights can be installed directly over the buttress, either using steel-decks or directly over the ledgers or the standards. In these cases, the load capacity of the scafold parts shall be verified previously (as guidance use the tables on **Standard configurations**).

As an alterantive, counterweights can be placed on the ground and after connected to the scaffold via straps or cables. A specific hazard analysis shall be then produced for checking, as well as supplementary assembly instructions.

SUPPORTING THE COUNTERWEIGHTS DIRECTLY ON THE SCAFFOLD

In order to transfer properly the loads of the counterweights to the scaffold, an additional ledger (or double ledger) shall be considered when the buttress is also formed by standards, as illustrated on the image below.



Items needed for rebar scaffold

Rebar scaffold 2.20 m height

Number of bays	Base jack 50cm	Base collar	Standard w/ spigot 3.00m	Ledger 0.73 or 1.09m[1]	Ledger 0.73m	Ledger 2.07 or 2.57 or 3.07m[2]	Diagonal brace 200/73cm	Diagonal brace 200/207 or 200/257 or 200/307cm[2]	Access deck 61/207 or 61/257 or 61/307cm[2]	Steel-deck 32/2.07 or 32/2.57 or 32/3.07m[2]	Steel-toeboard 0.73 or 1.09m[1]	Steel-toeboard 2.07 or 2.57 or 3.07m[2]
1	6	6	4	8	2	9	2	1	1	2 or 4[1]	2	2
2	9	9	6	10	3	18	3	1	1	4 or 7[1]	2	4
3	12	12	8	12	4	27	4	2	1	6 or 10[1]	2	6
4	15	15	10	14	5	36	5	2	1	8 or 13[1]	2	8
5	18	18	12	16	6	45	6	3	1	10 or 16[1]	2	10
6	21	21	14	18	7	54	7	3	2	12 or 20[1]	2	12
7	24	24	16	20	8	63	8	4	2	14 or 23[1]	2	14
8	27	27	18	22	9	72	9	4	2	16 or 26[1]	2	16
9	30	30	20	24	10	81	10	5	2	18 or 29[1]	2	18
10	33	33	22	26	11	90	11	5	2	20 or 32[1]	2	20

[1] According to the width of the working bays.

[2] According to the length of the working bays.

Rebar scaffold 4.20 m height

Number of bays	Base jack 50cm	Base collar	Suspended scaffolding connector[3]	Standard w/ spigot 2.00m	Standard w/ spigot 3.00m	Hinged pin 10x60	Ledger 0.73 or 1.09m[1]	Ledger 1.09m	Ledger 2.07 or 2.57 or 3.07m[2]	Diagonal brace 200/109cm	Diagonal brace 200/207 or 200/257 or 200/307cm[2]	Access deck 61/207 or 61/257 or 61/307cm[2]	Steel-deck 32/2.07 or 32/2.57 or 32/3.07m[2]	Steel-toeboard 0.73 or 1.09m[1]	Steel-toeboard 2.07 or 2.57 or 3.07m[2]
1	6	6	2	6	4	4	14	4	16	4	3	2	2 or 5[1]	4	4
2	9	9	3	9	6	6	17	6	32	6	3	2	6 or 11[1]	4	8
3	12	12	4	12	8	8	20	8	48	8	6	2	10 or 17[1]	4	12
4	15	15	5	15	10	10	23	10	64	10	6	2	14 or 23[1]	4	16
5	18	18	6	18	12	12	26	12	80	12	9	2	18 or 29[1]	4	20
6	21	21	7	21	14	14	29	14	96	14	9	4	20 or 34[1]	4	24
7	24	24	8	24	16	16	32	16	112	16	12	4	24 or 40[1]	4	28
8	27	27	9	27	18	18	35	18	128	18	12	4	28 or 46[1]	4	32
9	30	30	10	30	20	20	38	20	144	20	15	4	32 or 52[1]	4	36
10	33	33	11	33	22	22	41	22	160	22	15	4	36 or 58[1]	4	40

[1] According to the width of the working bays.

[2] According to the length of the working bays.

[3] Mandatory with counterweights.

Rebar scaffold 6.20 m height

Number of bays	Base jack 50cm	Base collar	Suspended scaffolding connector [4]	Standard w/ spigot 2.00m	Standard w/ spigot 3.00m	Hinged pin 10x60	Ledger 0.73 or 1.09m[1]	Ledger 1.57m or double ledger 1,57[3]	Ledger 1.57m	Ledger 2.07 or 2.57 or 3.07m[2]	Diagonal brace 200/157cm	Diagonal brace 200/207 or 200/257 or 200/307cm[2]	Access deck 61/207 or 61/257 or 61/307cm[2]	Steel-deck 32/2.07 or 32/2.57 or 32/3.07m[2]	Steel-toeboard 0.73 or 1.09m[1]	Steel-toeboard 2.07 or 2.57 or 3.07m[2]
1	6	6	2	12	4	10	20	2	4	23	6	5	3	2 or 6[1]	6	6
2	9	9	3	18	6	15	24	3	6	46	9	5	3	8 or 15[1]	6	12
3	12	12	4	24	8	20	28	4	8	69	12	10	3	14 or 24[1]	6	18
4	15	15	5	30	10	25	32	5	10	92	15	10	3	20 or 33[1]	6	24
5	18	18	6	36	12	30	36	6	12	115	18	15	3	26 or 42[1]	6	30
6	21	21	7	42	14	35	40	7	14	138	21	15	6	28 or 48[1]	6	36
7	24	24	8	48	16	40	44	8	16	161	24	20	6	34 or 57[1]	6	42
8	27	27	9	54	18	45	48	9	18	184	27	20	6	40 or 66[1]	6	48
9	30	30	10	60	20	50	52	10	20	207	30	25	6	46 or 75[1]	6	54
10	33	33	11	66	22	55	56	11	22	230	33	25	6	52 or 84[1]	6	60

[1] According to the width of the working bays.

[2] According to the length of the working bays.

[3] If the ledgers are to support the counterweights, then double ledgers shall be used.

[4] Mandatory with counterweights.

Rebar scaffold 8.20 m height

Number of bays	Base jack 50cm	Base collar	Suspended scaffolding connector [4]	Standard w/ spigot 2.00m	Standard w/ spigot 3.00m	Hinged pin 10x60	Ledger 0.73 or 1.09m[1]	Ledger 2.07m or double ledger 2.07[3]	Ledger 2.07m	Ledger 2.07 or 2.57 or 3.07m[2]	Diagonal brace 200/207cm	Diagonal brace 200/207 or 200/257 or 200/307cm[2]	Access deck 61/207 or 61/257 or 61/307cm[2]	Steel-deck 32/2.07 or 32/2.57 or 32/3.07m[2]	Steel-toeboard 0.73 or 1.09m[1]	Steel-toeboard 2.07 or 2.57 or 3.07m[2]
1	6	6	2	18	4	16	26	2	6	30	8	7	4	2 or 7[1]	8	8
2	9	9	3	27	6	24	31	3	9	60	12	7	4	10 or 19[1]	8	16
3	12	12	4	36	8	32	36	4	12	90	16	14	4	18 or 31[1]	8	24
4	15	15	5	45	10	40	41	5	15	120	20	14	4	26 or 43[1]	8	32
5	18	18	6	54	12	48	46	6	18	150	24	21	4	34 or 55[1]	8	40
6	21	21	7	63	14	56	51	7	21	180	28	21	8	36 or 62[1]	8	48
7	24	24	8	72	16	64	56	8	24	210	32	28	8	44 or 74[1]	8	56
8	27	27	9	81	18	72	61	9	27	240	36	28	8	52 or 86[1]	8	64
9	30	30	10	90	20	80	66	10	30	270	40	35	8	60 or 98[1]	8	72
10	33	33	11	99	22	88	71	11	33	300	44	35	8	68 or 110[1]	8	80

[1] According to the width of the working bays.

[2] According to the length of the working bays.

[3] If the ledgers are to support the counterweights, then double ledgers shall be used.

[4] Mandatory with counterweights.

Repositioning by crane

DokaScaff UNI rebar scaffolds are craneable, which guarantees the quickest repositioning in the construction site.

MAXIMUM LENGTH THAT CAN BE REPOSITIONED BY CRANE

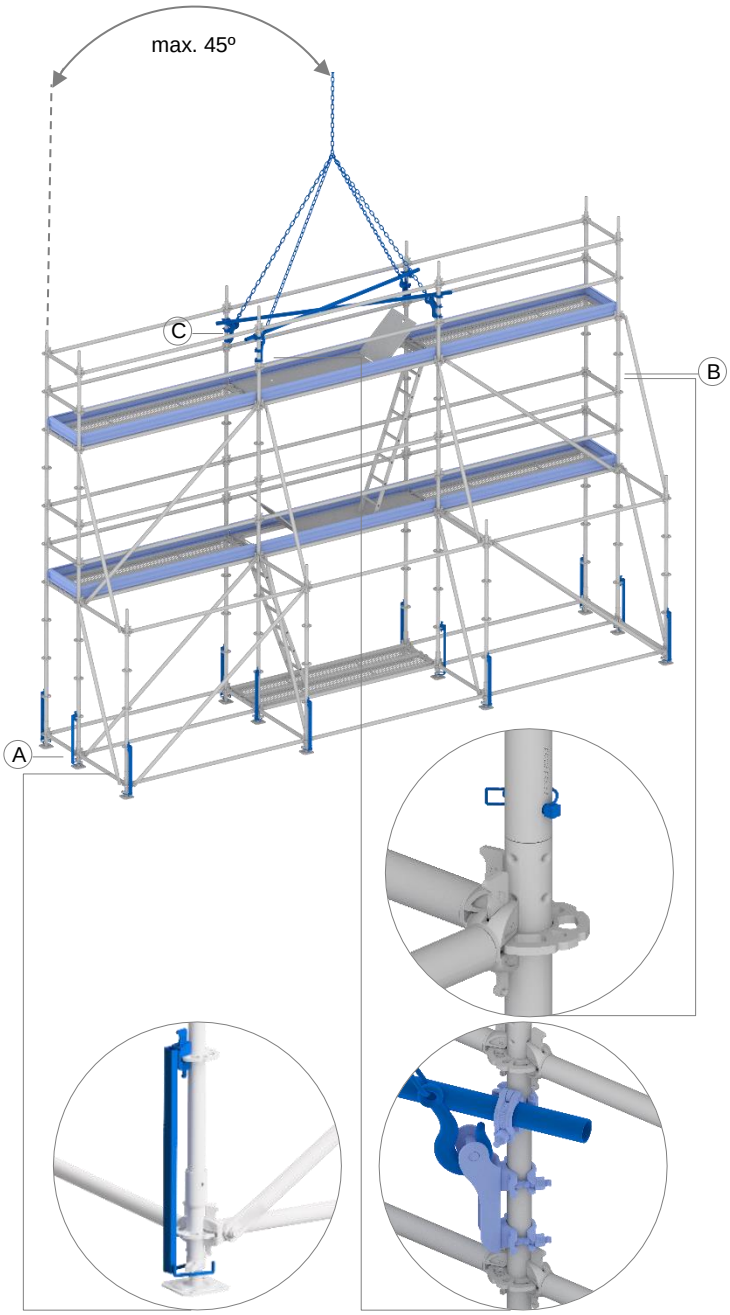
For rebar scaffold with more than three bays, a specific hazard analysis shall be produced for checking, as well as supplementary assembly instructions.

For a safe operation, comply with the following steps:

- Clear all decks of loose materials.
- Check if every wedge is duly locked.
- Fix the base jacks using base jack retentions (**or base collar retention for the rebar scaffold 2.20 m height**).
- Check if every standards is fasten with hinged pins 10x60 mm or bolts M12 class 8.8 and self-locking nuts (check **Items needed for rebar scaffold**).
- Reinforce the top level of the rebar scaffold with two tubes fasten crosswise using normal couplers 48.3mm as illustrated on the image.
- Fix the crane straps/chains below the rosettes of the top level using lifting couplers.
- Remove the counterweights, keeping the straps/cables tensioned.
- Use ropes or other devises to guide the scaffold and to prevent its rotation.
- Hoist the scaffold as minimum as possible to the ground.
- Bring the scaffold to the new position.
- Reinstall the counterweights that have been previously removed, keeping the straps/chains tensioned.
- Check the scaffold for its stability.
- Detach the crane/chain cables.

Straps length

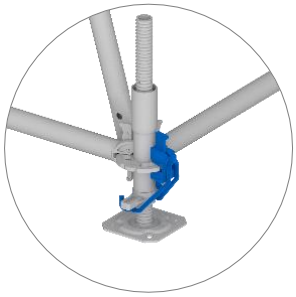
Use straps of a suitable length to form an angle of inclination less than 45º.



A	DokaScaff UNI base jack (1x per base jack)
B	DokaScaff UNI hinged pin 10x60 (1x per joint)
C	DokaScaff UNI coupler for lifting (4x per rebar scaffold)

Rebar scaffold 2.20 m height

To fix the base jacks to the other scaffold parts, use a DokaSacaff UNI base collar retention.

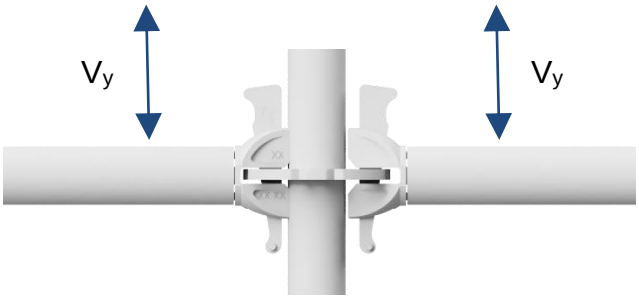


Technical details

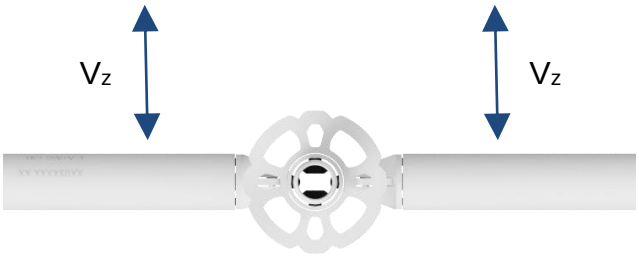
Permissible loads

Loads given in the following images and tables are safe working loads as they already include the partial factors ɣM = 1.1 and ɣF = 1.5 and a limitation of 1/100 in terms of deflection, and therefore may be applied without any further reduction.

These values enable the user to estimate the capabilities of individual DokaScaff UNI scaffold configurations, thought should not be used in isolation. The overall structure integrity and global stability of the scaffold structure must be checked by a suitably qualified person, such as a scaffold design engineer.

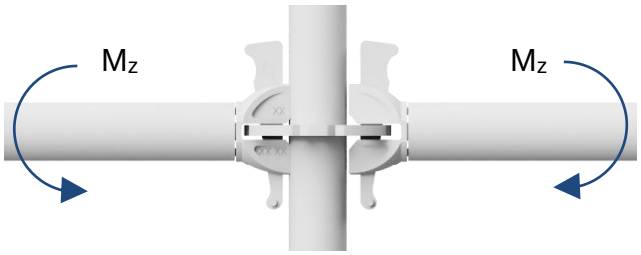


$V_{y,}$= 12.1 kN

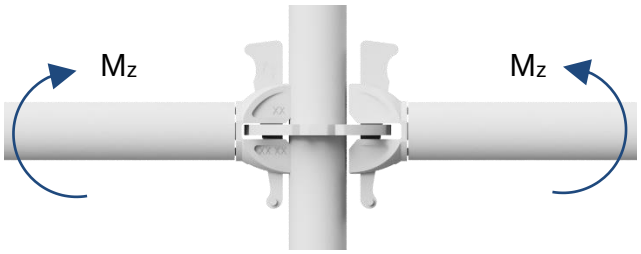


V_z= 5.5 kN

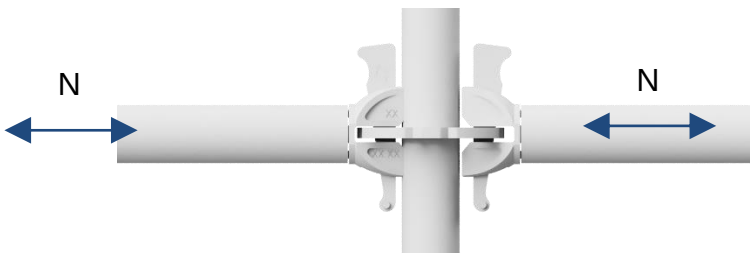
Nodes and connectors



M^+_z= 78.6 kN.cm



M^-_z= 84.1 kN.cm



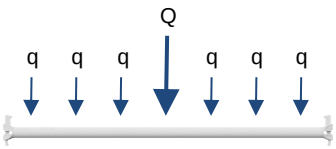
N= 28.6 kN

Base components

Load capacity of standards

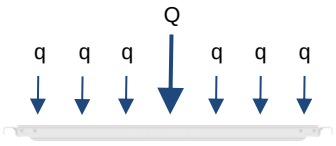
Buckling length (m)	1.0	1.5	2.0	2.5	3.0
Permisable compressive load (kN)	47.7	35.8	26.0	19.2	14.5
Permissibe tension load (kN) [1]	50.1				

[1] Values considering the standards are connected with a M12 bolt.



Load capacity of ledgers

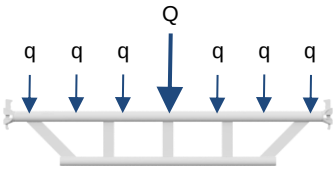
Size	0.42	0.50	0.73	1.09	1.40	1.57	2.07	2.57	3.07
Permissible uniformly distributed load, q (kN/m)	40.5	28.6	13.4	6.5	4.0	3.3	1.8	1.3	0.9
Permissible single load in the centre, Q (kN)	9.2	8.0	5.7	3.9	3.1	2.8	2.2	1.8	1.5
Permissible compressive load (kN)	28.6							20.3	14.2
Permissible tensile load (kN)	28.6								



Load capacity of steel-decks

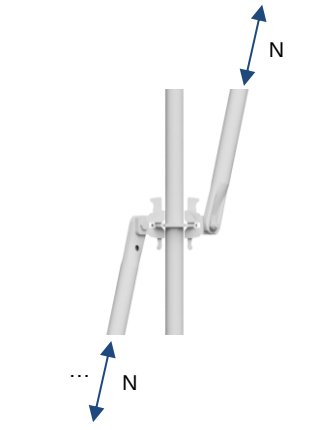
Size	0.73	1.09	1.40	1.57	2.07	2.57	3.07
Permissible uniformly distributed load, q (kN/m)	6.00[1]	6.00[1]	6.00[1]	6.00[1]	6.00[1]	4.5[2]	4.5[2]

[1] Load class 6 according to EN12810-1
[2] Load class 5 according to EN12810-1



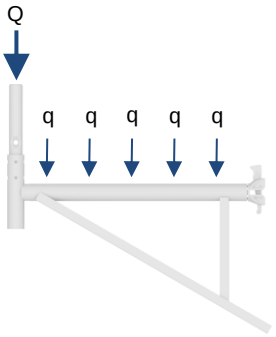
Load capacity of double ledgers

Size	1.57	2.07	2.57	3.07
Permissible uniformly distributed load, q (kN/m)	8.2	6.2	5.2	4.6
Permissible single load in the centre, Q (kN)	9.6	8.7	8.0	7.5



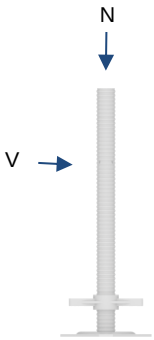
Load capacity of 2.00 m diagonal braces

Bay lenght	0.73	1.09	1.40	1.57	2.07	2.57	3.07
Permissible compressive load (kN)	9.3	8.3	7.3	6.7	5.2	4.1	3.2
Permissible tensile load (kN)	11.6						



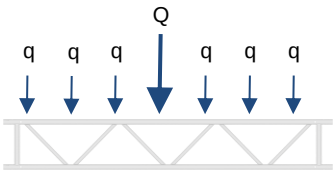
Load capacity of brackets

Size	0.32	0.73	1.09
Permissible uniformly distributed load, q (kN/m)	22.0	9.0	7.0
Permissible single load on the edge, Q (kN)	4.5	4.5	4.0



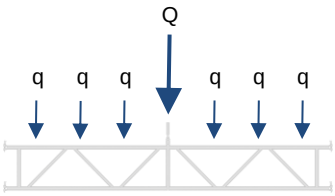
Load capacity of base jacks and screw-base jacks

Spindle opening	0.00	0.10	0.20	0.30	0.40	0.50
Permisable compressive load (kN) considering an horizontal load V= 0.0 kN	60.5	59.0	55.0	51.6	48.3	45.0
Permisable compressive load (kN) considering an horizontal load V= 1.5 kN	49.4	43.6	37.4	30.7	27.1	-
Permisable compressive load (kN) considering an horizontal load V= 3.0 kN	49.4	37.4	23.3	-	-	-
Permisable compressive load (kN) considering an horizontal load V= 6.0 kN	49.4	23.3	-	-	-	-



Load capacity of lattice girders

Height	0.40				0.75	
Size	3.00	4.00	5.00	6.00	5.00	6.00
Permissible uniformly distributed load, q (kN/m)	9.5	8.0	5.5	3.5	6.0	4.0
Permissible single load in the centre, Q (kN)	22.0	16.0	20.0	17.0	25.0	

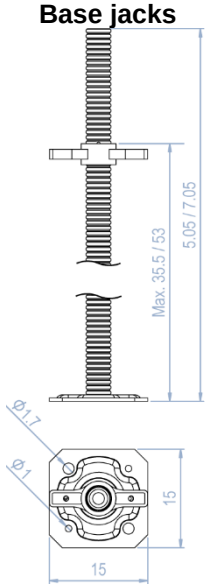


Load capacity of lattice girders with w/ wedge

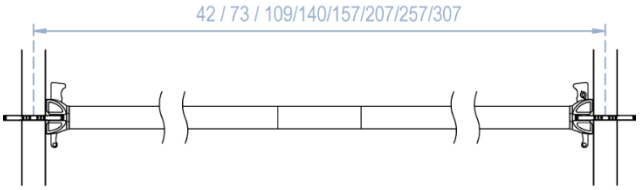
Size	5.14	6.14
Permissible uniformly distributed load, q (kN/m)	3.1	3.0
Permissible single load in the centre, Q (kN)	11.7	11.0

Usefully dimensions

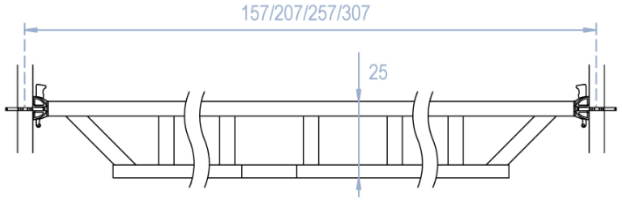
Base jacks



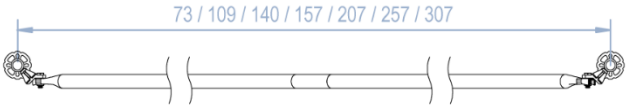
Ledgers



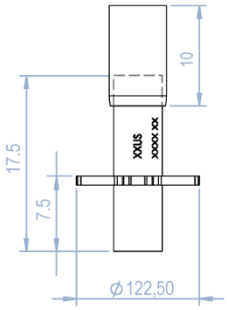
Double ledgers



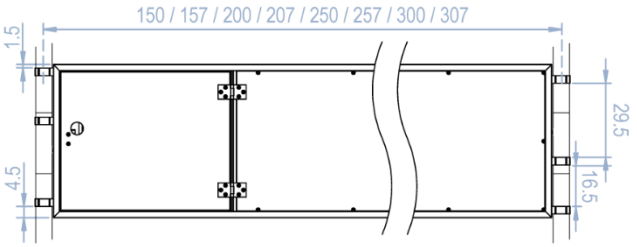
Diagonal braces



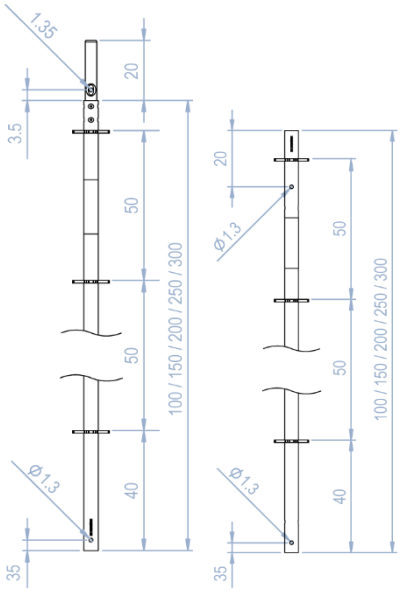
Base collar



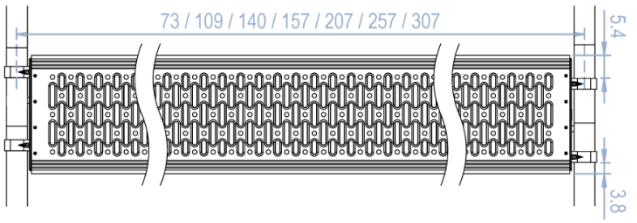
Access decks



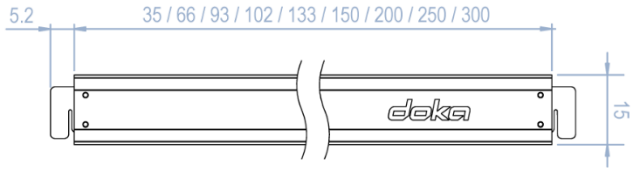
Standards



Steel-decks



Steel-toeboard



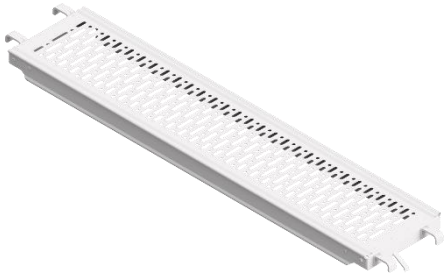
Components overview

Part Name	kg	Article-Number
DokaScaff UNI standard with spigot 0.50m	3.2	698001010
DokaScaff UNI standard with spigot 1.00m	5.7	698001020
DokaScaff UNI standard with spigot 1.50m	7.9	698001030
DokaScaff UNI standard with spigot 2.00m	10.2	698001040
DokaScaff UNI standard with spigot 2.50m	12.6	698001050
DokaScaff UNI standard with spigot 3.00m	14.9	698001060
Galvanised		

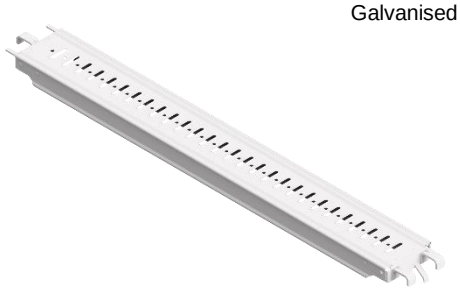
DokaScaff UNI standard without spigot 0.50m	2.4	698001090
DokaScaff UNI standard without spigot 1.00m	4.8	698001100
DokaScaff UNI standard without spigot 1.50m	7.0	698001110
DokaScaff UNI standard without spigot 2.00m	9.4	698001120
Galvanised		

DokaScaff UNI ledger 0.42m	1.9	698002010
DokaScaff UNI ledger 0.50m	2.2	698002090
DokaScaff UNI ledger 0.73m	3.0	698002020
DokaScaff UNI ledger 1.00m	3.9	698002100
DokaScaff UNI ledger 1.09m	4.2	698002030
DokaScaff UNI ledger 1.40m	5.3	698002040
DokaScaff UNI ledger 1.57m	5.9	698002050
DokaScaff UNI ledger 2.07m	7.6	698002060
DokaScaff UNI ledger 2.57m	9.3	698002070
DokaScaff UNI ledger 3.07m	11.0	698002080
Galvanised		

DokaScaff UNI steel-deck 32/73 cm	6.1	698005130
DokaScaff UNI steel-deck 32/109 cm	8.5	698005070
DokaScaff UNI steel-deck 32/140 cm	10.5	698005080
DokaScaff UNI steel-deck 32/157 cm	11.6	698005090
DokaScaff UNI steel-deck 32/207 cm	14.9	698005100
DokaScaff UNI steel-deck 32/257 cm	18.7	698005110
DokaScaff UNI steel-deck 32/307 cm	22.0	698005120
Pre-galvanised		



DokaScaff UNI steel-deck 19/73 cm	4.9	698005300
DokaScaff UNI steel-deck 19/109 cm	6.9	698005010
DokaScaff UNI steel-deck 19/140 cm	8.7	698005020
DokaScaff UNI steel-deck 19/157 cm	9.6	698005030
DokaScaff UNI steel-deck 19/207 cm	12.4	698005040
DokaScaff UNI steel-deck 19/257 cm	15.3	698005050
DokaScaff UNI steel-deck 19/307 cm	17.7	698005060
Galvanised		



DokaScaff UNI access deck 61/157cm	13.6	698005210
DokaScaff UNI access deck 61/207cm	17.3	698005220
DokaScaff UNI access deck w/ ladder 61/257cm	23.7	698005230
DokaScaff UNI access deck w/ ladder 61/307cm	28.8	698005240

Aluminium & Plywood

DokaScaff UNI ladder f/ access deck 2.00m	3.1	698005250

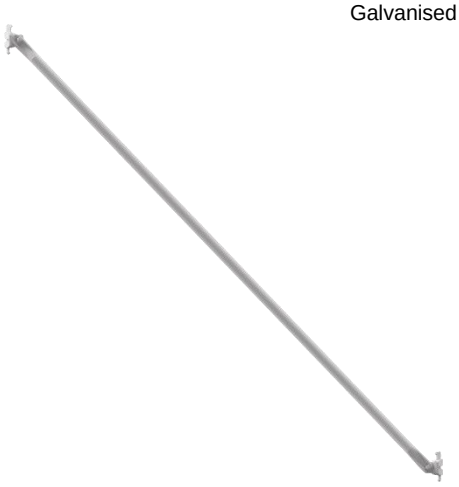
Aluminium

DokaScaff UNI steel-toeboard 0.73 m	2.1	698005140
DokaScaff UNI steel-toeboard 1.09 m	3.0	698005150
DokaScaff UNI steel-toeboard 1.40 m	3.7	698005160
DokaScaff UNI steel-toeboard 1.57 m	4.2	698005170
DokaScaff UNI steel-toeboard 2.07 m	5.4	698005180
DokaScaff UNI steel-toeboard 2.57 m	6.7	698005190
DokaScaff UNI steel-toeboard 3.07 m	7.9	698005200

Pre-galvanised & Paint (yellow)

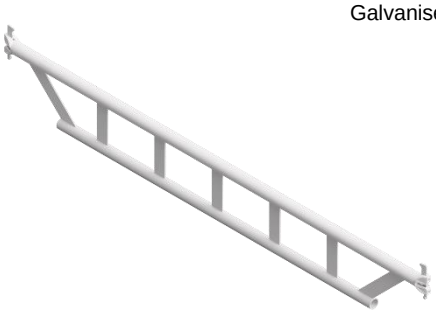
DokaScaff UNI diagonal brace 100/73 cm	5.0	698003080
DokaScaff UNI diagonal brace 100/109 cm	5.5	698003090
DokaScaff UNI diagonal brace 100/157 cm	6.5	698003110
DokaScaff UNI diagonal brace 100/207 cm	7.7	698003120
DokaScaff UNI diagonal brace 100/257 cm	9.0	698003130
DokaScaff UNI diagonal brace 100/307 cm	10.2	698003140
DokaScaff UNI diagonal brace 150/73 cm	6.2	698003150
DokaScaff UNI diagonal brace 150/109 cm	6.6	698003160
DokaScaff UNI diagonal brace 150/157 cm	7.4	698003180
DokaScaff UNI diagonal brace 150/207 cm	8.5	698003190
DokaScaff UNI diagonal brace 150/257 cm	9.6	698003200
DokaScaff UNI diagonal brace 150/307 cm	10.8	698003210
DokaScaff UNI diagonal brace 200/73 cm	7.5	698003010
DokaScaff UNI diagonal brace 200/109 cm	7.8	698003020
DokaScaff UNI diagonal brace 200/140 cm	8.2	698003030
DokaScaff UNI diagonal brace 200/157 cm	8,5	698003040
DokaScaff UNI diagonal brace 200/207 cm	9.4	698003050
DokaScaff UNI diagonal brace 200/257 cm	10.4	698003060
DokaScaff UNI diagonal brace 200/307 cm	11.5	698003070

Galvanised



DokaScaff UNI double ledger 1.57 m	10.3	698002160
DokaScaff UNI double ledger 2.07 m	14.0	698002170
DokaScaff UNI double ledger 2.57 m	17.6	698002180
DokaScaff UNI double ledger 3.07 m	21.3	698002190

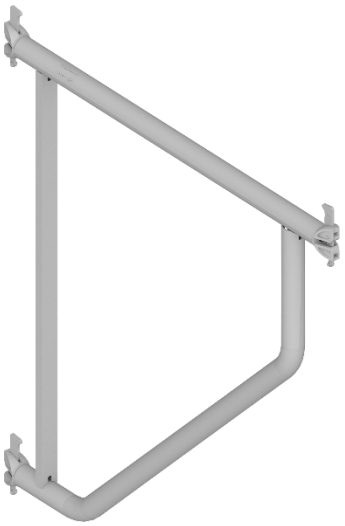
Galvanised



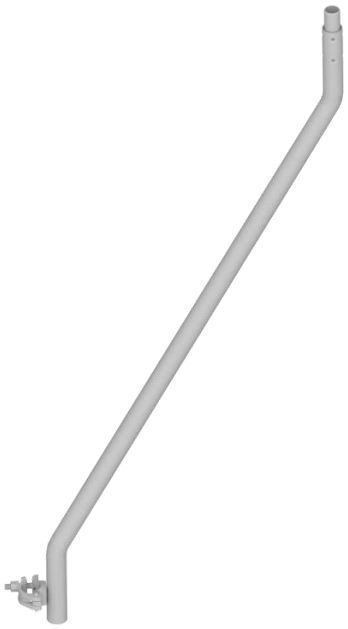
DokaScaff UNI bracket 0.42 m	4.7	698006090
DokaScaff UNI bracket 0.73 m	6.3	698006100

Galvanised

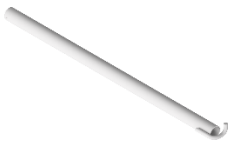
DokaScaff UNI bracket 1.09 m 11.3 698006110
Galvanised



DokaScaff UNI bracket brace 2.00m 7.2 698006120
Galvanised



DokaScaff UNI anchor tube 1.00 m 3.9 698006220
DokaScaff UNI anchor tube 1.50 m 5.8 698006230
Galvanised

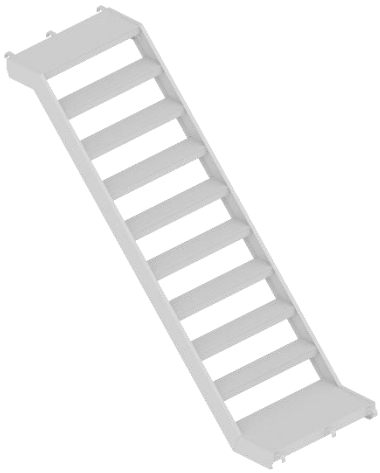


DokaScaff UNI ring screw 12 cm 0.18 698006240
Zinc plated

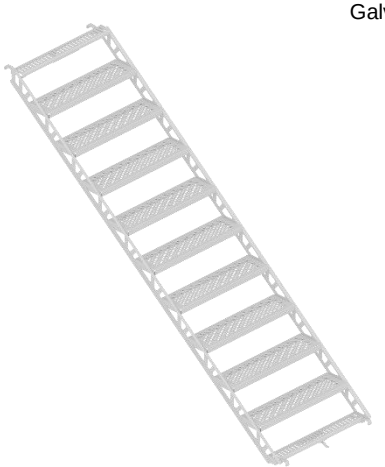
DokaScaff UNI ring screw dowel 0.01 698006250
Plastic

DokaScaff UNI aluminium stairway 62/257 cm 25.9 698004010
DokaScaff UNI aluminium stairway 62/307 cm 30.7 698004020
Aluminium

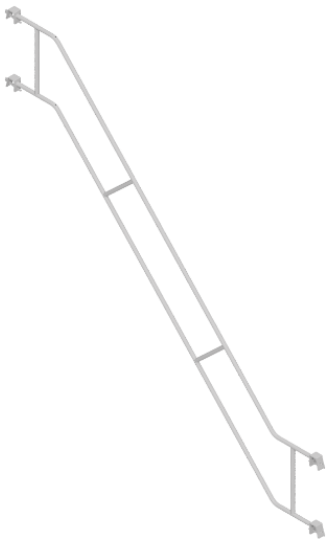
DokaScaff UNI aluminium stairway 96/257 cm 41.6 698004030



DokaScaff UNI steel stairway 88/257cm 55,1 698004090
Galvanised

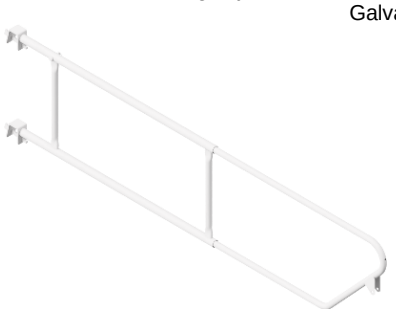


DokaScaff UNI outer railing 2.57 m 16.5 698004050
DokaScaff UNI outer railing 3.07 m 18.2 698004060
Galvanised



DokaScaff UNI stairway railing adaptor 0.76 698004080
Galvanised

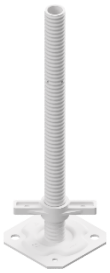
DokaScaff UNI railing adjustable 257/307 cm 10.5 698004070
Galvanised



DokaScaff UNI inner railing 2.57/3.07 m 8.4 698004040
Galvanised

DokaScaff UNI castor wheel 10kN 6.8 698006070

DokaScaff UNI base jack 50cm 3.1 698006010
DokaScaff UNI base jack 70cm 3.7 698006330
Galvanised



DokaScaff UNI swivel base jack 65cm 4.2 698006020
Galvanised

DokaScaff UNI base collar 1.5 698006050
Galvanised

DokaScaff UNI base jack retention 1.9 698006060
Galvanised

DokaScaff UNI adaptor f/ castor wheels 5.8 698006340
Galvanised

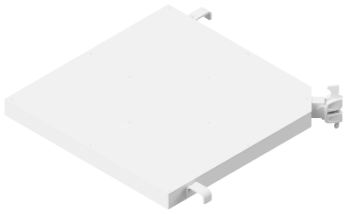
DokaScaff UNI intermediate transom tube 0.73m	3.4	698002220
DokaScaff UNI intermediate transom tube 1.09m	4.6	698002230
Galvanised		

DokaScaff UNI intermediate transom deck 0.73m	3.5	698002200
DokaScaff UNI intermediate transom deck 1.09m	4.6	698002210
Galvanised		

DokaScaff UNI right ledger 0.73m 35°	3.1	698002370
DokaScaff UNI left ledger 0.73m 35°	3.1	698002360
Galvanised		

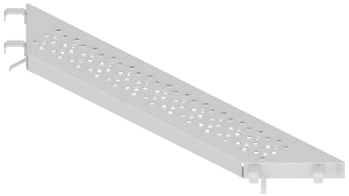
DokaScaff UNI angular deck 0/45°	8.2	698005260
Galvanised		

DokaScaff UNI corner-deck 90º	10.3	698005290
Aluminium		



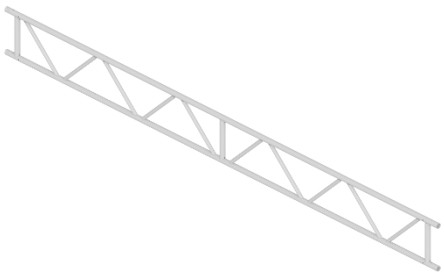
DokaScaff UNI corner-deck 0.73m	9.9	698005270
Galvanised		

DokaScaff UNI corner-deck 1.09m	7.8	698005280
Galvanised		

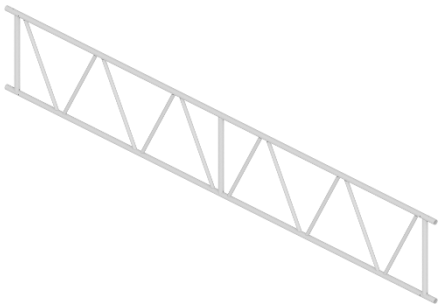


DokaScaff UNI pole ladder 2.00m	10,6	698006260
Galvanised		

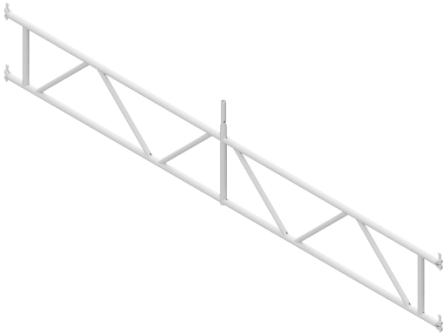
DokaScaff UNI lattice girder 40/300cm	28,3	698002280
DokaScaff UNI lattice girder 40/400cm	40,1	698002290
DokaScaff UNI lattice girder 40/500cm	49,2	698002300
DokaScaff UNI lattice girder 40/600cm	59,6	698002310
Galvanised		



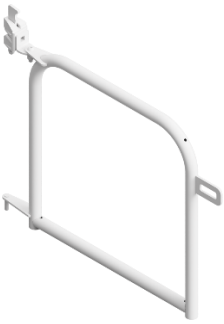
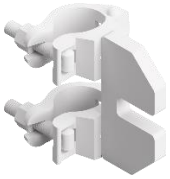
DokaScaff UNI lattice girder 75/500cm	57.6	698002320
DokaScaff UNI lattice girder 75/600cm	70.2	698002330
Galvanised		



DokaScaff UNI lattice girder w/ wedge 5.14m	55.0	698002340
DokaScaff UNI lattice girder w/ wedge 6.14m	64.9	698002350
Galvanised		



DokaScaff UNI spigot for standard joint Galvanised	1.8	698006200
		
DokaScaff UNI spigot for lattice girder joint Galvanised	1.5	698006190
		
DokaScaff UNI screw M12x65 for standards	0.08	698006310
		
DokaScaff UNI loknut M12 for standards	0.02	
		
DokaScaff UNI 4-way screw-jack head 65cm Galvanised	6.3	698006350
		
DokaScaff UNI screw-jack U-head 65cm Galvanised	6.0	698006360
		

DokaScaff UNI swing door w/ toe board 1.00m Galvanised + Paint (yellow)	6.7	698006280
		
DokaScaff UNI swing door 0.73m Galvanised	3.2	698006270
		
DokaScaff UNI toeboard holder Galvanised	0.52	698006210
		
DokaScaff UNI profile coupler with bolt Galvanised	1.7	698006160
		
DokaScaff UNI double coupler for profile Galvanised	2.4	698006170
		
DokaScaff UNI lattice girder coupler Galvanised	2.7	698006180
		

DokaScaff UNI twin ledger end coupler 0.9 698006150
Galvanised

DokaScaff UNI rosette coupler 1.2 698006140
Galvanised

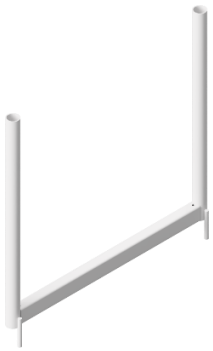
DokaScaff UNI coupler with spigot 1.8 698006130
Galvanised

DokaScaff UNI hinged pin 10x60mm 0.06 698006320
Zinc plated

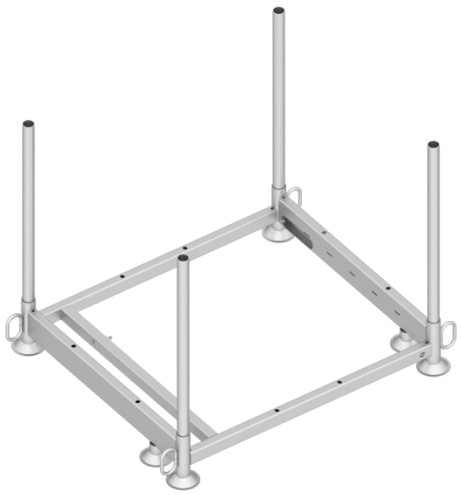
DokaScaff UNI universal pallet 43.1 698007010
Galvanised

DokaScaff UNI universal pallet with mesh crate 96.7 698007020
Galvanised

DokaScaff UNI central support for UP 9.5 698007040
Galvanised



DokaScaff UNI pallet for steel-decks 49.4 698007070
Galvanised



DokaScaff UNI central support for SD pallet 11.2 698007080
Galvanised