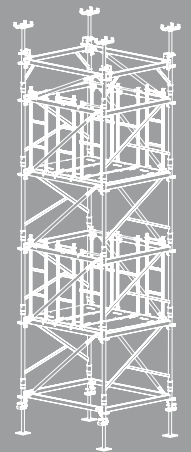
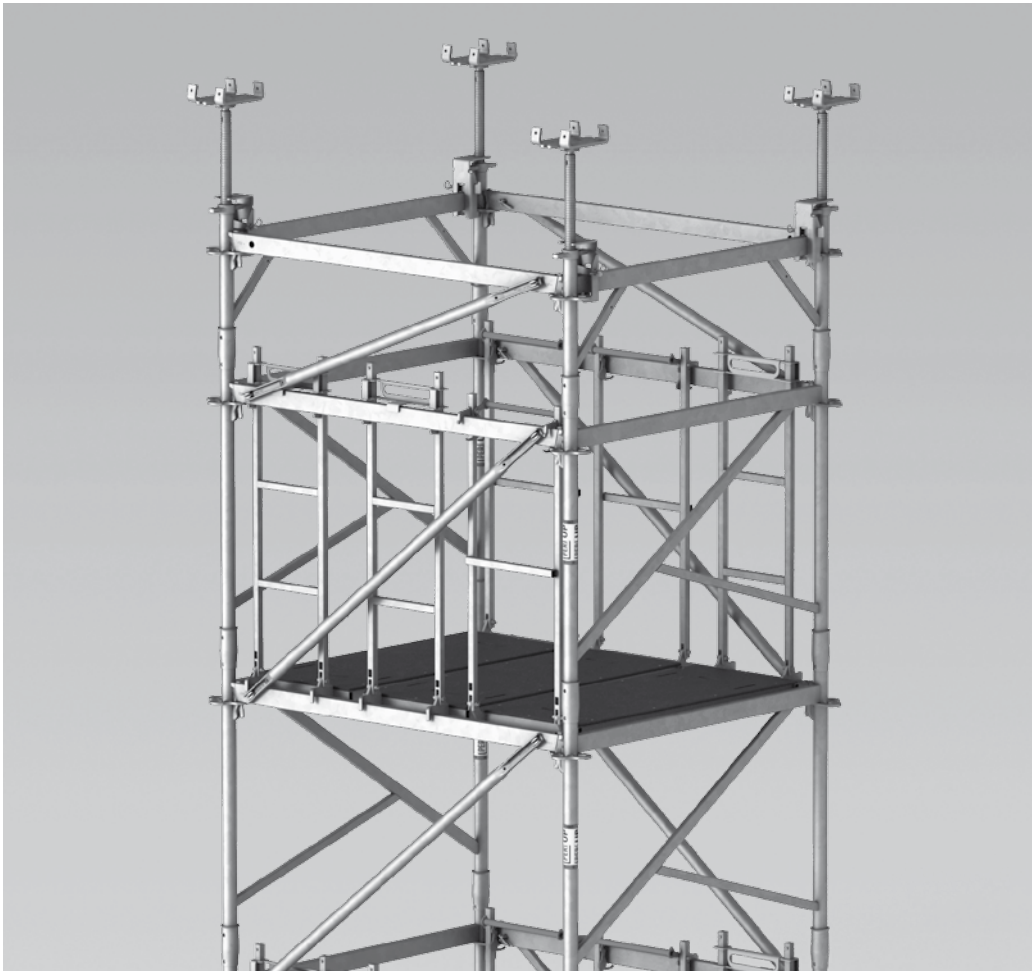


PERI UP Flex

Shoring Tower MDS K

Instructions for Assembly and Use – Standard Configuration - Issue 03/2018



Main components

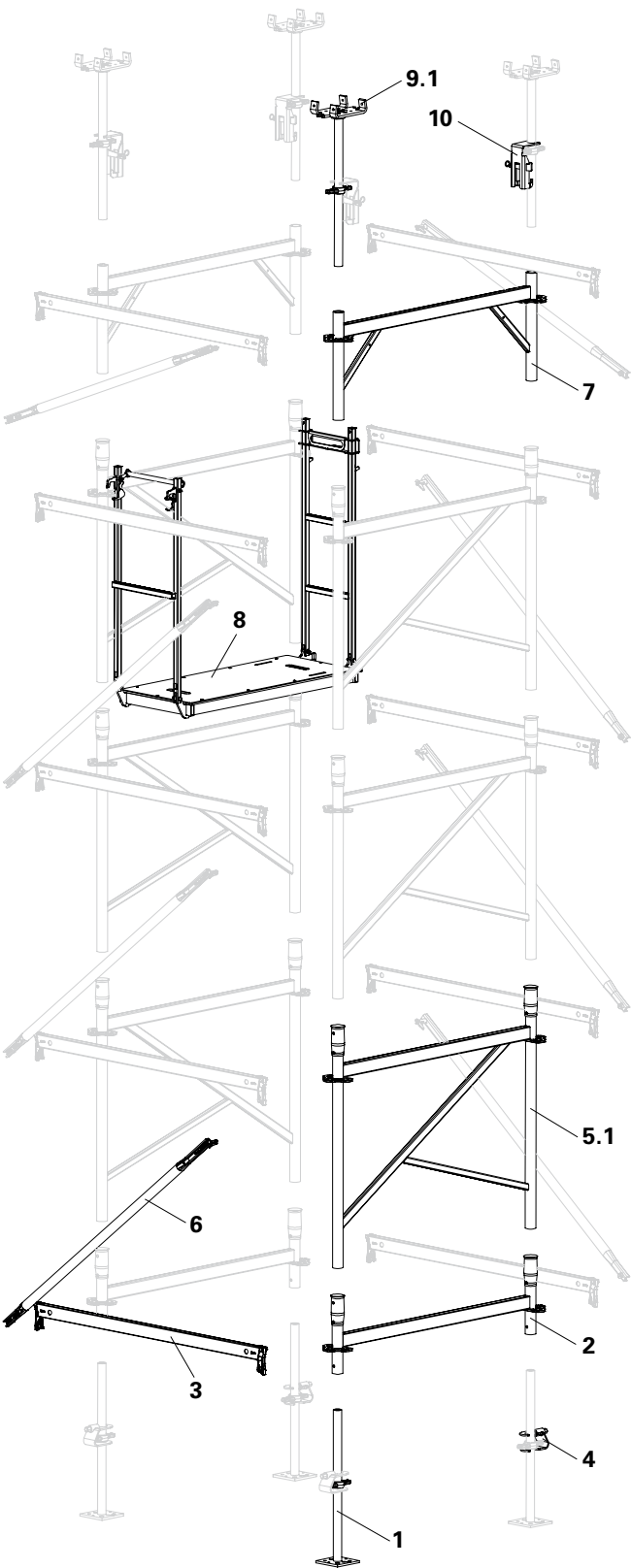


Fig. 01

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Key

Pictogram | Definition



Danger / Warning / Caution



Information



To be complied with



Load-bearing point



Visual check



Tip



Misapplication

Arrows



Arrow representing an action



Arrow representing a reaction of an action*



Forces

* if not identical to the action arrow.

Safety instruction categories

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



Danger

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



Warning

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



Caution

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



Information

This sign indicates warning of situations whereby failure to observe the information can result in material damage.

Set-up of the safety instructions



Signal word

Type and source of the danger!
Consequences of non-compliance.
⇒ Avoidance measures.

Dimension specifications

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

Conventions

- Instructions are numbered with:
1., 2., 3.
- The result of an instruction is shown by: →
- Position numbers are clearly provided for the individual components and are given in the drawing, e.g. 1, in the text in brackets, for example (1).
- Position numbers:
 - **variants of the components are extended with point and number, e.g. 5.1.**
 - **sub-components of a component are extended using lower-case letters, e.g. 5a.**
 - **multiple position numbers, i.e. alternative components, are represented with a slash: e.g. 1 / 2.**

Presentational reference

The illustration on the front cover of these instructions is understood to be a system representation only. The assembly steps presented in these Instructions for Assembly and Use are shown in the form of examples with only one component size. They are valid accordingly for all component sizes contained in the standard configuration.

For a better understanding, detailed illustrations are partly incomplete. The safety installations which have possibly not been included in these detailed drawings must nevertheless still be available.

Target groups

Contractors

These Instructions for Assembly and Use are designed for contractors who use the scaffolding either for

- assembling, modifying and dismantling, or
- use it, e.g. for concreting, or
- who have it used, e.g. for forming operations.

Competent person

(Construction Site Coordinator)

The Safety and Health Protection Coordinator*

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

Competent person qualified to carry out inspections

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

Qualified persons

The scaffolding may only be assembled, modified or dismantled by personnel who are suitably qualified to do so. For the work to be carried out, the qualified persons must have received instructions** covering at least the following points:

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

to safely assemble, modify or dismantle the scaffolding.

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



- **In other countries, ensure that the relevant national guidelines and regulations in the respective current version are complied with!**
- **If no country-specific regulations are available, it is recommended to proceed according to German guidelines and regulations.**
- **A competent person must be present on site during scaffolding operations.**

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

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

Additional technical documentation

- Approval Z-8.22-863 PERI UP Flex Modular System
- Instructions for Assembly and Use
 - PERI UP Flex Shoring Tower
 - SKYDECK Panel Slab Formwork
 - GRIDFLEX Aluminium Grid Slab Formwork
 - MULTIFLEX Girder Slab Formwork
- Basic Information - PERI UP Flex Core Components
- Instructions for Use
 - Trolley with Winch
 - Pallets and Stacking Devices
- Data Sheet for Anchor Bolt PERI 14/20 x 130
- PERI Design Tables - Formwork and Shoring
- Product Brochure - PERI UP Flex Shoring Tower MDS K

Intended use

Product description

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

The PERI UP Flex Shoring Tower MDS K

- provides a safe working position also during vertical assembly and dismantling operations,
- facilitates a wide range of project-specific application possibilities.

Features

The PERI UP Flex Shoring Tower MDS K is used in shoring constructions in a systematic vertical position for transferring vertical and, in part, horizontal loads.

The main feature of the PERI UP system is the particularly rigid node connection between the rosettes of the Standards and the Ledgers.

The frames of the shoring towers are connected with Ledgers. The wedge connections of the Ledgers are particularly easy to assemble. Bracing is installed in the form of system diagonals. The tensile-proof connection of the frame takes place through the use of the Ledger Brace UBL.

Through the combination of standard and intermediate elements in connection with the final end frame, all heights can be continuously realized.

System dimensions

Ground plans of the standard configuration.

Frame direction x ledger direction

- 125 x 100 cm
- 125 x 125 cm
- 125 x 150 cm – see Section A1
- 125 x 200 cm
- 125 x 250 cm
- 125 x 300 cm

Permissible load-bearing capacities

- Correspond to Design Class B1 in accordance with DIN EN 12812.
- Leg loads, see Section B1 to B3.

Instructions on use

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

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

Changes to PERI components are not permitted.

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

Cleaning and maintenance instructions

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

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

Do not clean powder-coated or galvanized components with steel brushes or metal scrapers.

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

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

Do not clean components suspended on a crane.

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

Cross-system

General

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

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

Always take into consideration and comply with the safety instructions and permissible loads.

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

Materials and working areas are to be inspected on a regular basis, especially before each use and assembly, for:

- signs of damage,
- stability and
- function.

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

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

Components provided by the contractor must conform with the characteristics required in these Instructions for Assembly and Use as well as all valid construction guidelines and standards. Unless otherwise indicated, this applies in particular to:

- Timber components: Strength Class C24 for Solid Wood according to EN 338.
- Scaffold tubes: galvanised steel tubes with minimum dimensions of Ø 48.3 x 3.2 mm according to EN 12811-1:2003 4.2.1.2.
- Scaffold tube couplings according to EN 74.

Deviations from the standard configuration are only permitted after a further

risk assessment has been carried out by the contractor.

On the basis of this risk assessment, appropriate measures for working and operational safety as well as stability are to be determined.

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

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

- create an additional risk assessment, with appropriate measures for ensuring the stability of the scaffolding system being carried out based on the results,
- arrange for an extraordinary inspection to be carried out by a competent person qualified to do so. The aim of this inspection is to identify and rectify any damage in good time in order to guarantee the safe use of the scaffolding system.

Exceptional occurrences can include:

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

Assembly, modification and dismantling work

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

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

Before initial use, the safe functioning of the scaffold must be checked by a

person qualified to carry out the inspection. The results of the inspection must be documented in an inspection record.

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

- safety helmet,
 - safety shoes,
 - safety gloves,
 - safety glasses,
- is available and used as intended.

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

The PPE against falling which is to be used is determined by the contractor.

The contractor must

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

Utilization

Every contractor who uses or allows the scaffolding system or sections of the scaffolding system to be used, has the responsibility for ensuring that the equipment is in good condition.

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

System-specific

Retract components only when the concrete has sufficiently hardened and the person in charge has given the go-ahead for striking to take place.

Anchoring is to take place only if the anchorage has sufficient concrete strength.

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

Tighten couplings with screw closures using 50 Nm. This corresponds to a force of 20 kg using a lever arm length of 25 cm.

Wedge connections are to be securely fixed using a 500 g hammer.

Protect shoring towers against impact loads, e.g. trucks. Impact loads are project-specifically determined.

A1.1 Base unit



- The 150 dimension is variable and is presented here as an example. All components in the ledger direction, e.g. Ledgers, are to be used according to their length. (Fig. A1.01)
- Spindle Locking is optional and must only be integrated if the shoring tower is subsequently moved.

1	Base Spindle	4x
2	Base Frame MDS	2x
3	Ledger UH Plus	2x
4	Spindle Locking UJS	
	– optional	4x

Assembly

1. Position four Base Spindles (1) in the form of a rectangle 1.25 x 1.50 m on the ground. (Fig. A1.01)
2. Insert one Base Frame (2) each on two Base Spindles 1.25 m apart positioned opposite. (Fig. A1.01)
3. Attach ledger head (3a) and wedge (3b) of the Ledger (3) in the rosettes (1a). (Fig. A1.01a)
4. Securely fix all wedges using a hammer. (Fig. A1.01b)
5. Establish perpendicularity of the base unit.
6. Optional: install Spindle Locking (4).
 - Insert Spindle Locking above Quick Jack Nut of the Base Spindle and ensure that the threaded pin of the mounting bolt (4a) is securely positioned in the hole on the leg (1b). (Fig. A1.01 + A1.02a)
 - Tighten the hex. nut of the Spindle Locking (4b). (Fig. A1.02b)
 - Base Spindle is now secured.
7. Horizontally align the base unit.



Do the end plates of the Base Spindles have full-surface contact?

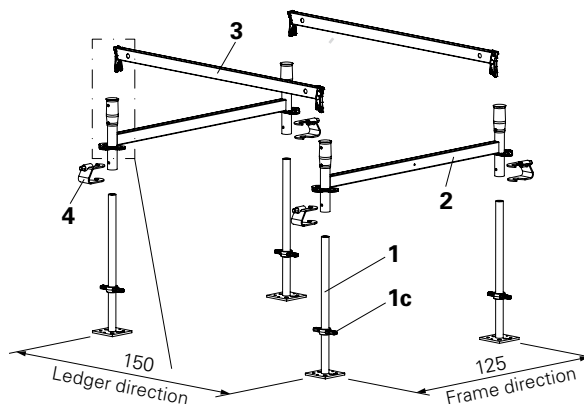


Fig. A1.01

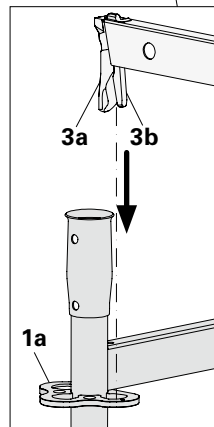


Fig. A1.01a

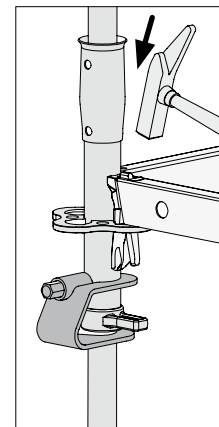


Fig. A1.01b

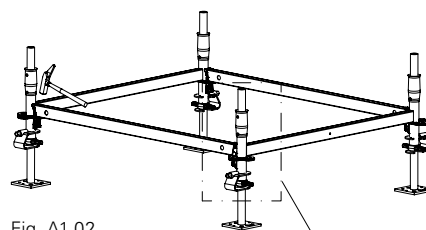


Fig. A1.02

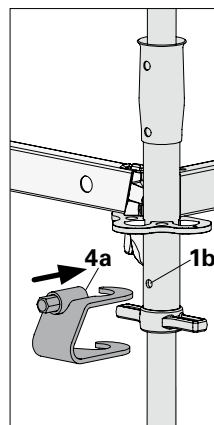


Fig. A1.02a

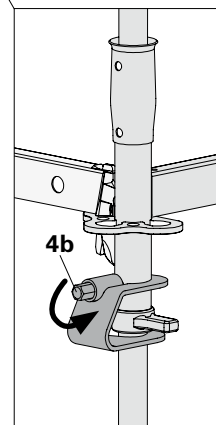


Fig. A1.02b

A1.2 First frame level

3	Ledger UH Plus	2x
5.1	Frame MDS 100 K	2x
6	Ledger Brace UBL	1x

Assembly

1. Insert tubes of the frame (5.1) into the tubes of the Base Frame (2).
2. Install Ledger (3).
3. Securely fix all wedges.
4. Install one Ledger Brace (6) externally from the bottom left to top right.
 - Insert finger (6b) at an angle into the hole of the bottom Ledger.
 - Insert gravity pin (6a) through the hole of the top Ledger, and then turn sideways.

(Fig. A1.03 + A1.04)



Have all gravity pins been turned sideways? (Fig. A1.04b)



Subsequently install the second Ledger Brace UBL so that the decking can be passed easily to the inside.

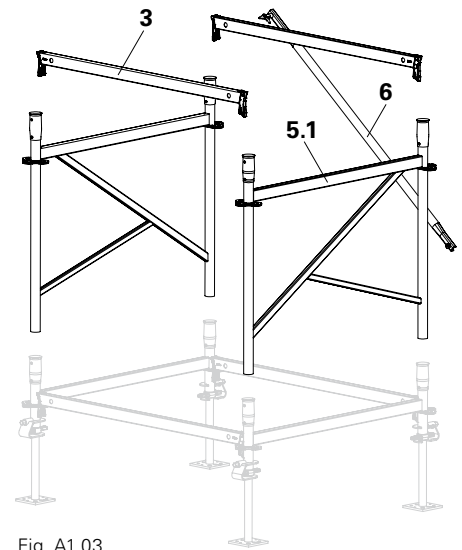


Fig. A1.03

Gravity pin – above

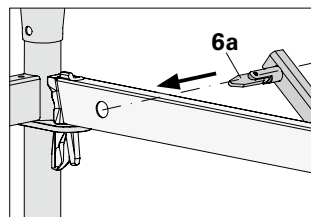


Fig. A1.04a

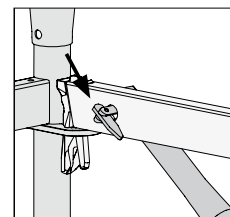


Fig. A1.04b

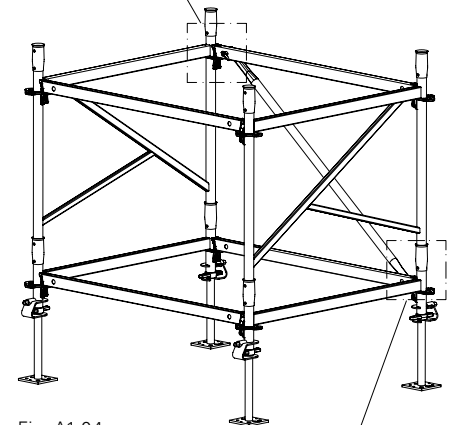


Fig. A1.04

Finger - below

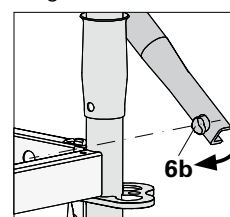


Fig. A1.04c

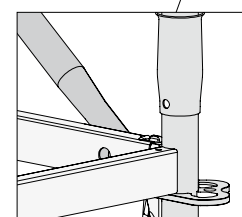


Fig. A1.04d

A1.3 Decking level



- Install Platform with both hooks (8a) of the red side on the side of the gravity pin of the Ledger Braces. (Fig. A1.06)
- Leave a 2 – 3 cm spacing between the assembly decks.

6	Ledger Brace UBL	1x
8	Platform MDS 125	3x*

* Number of Platforms (pieces) depends on the length (L) of the Ledgers.

L	100	150	200	250	300
Qty	2x	3x	4x	5x	6x

Assembly

1. Suspend Platform with both hooks (8a) of the red side over the beam of the Ledger. (Fig. A1.05 + A1.06) Ensure that the outer hook (8a) is mounted between the leg (2c) and the end of the Ledger Brace (6c). (Fig. A1.05a)
2. Remove cotter pin (8g) on the underside of the Platform. (Fig. A1.05b) → Securing means of the Platform is disengaged.
3. Hold platform board using the grip hole (8j) and fold downwards. (Fig. A1.06 + A1.07) → Platform lies on the Ledger with both claws (8f). (Fig. A1.07) → Counterholder (8b) is positioned as protection against lifting below on the Ledger. (Fig. A1.05a)

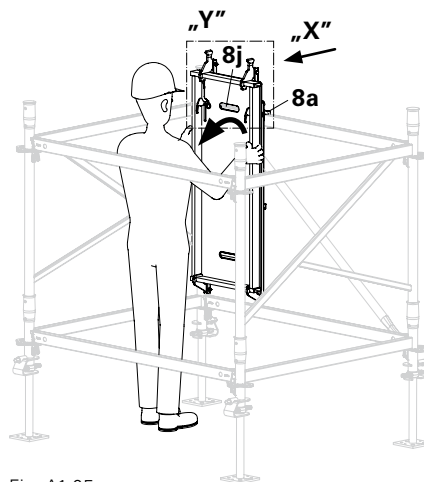


Fig. A1.05

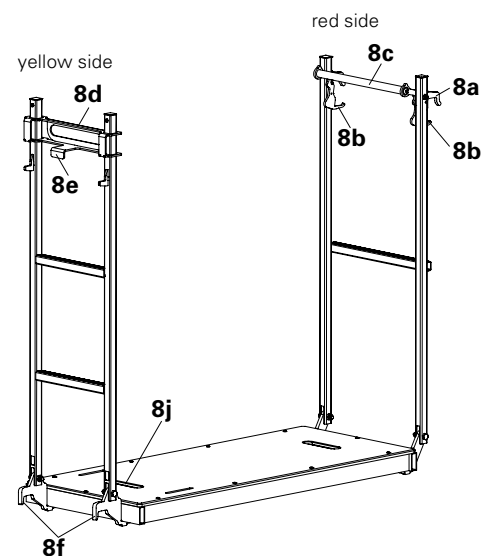


Fig. A1.06

View "X" - shown without the yellow side

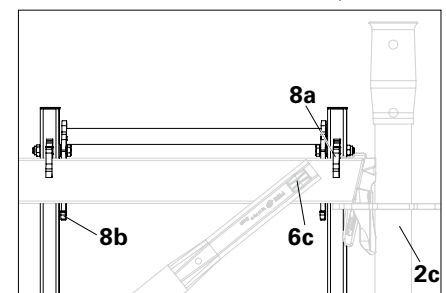


Fig. A1.05a

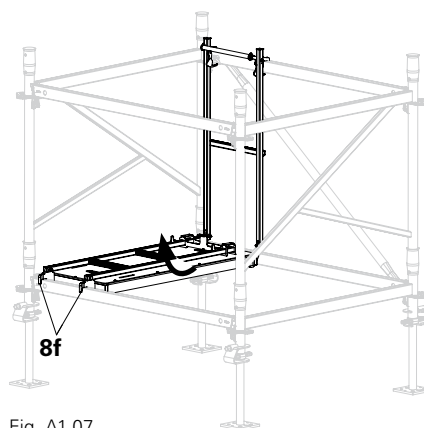


Fig. A1.07

Detail "Y"

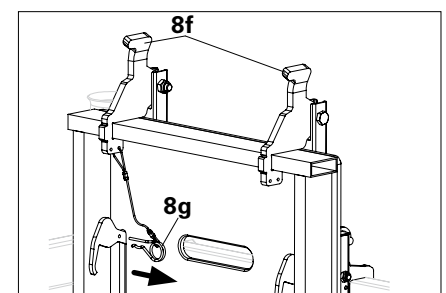


Fig. A1.05b

4. Pull yellow bar (8d) upwards and suspend yellow lug (8e) above the top Ledger. (Fig. A1.07 + A1.08)
→ Platform is now installed.
5. Install other Platforms in the same way as the first Platform, as described in Points 1 – 4.
6. Install the final Platform - positioned at 180° to the other Platforms. (Fig. A1.09)
 - Mount hooks (8a) of the red side next to the yellow lug of the previous Platform.
 - On the other side, mount the yellow lug next to the red hook.
7. Install Ledger Brace UBL (6). (Fig. A1.10)

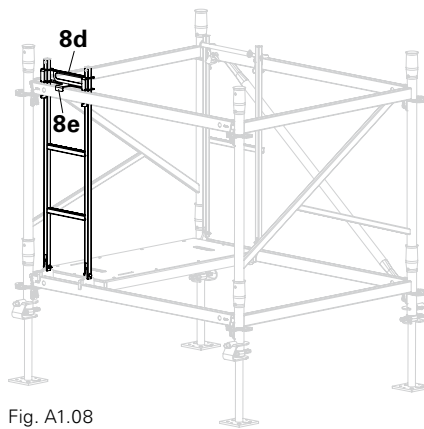


Fig. A1.08



- Is the red tipping bar (8c) folded downwards?
 - Is the yellow lug (8e) positioned against the Ledger?
 - Do the claws (8f) of the yellow side lie on the Ledger?
- (Fig. A1.09)

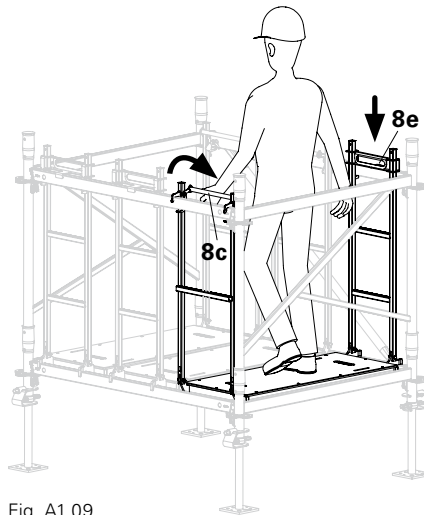


Fig. A1.09

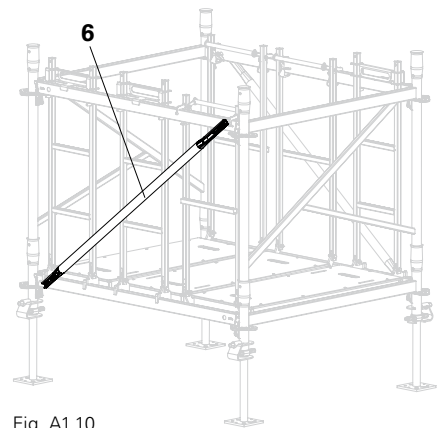


Fig. A1.10

A1.4 Second frame level

3	Ledger UH Plus	2x
5.1	Frame MDS 100 K	2x
6	Ledger Brace UBL	2x

Assembly

1. Position Frame (5.1) at approx. 45° inclination against the sleeves of the Frame below. (Fig. A1.11)
2. Place Frame in a vertical position.
→ Frame slides downwards to the required position through its own weight.
3. Install Ledger (3). (Fig. A1.12)
4. Install Ledger Brace (6). (Fig. A1.13)



Are all gravity locks secured, i.e. have all gravity locks been turned sideways?

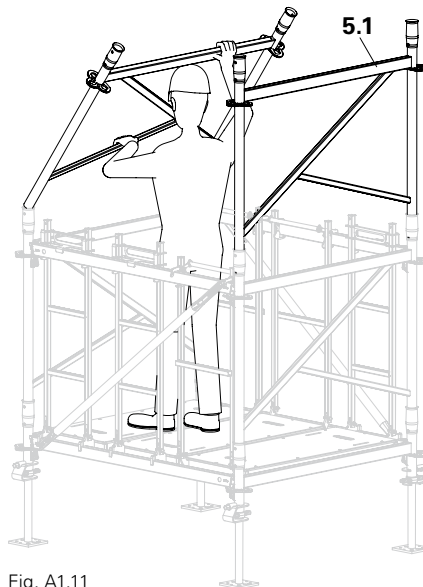


Fig. A1.11

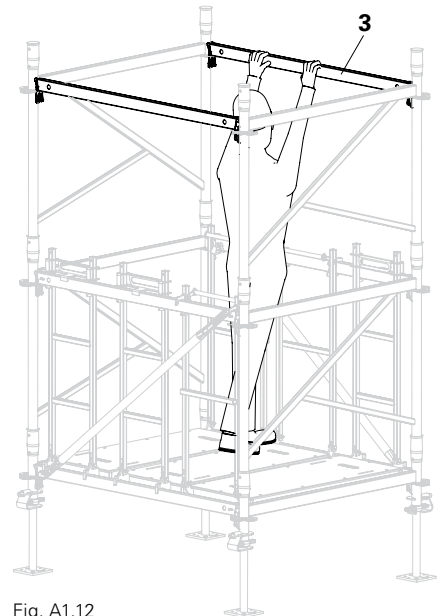


Fig. A1.12

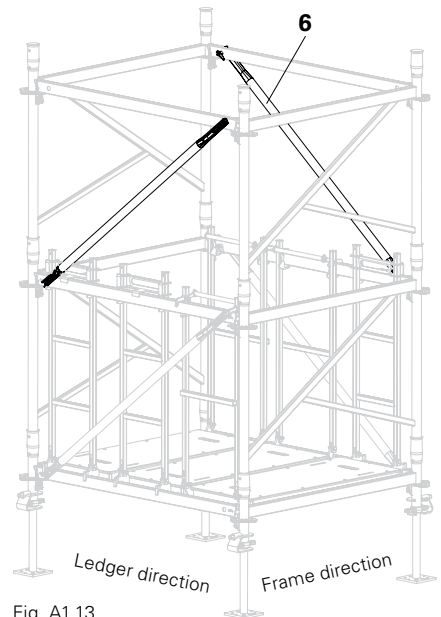


Fig. A1.13

Misapplications

- For towers with a 1.25 m x 1.25 m ground plan, ensure that the Frame MDS 100 K is installed on the Frames MDS 100 K directly below, and not offset by 90°! (Fig. A1.14 – only Frame MDS 100 K shown)
- Climbing on the outer side of the shoring tower is not permitted.

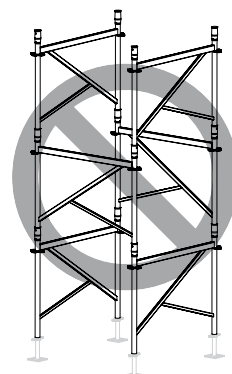


Fig. A1.14

A1.5 Changing the decking level



- The decking from the lower level is re-installed at the top.
- When moving the decking, the yellow side is always higher. Therefore, when moving upwards begin with the yellow side. (Fig. A1.15)

Assembly

1. Disengage yellow lug (8d) and hook in to the top Ledger (3). (Fig. A1.15a)
2. Disengage the two hooks on the red side opposite and hook in to the top Ledger (3). (Fig. A1.16)
3. Move other decking according to points 1 + 2. (Fig. A1.17)
4. Climb up to the top decking level before moving the last deck.



- Accessing the top level by means of
- the rungs on the red side (8l), tread height 50 cm.
 - the rungs on the yellow side (8k), tread height 33 cm.

5. Move last deck from above. (Fig. A1.18)
 - Re-position yellow lug from the bottom to the top according to Point 1.
 - Re-position hooks of the red side from the bottom to the top according to Point 2.



- Is the red tipping bar (8c) folded downwards?
- Is the yellow lug (8e) positioned against the Ledger? (Fig. A1.16)
- Do the claws (8f) of the yellow side lie on the Ledger?

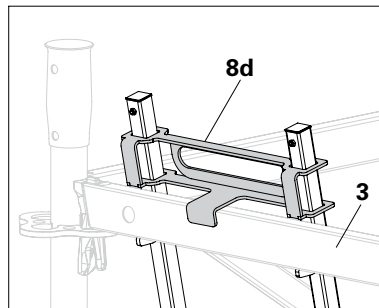


Fig. A1.15a

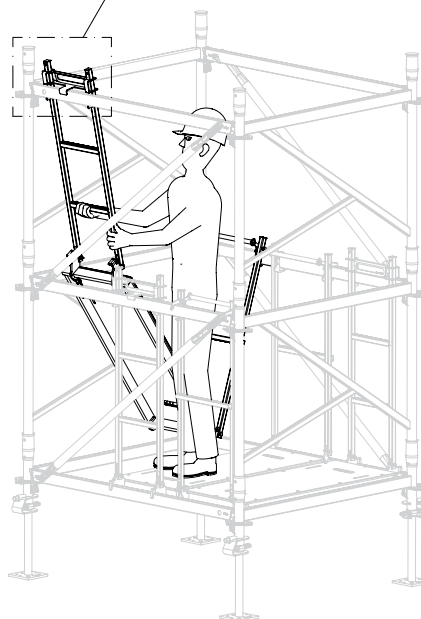


Fig. A1.15

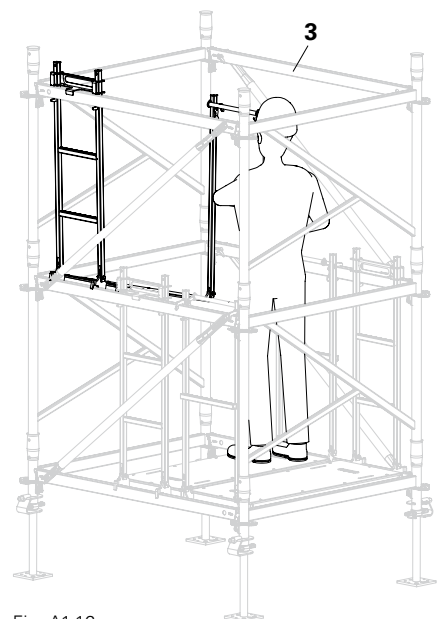


Fig. A1.16

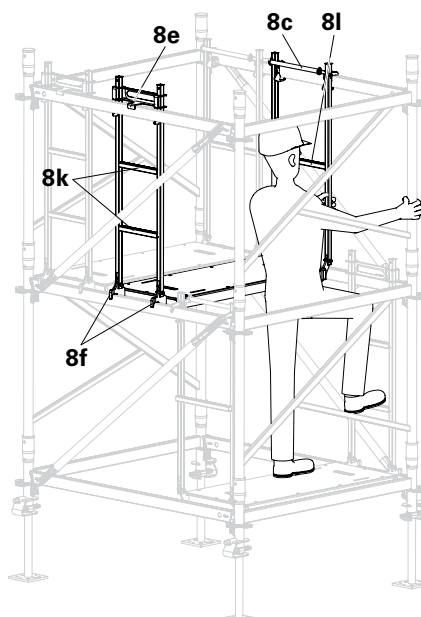


Fig. A1.17

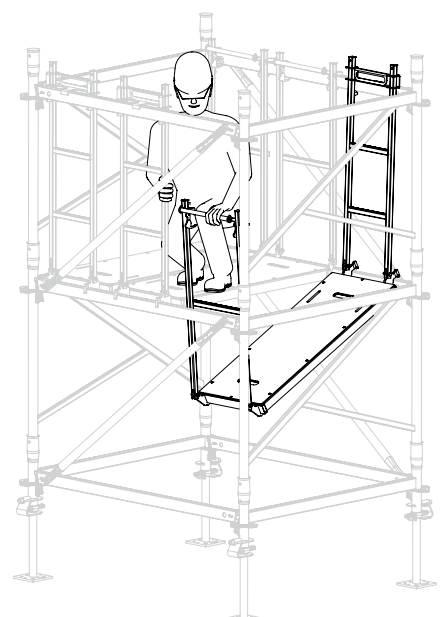


Fig. A1.18

A1.6 Additional levels



Warning

- Risk of falling during transport of materials.
 - ⇒ For higher towers, install one or more additional decking levels.
 - ⇒ Project-specifically determine additional decking levels or temporary support according to a separate risk assessment.
- Tipping or horizontal moving of the scaffolding unit.
 - ⇒ Install a temporary support during installation, see Section A5.

3	Ledger UH Plus	2x
5.1	Frame MDS 100 K	2x
6	Ledger Brace UBL	2x



The decking from the lower level is re-installed at the top.

Assembly

1. Install additional frame levels as described in Section A1.4. (Fig. A1.19)
2. Move decking to the next highest frame level as described in Section A1.5. (Fig. A1.20)

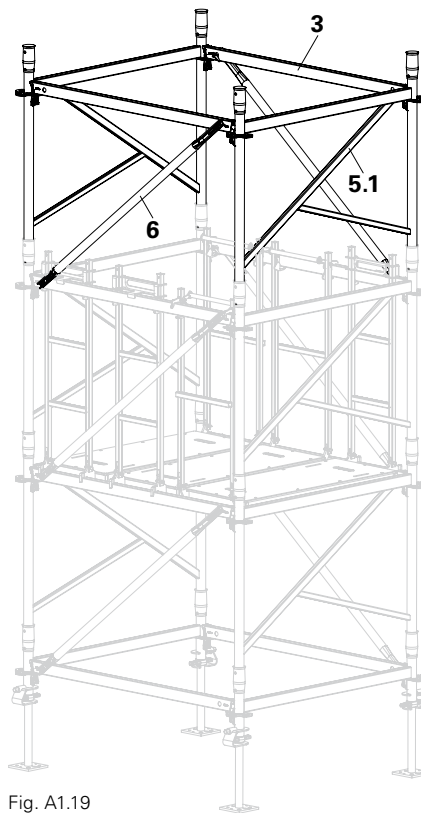


Fig. A1.19

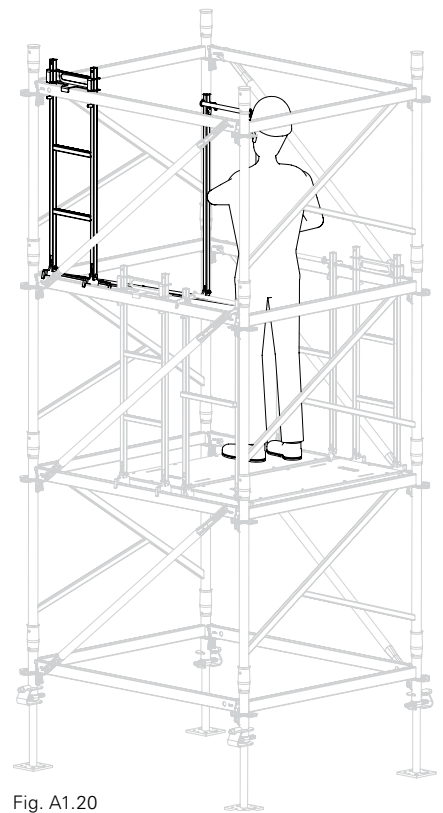


Fig. A1.20

A1.7 Transport of materials

Pass up the other required components with protection provided by the existing guardrails. (Fig. A1.21)

For higher towers, install one or more additional decking levels.

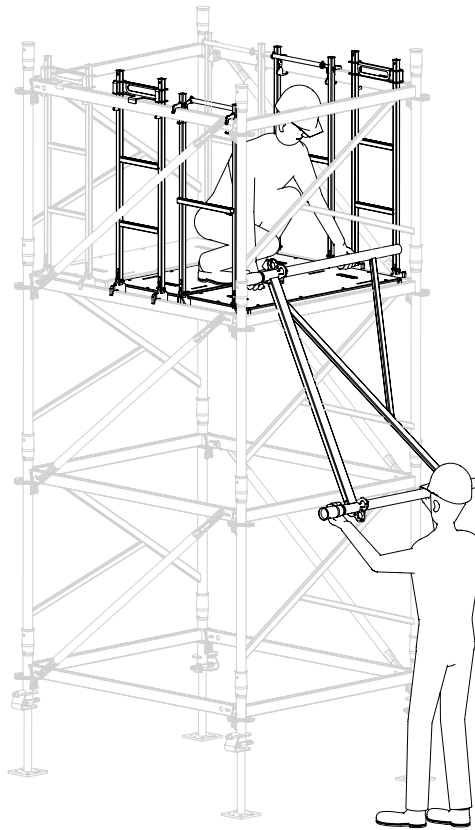


Fig. A1.21

A1.8 Final level



The Head Spindle Locking is optional and must only be integrated if the shoring tower is subsequently moved.

3	Ledger UH Plus	2x
6	Ledger Brace UBL	2x
7	End Frame MDS 50	2x
9.1	Head Spindle-2 TR 38/50-70	4x
	alternatively:	
9.2	Cross Forkhead TR 38-70/50	4x
10	Head Spindle Locking UJH – optional	4x

Preparation

Remove cotter pin (10e) and wedge (10d) on the Spindle Locking (10).

Assembly

1. Install End Frame (7).
2. Install Ledger (3).
3. Securely fix all wedges.
4. Install Ledger Brace (6).
5. Insert one Head Spindle each (9.1 / 9.2) in the tubes of the End Frame (Fig. A1.22a / A1.22b)
6. Optional: place Head Spindle Locking (10) with the groove on the Ledger, in the process hooking in the two claws (10a) from below into the rosette.
 - Retaining plate (10b) is positioned over the Quick Jack Nut (10c) of the Head Spindle Locking.
7. Push the wedge (10d) through the slots in the Head Spindle Locking and secure.
8. Insert cotter pin (10e) into the hole of the wedge.
 - Head Spindle is secured against lifting.

(Fig. A1.22)



Have the cotter pins been fitted?

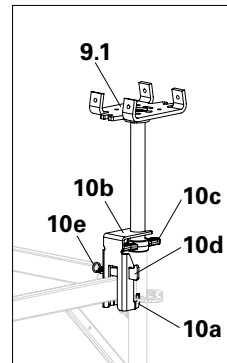


Fig. A1.22a

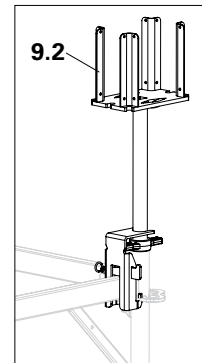


Fig. A1.22b

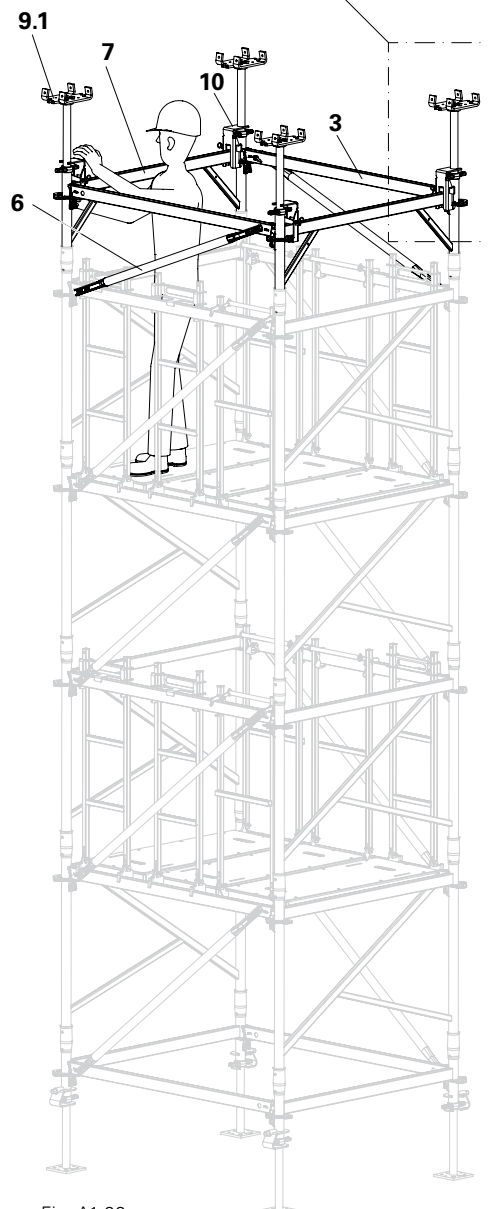


Fig. A1.22

A1.9 Height adjustment

Height adjustment for the Shoring Tower MDS K is carried out by combining the Frame MDS 100 K (5.1) with the Intermediate Frame MDS 50 (5.2).

Install the Intermediate Frame MDS 50 as required in the level below the End Frame MDS 50 (7).
(Fig. A1.23 + A1.24a/b + A1.25)

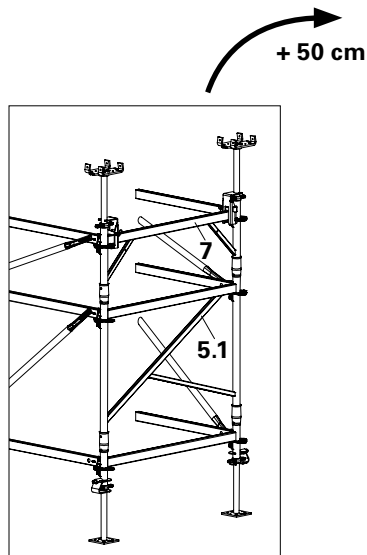


Fig. A1.23

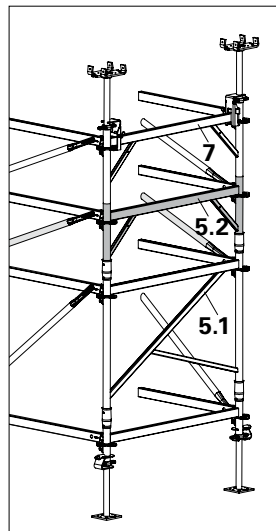


Fig. A1.24a

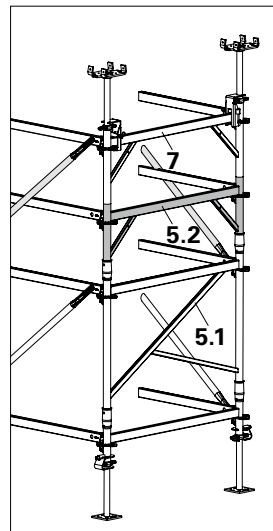


Fig. A1.24b

+ 50 cm

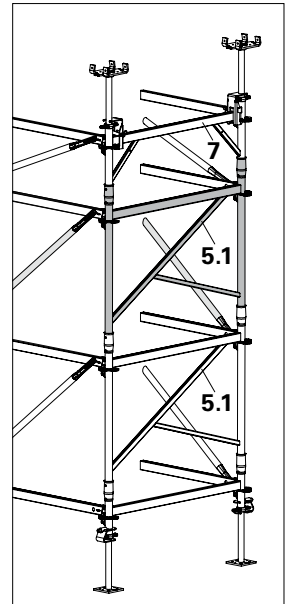


Fig. A1.25



- The final level remains unchanged as described in Section A1.8.
- Adjust the final height continuously with the Head Spindles.



When using the Intermediate Frame (5.2), one Ledger Brace for a 100 cm height can be installed per side instead of two Ledger Braces for a 50 cm height.
Height 50 cm (Fig. A1.24a)
Height 100 cm (Fig. A1.24b)

A2.1 With the crane



Warning

If scaffolding units should fall during transfer operations, this can cause serious injury or even death.

- ⇒ Ensure that scaffolding units are picked up and set down so that unintentional falling over, falling apart, sliding, falling down or rolling is avoided.
- ⇒ During moving operations, no persons are allowed to remain under the suspended load, see Section 6 – Storage and transportation.



- Recommended angle of inclination of the chains: approx. 60° to the horizontal.
- Max. tower weight 600 kg.
- Ledger Braces UBL tightly connect all Frames MDS.
- Attach four-sling lifting gear to the standards below the rosettes and Ledgers.

- Simple shoring tower. (Fig. A2.01a)
- Shoring tower with additional frames. (Fig. A2.01b)



- Are the wedges securely in position?
- Have all Diagonals been installed?
- Have the Spindle Lockings been fitted?

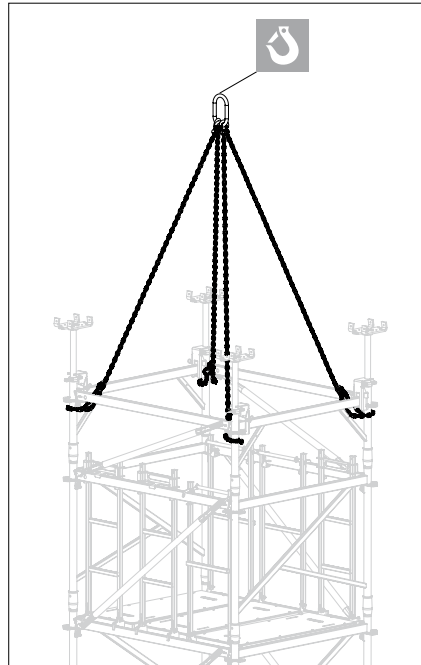


Fig. A2.01a

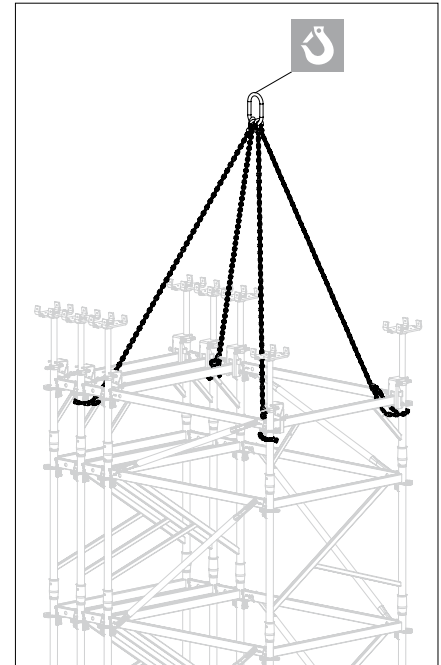


Fig. A2.01b

A2.2 Using the Trolley with Winch



Follow the Instructions for Use for the Trolley and Winch.

11	Trolley with Winch	2x
12	Connector PERI UP – Trolley	2x

Assembly

1. Mount adapter (12a) on the Trolley with Winch (11). (Fig. A2.02)
2. Mount telescopic tube (12b) on the Trolley with Winch (11). (Fig. A2.02)
3. Pick up shoring tower by means of the holding device of the Trolley with Winch. (Fig. A2.03)



If the clearance between the ground and bottom edge of the ledger on the base frame is < 36 cm, the front wheels will not fit under the ledger. Therefore, temporarily remove the front wheels.

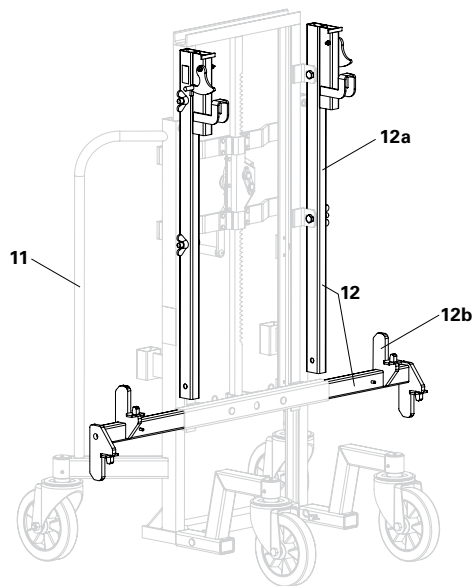


Fig. A2.02

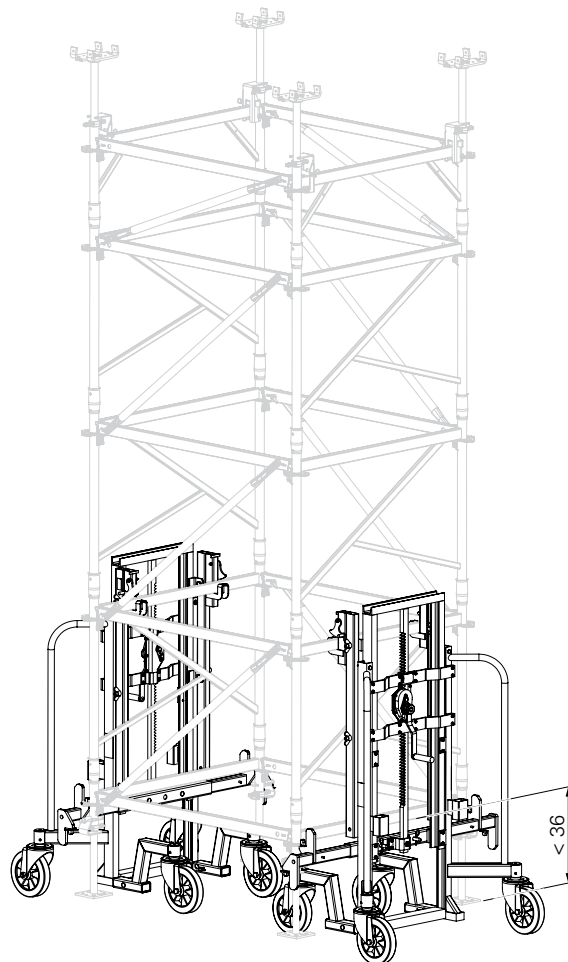


Fig. A2.03



Warning

Falling or shifting scaffolding units can cause serious injuries or even death.

⇒ Secure scaffolding unit with temporary support, see Section A5.



- For safe storage and transportation place components in PERI Pallets, see Section A6.
- When moving the decking, the yellow side is always higher. Therefore, begin with the red side when moving downwards.

Dismantling

1. Dismantling the final level:
 - optional: release Head Spindle Locking.
 - remove Head Spindle from the End Frame.
 - remove Ledger Braces.
 - remove Ledgers.
 - remove End Frame.
2. Moving the decking downwards:
 - firstly, unhook the two hooks of the red side and hang in on the Ledgers positioned below.
 - on the opposite side, detach the yellow lug and re-install on the bottom Ledger.
3. Dismantling the next levels down to the first frame level. Per level:
 - remove Ledger Braces.
 - remove Ledgers.
 - remove Intermediate frames and Frames.
 - move decking downwards.
4. Removing the decking level:
 - detach yellow lug and place bar on the decking board.
 - fold up decking board.
 - secure counterholder (8b) with cotter pin (8g).
 - detach hooks of the red side. (Fig. A3.01a)
5. Dismantling the first frame level:
 - remove Ledger Braces.
 - remove Ledgers.
 - remove Frame.
6. Dismantling the base unit:
 - optional: release and remove the Spindle Locking.
 - remove Ledgers.
 - remove Base Frame.
 - remove Base Spindles.

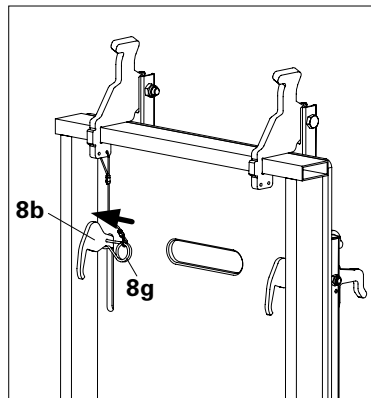


Fig. A3.01a - decking board folded up

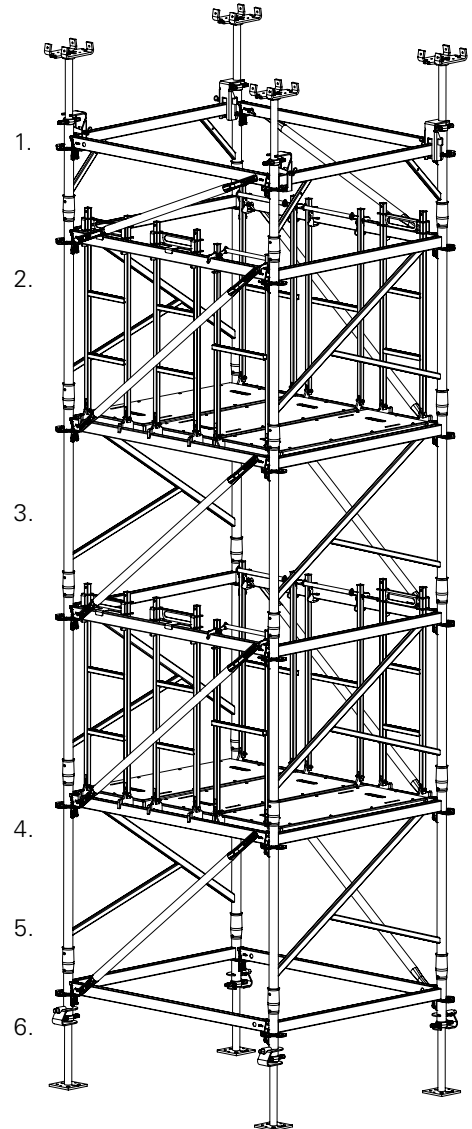


Fig. A3.01

A4 Shoring tower with additional frames

For transferring concentrated loads, up to 2 additional frames on an individual tower can be connected. The spacing of the frames to one another is freely selectable according to the requirements; max. bay length in the direction of the Ledger ≤ 1.50 m.
(Fig. A4.01a + A4.01b)



If required, install further Platforms MDS 125 in the bays of the additional frames.

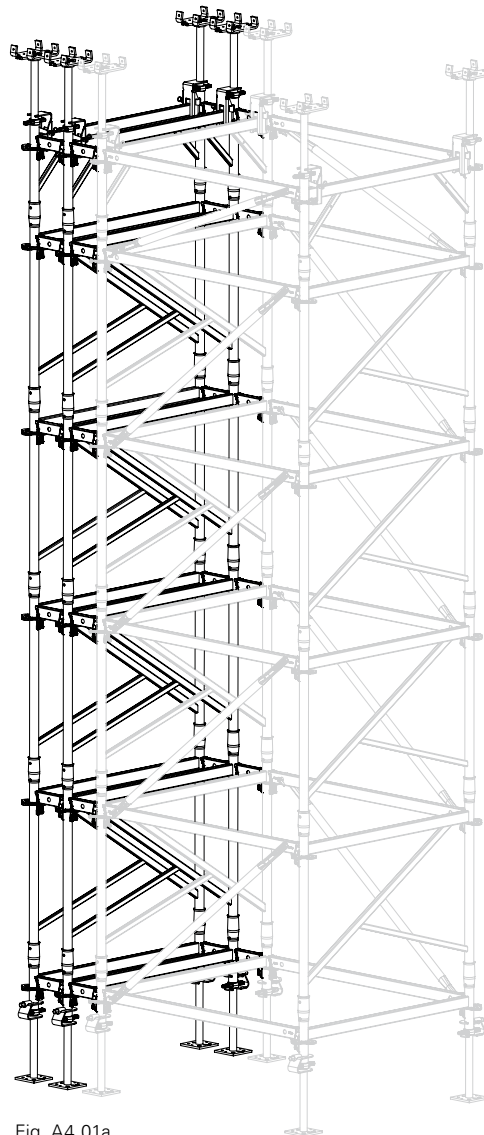


Fig. A4.01a

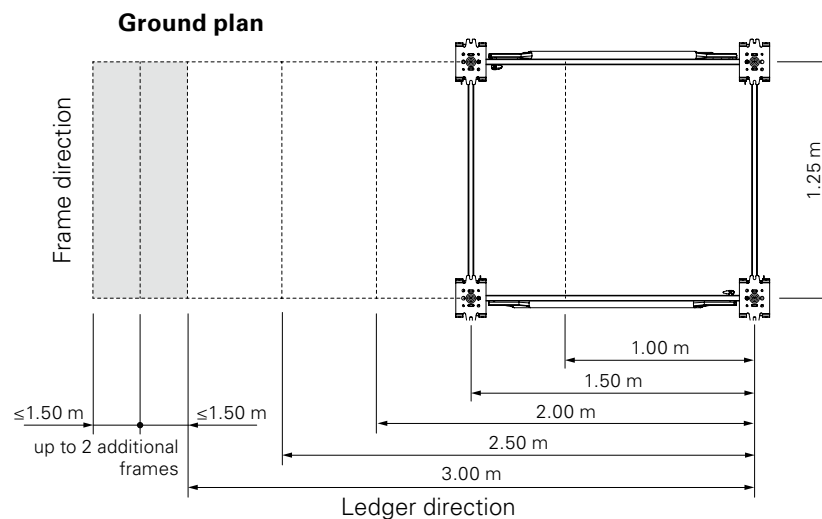


Fig. A4.01b

A5.1 Supporting individual towers



- To secure against tipping or horizontal movement, temporary support may be necessary during the installation process.
- Mount 3 Push-Pull Props as assembly aids.
- For high shoring towers, additional higher positioned holders could be required.
- Alternatively, a corresponding holder on sufficiently load-bearing components already installed is possible.
- The support used is project-specifically determined.
- Take into consideration data sheet for Anchor Bolt PERI 14/20 x 130 (16).

13	Push-Pull Prop RS	3x
14	Brace Connector HDR-2	3x
15	Base Plate RS	3x
16	Anchor Bolt PERI 14/20 x 130	3x

Preparation

Remove cotter pins (14b) and bolts (14a) from the Brace Connectors (14).

Assembly

1. Secure coupling (14c) of the Brace Connector (14) to the Standard of the shoring tower. (Fig. A5.01a)
2. Insert lug (13a) on the Push-Pull Prop (13) between the lugs of the Brace Connector.
3. Fix Push-Pull Prop with bolts (14a) and cotter pins (14b) to the Brace Connector. (Fig. A5.01a)
4. Fix Base Plate (15) in the ground using Anchor Bolts (16). Inclination angle of the Push-Pull Prop to the ground approx. 60°. (Fig. A5.01b)
5. Secure Push-Pull Prop (13) to the anchor plate (15) by means of bolts (15a) and cotter pins (15b). (Fig. A5.01b)

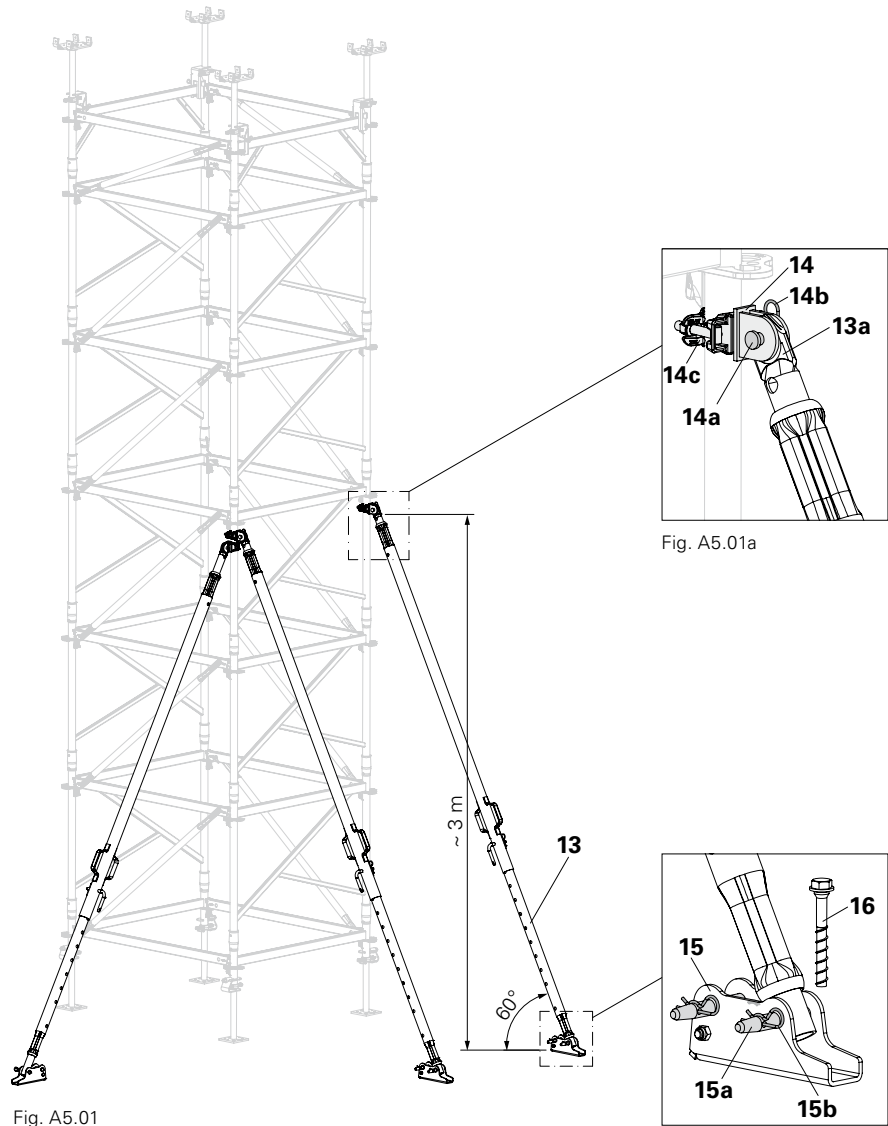


Fig. A5.01

Fig. A5.01b

A5.2 Bracing sets of shoring towers



For providing stability, mount Push-Pull Props and Ledgers.

- 3** Ledger UH Plus
- 13** Push-Pull Prop RS
- 14** Brace Connector HDR-2
- 15** Base Plate RS
- 16** Anchor Bolt PERI 14/20 x 130

Determine number of pieces required for project, according to the assembly instructions of the manufacturer, assembly instructions of the contractor.

Assembly

- Secure first shoring tower against tipping, see Section 5.1.
 - Connect further shoring towers using Ledgers (3) and Push-Pull Props.
- (Fig. A5.02)



Alternatively, the shoring towers can also be secured against tipping or horizontal movement during assembly operations using existing structural parts, e.g. walls.

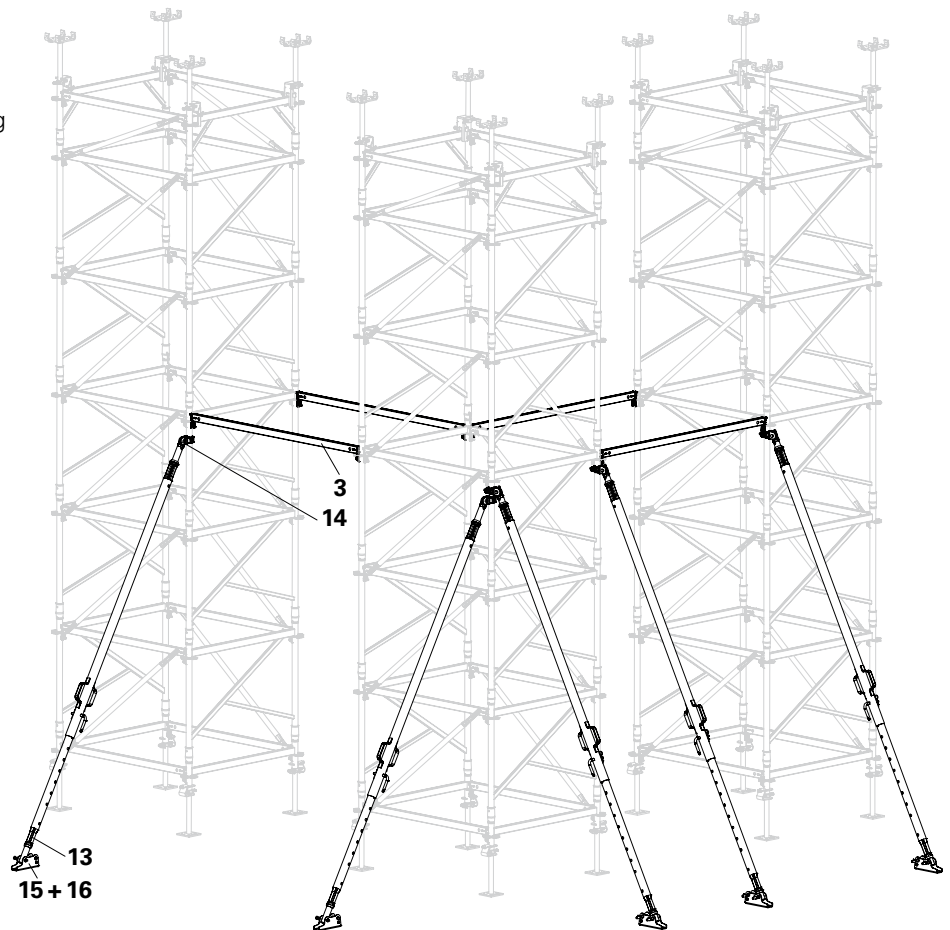


Fig. A5.02

PERI Pallets and Stacking Devices are suitable for lifting by crane or forklift. They can also be moved with a Pallet Lifting Trolley.



Warning

If transport units should fall during transfer and transport operations, this can cause serious injuries or even death.

- ⇒ During moving operations, no persons are allowed to remain under the suspended load.
- ⇒ Do not drop the components.



Caution

Attention: obstacles and tripping hazards on the construction site can cause injuries.

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



- For storage and transportation, the surface used must have sufficient load-bearing capacity.
- Create transport units using only the same components.
- Transport units are picked up using the longitudinal side only.
- Transport units are suitable for lifting by forklift.
- Always guide pre-assembled scaffolding bays, scaffolding units or scaffolding sections with ropes when moving them by crane.
- Use original PERI storage and transport systems, e.g. crate pallets, pallets or stacking devices.
- Use PERI lifting accessories and slings as well as only those load-bearing points provided on the component.
- Instructions for Use for PERI Pallets and Stacking Devices must always be taken into consideration.

Base Frame MDS

Pallet RP-2 80 x 120

- Insert 3 Base Frames MDS into each other.
→ Bundle
- Place bundle (14x) in the pallet with Frames alternately protruding on one side.
- Secure with steel band.
- Max. 42 Base Frame MDS.
(Fig. A6.01)

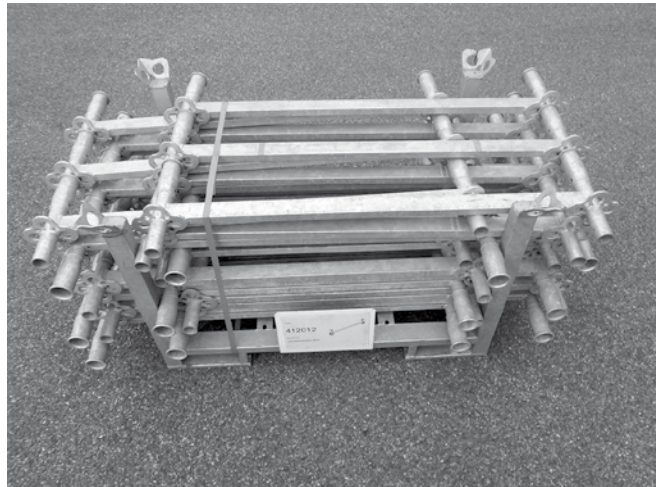


Fig. A6.01

Frame MDS 100 K

Pallet RP-2 80 x 120

- Position Frames in the pallet, alternately protruding on one side.
- Secure with steel band.
- Max. 14 Frame MDS 100 K.
(Fig. A6.02)

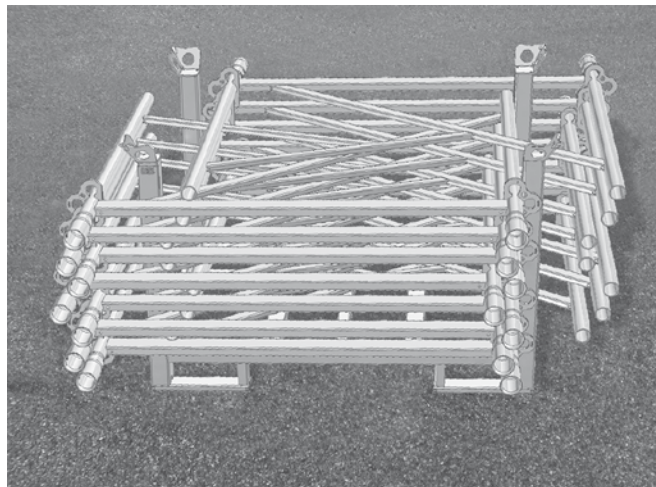


Fig. A6.02

Intermediate Frame MDS 50

Pallet RP-2 80 x 120

- Insert 2 Intermediate Frames into each other.
→ Bundle
- Place bundle (14x) in the Pallet with Frames alternately protruding on one side.
- Secure with steel band.
- Max. 28 Intermediate Frames MDS 50.
(Fig. A6.03)

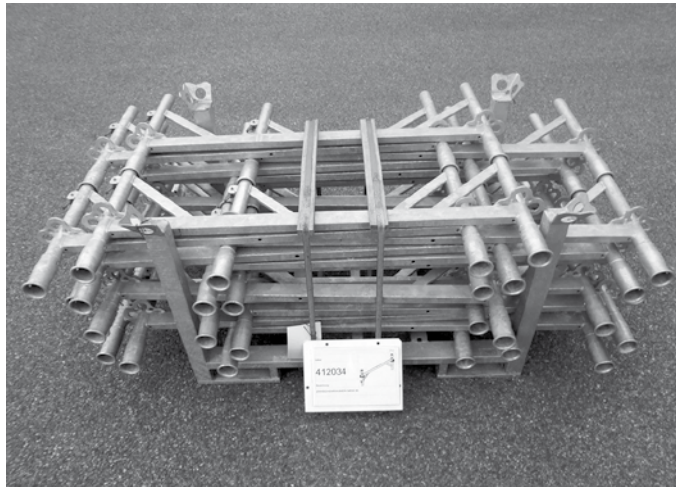


Fig. A6.03

End Frame MDS 50

Pallet RP-2 80 x 120

- Place the End Frame (10x) in the Pallet symmetrically identical and alternately protruding on one side.
→ Pallet is filled asymmetrically.
- Secure with steel band.
- Max. 20 End Frames MDS 50.
(Fig. A6.04)

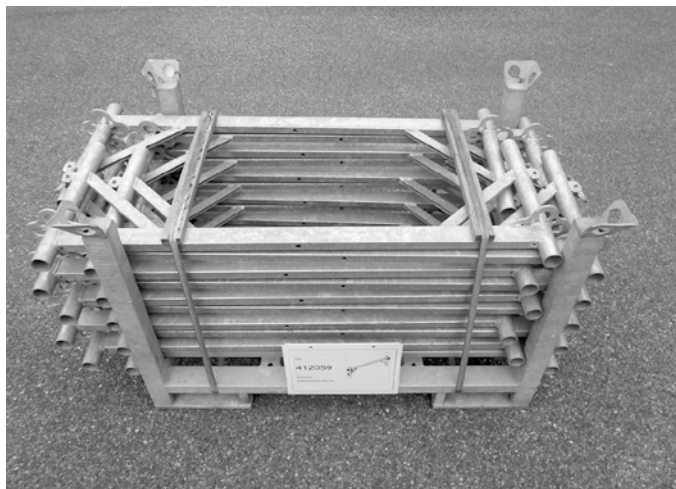


Fig. A6.04

Platform MDS 125 Pallet RP-2 80 x 150



Caution

Decks may slip during stacking or when a transport unit is opened which could result in persons being hit and injured.

⇒ Stack and secure transport units in the correct manner ensuring that no unintentional change in their position is possible.

- Place 3 Platforms MDS 125 next to each other and 5 layers on top of each other. The cams (8m) must reach into the stacking pockets (8n).
 - Secure with steel band.
 - Max. 15 Platforms MDS 125.
- (Fig. A6.05 + A6.06)

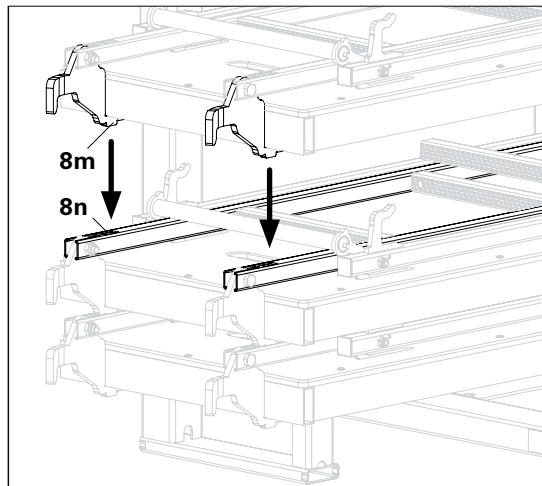


Fig. A6.05

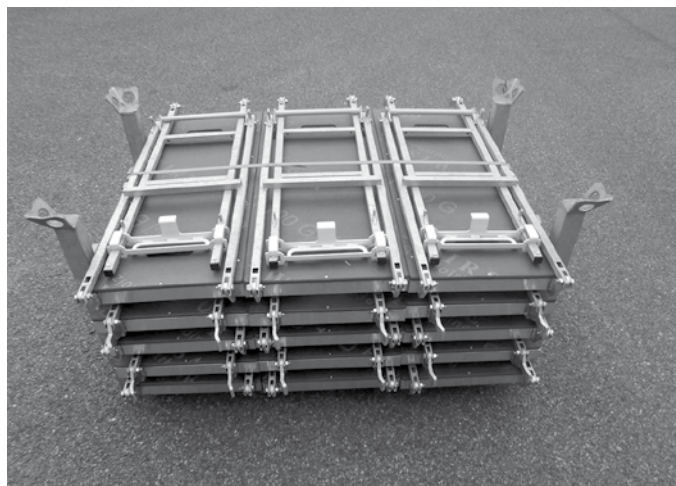


Fig. A6.06

B1 Shoring tower – restrained at the top

B1.1 Application conditions

Restrained at the top

- without wind $q = 0.0 \text{ kN/m}^2$
- with wind $q = 0.5 \text{ kN/m}^2$

Spindeltyp am Kopf

"KK" = Cross Forkhead TR 38-70/50

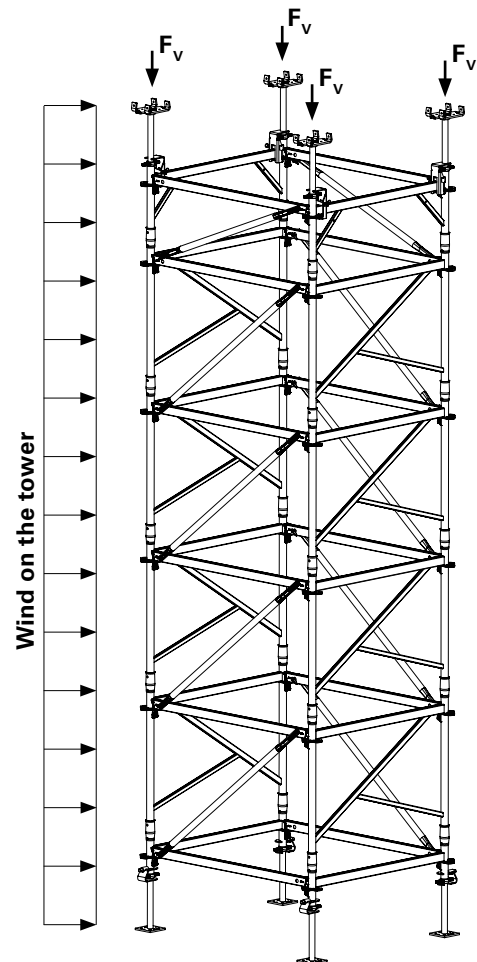
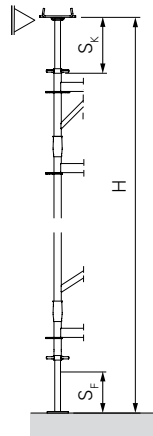
"GK" = Head Spindle-2 TR 38-70/50

Spindle type featured on the base

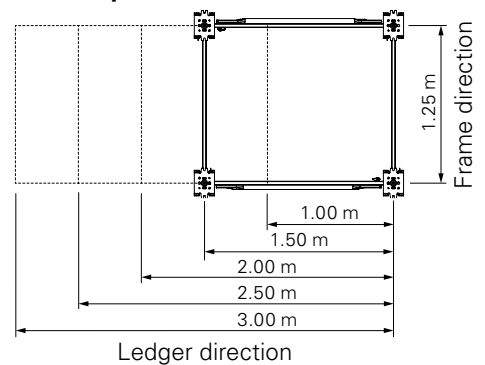
"TR" = Base Spindle TR 38-70/50

"UJB" = Adjustable Base Plate UJB
38-50/30

Calculation basis
DIN EN 12812 Shoring.



Ground plan



B1 Shoring tower – restrained at the top

B1.2 Perm. leg load FV

Without wind $q = 0.0 \text{ kN/m}^2$

$S_K \leq 30 \text{ cm}$, $S_F \leq 35 \text{ cm}$ "TR"

Height H [m]	Ground plan [m]				
	1.25 x 1.00	1.25 x 1.50	1.25 x 2.00	1.25 x 2.50	1.25 x 3.00
	Perm. FV [kN]				
	KK/ GK	KK/GK	KK/GK	KK/GK	KK/GK
1.83 – 6.39	47.7	49.0	50.2	47.6	45.1
6.33 – 6.89	47.7	48.9	50.1	47.5	44.9
6.83 – 7.39	47.6	48.8	49.9	47.4	44.8
7.33 – 7.89	47.6	48.7	49.8	47.2	44.7
7.83 – 8.39	47.5	48.6	49.7	47.1	44.5
8.33 – 8.89	47.4	48.5	49.5	47.0	44.4
8.83 – 9.39	47.4	48.4	49.4	46.8	44.2
9.33 – 9.89	47.3	48.3	49.3	46.7	44.1
9.83 – 10.39	47.2	48.2	49.1	46.5	44.0
10.33 – 10.89	47.2	48.1	49.0	46.4	43.8
10.83 – 11.39	47.1	48.0	48.9	46.3	43.7
11.33 – 11.89	47.1	47.9	48.7	46.1	43.5
11.83 – 12.39	47.0	47.8	48.6	46.0	43.4
12.33 – 12.89	47.0	47.7	48.5	45.9	43.3
12.83 – 13.39	46.9	47.7	48.4	45.8	43.2
13.33 – 13.89	46.9	47.6	48.3	45.8	43.2
13.83 – 14.39	46.8	47.5	48.2	45.7	43.1
14.33 – 14.89	46.8	47.5	48.2	45.6	43.0
14.83 – 15.39	46.8	47.4	48.1	45.5	42.9
15.33 – 15.89	46.7	47.4	48.0	45.4	42.9
15.83 – 16.39	46.7	47.3	47.9	45.3	42.8
16.33 – 16.89	46.7	47.2	47.8	45.3	42.7
16.83 – 17.39	46.6	47.2	47.7	45.2	42.6
17.33 – 17.89	46.6	47.1	47.6	45.1	42.5
17.83 – 18.39	46.5	47.0	47.5	45.0	42.5
18.33 – 18.89	46.5	47.0	47.5	45.0	42.5
18.83 – 19.39	46.5	47.0	47.4	44.9	42.4
19.33 – 19.89	46.4	46.9	47.4	44.9	42.4
19.83 – 20.39	46.4	46.9	47.4	44.9	42.4
20.33 – 20.89	46.4	46.8	47.3	44.9	42.4
20.83 – 21.39	46.3	46.8	47.3	44.8	42.4

$S_K \leq 30 \text{ cm}$, $S_F \leq 35 \text{ cm}$ "UJB"

Height H [m]	Ground plan [m]				
	1.25 x 1.00	1.25 x 1.50	1.25 x 2.00	1.25 x 2.50	1.25 x 3.00
	Perm. FV [kN]				
	KK/ GK	KK/GK	KK/GK	KK/GK	KK/GK
1.83 – 6.39	45.5	45.7	45.9	45.0	44.1
6.33 – 6.89	45.4	45.6	45.8	44.9	44.1
6.83 – 7.39	45.3	45.5	45.7	44.9	44.0
7.33 – 7.89	45.1	45.4	45.6	44.8	44.0
7.83 – 8.39	45.0	45.2	45.5	44.7	43.9
8.33 – 8.89	44.8	45.1	45.4	44.7	43.9
8.83 – 9.39	44.7	45.0	45.3	44.6	43.8
9.33 – 9.89	44.6	44.9	45.2	44.5	43.8
9.83 – 10.39	44.4	44.8	45.2	44.4	43.7
10.33 – 10.89	44.3	44.7	45.1	44.4	43.7
10.83 – 11.39	44.1	44.6	45.0	44.3	43.6
11.33 – 11.89	44.0	44.4	44.9	44.2	43.6
11.83 – 12.39	43.9	44.3	44.8	44.2	42.5
12.33 – 12.89	43.8	44.2	44.7	44.1	43.4
12.83 – 13.39	43.7	44.1	44.6	44.0	43.4
13.33 – 13.89	43.6	44.1	44.5	43.9	43.3
13.83 – 14.39	43.5	44.0	44.4	43.8	43.2
14.33 – 14.89	43.4	43.9	44.3	43.7	43.1
14.83 – 15.39	43.3	43.8	44.2	43.6	43.0
15.33 – 15.89	43.2	43.7	44.1	43.5	42.9
15.83 – 16.39	43.2	43.6	44.0	43.4	42.8
16.33 – 16.89	43.1	43.5	43.9	43.3	42.7
16.83 – 17.39	43.0	43.4	43.8	43.2	42.6
17.33 – 17.89	42.9	43.3	43.7	43.1	42.6
17.83 – 18.39	42.8	43.2	43.6	43.0	42.5
18.33 – 18.89	42.7	43.1	43.5	42.9	42.4
18.83 – 19.39	42.6	43.0	43.4	42.8	42.3
19.33 – 19.89	42.6	43.0	43.3	42.8	42.2
19.83 – 20.39	42.5	42.9	43.2	42.7	42.2
20.33 – 20.89	42.4	42.8	43.2	42.6	42.1
20.83 – 21.39	42.3	42.7	43.1	42.5	42.0

B1 Shoring tower – restrained at the top

With wind $q = 0.5 \text{ kN/m}^2$

$S_k \leq 30 \text{ cm}$, $S_F \leq 35 \text{ cm}$ "TR"

Height H [m]	Ground plan [m]				
	1.25 x 1.00	1.25 x 1.50	1.25 x 2.00	1.25 x 2.50	1.25 x 3.00
	Perm. FV [kN]				
	KK/ GK	KK/GK	KK/GK	KK/GK	KK/GK
1.83 – 6.39	45.3	46.4	47.4	44.7	42.0
6.33 – 6.89	45.0	45.9	46.9	44.2	41.6
6.83 – 7.39	44.7	45.5	46.4	43.8	41.2
7.33 – 7.89	44.3	45.1	45.9	43.3	40.8
7.83 – 8.39	44.0	44.7	45.4	42.9	40.4
8.33 – 8.89	43.7	44.3	44.9	42.4	40.0
8.83 – 9.39	43.3	43.9	44.4	42.0	39.6
9.33 – 9.89	43.0	43.4	43.9	41.5	39.2
9.83 – 10.39	42.7	43.0	43.4	41.1	38.8
10.33 – 10.89	42.3	42.6	42.9	40.6	38.4
10.83 – 11.39	42.0	42.2	42.3	40.2	38.0
11.33 – 11.89	41.7	41.8	41.8	39.7	37.6
11.83 – 12.39	41.3	41.3	41.3	39.3	37.2
12.33 – 12.89	41.1	41.0	40.8	38.7	36.6
12.83 – 13.39	40.9	40.6	40.3	38.1	35.9
13.33 – 13.89	40.6	40.2	39.7	37.5	35.3
13.83 – 14.39	40.4	39.8	39.2	36.9	34.7
14.33 – 14.89	40.2	39.4	38.7	36.4	34.0
14.83 – 15.39	39.9	39.0	38.1	35.8	33.4
15.33 – 15.89	39.7	38.7	37.6	35.2	32.8
15.83 – 16.39	39.5	38.3	37.1	34.6	32.1
16.33 – 16.89	39.2	37.9	36.5	34.0	31.5
16.83 – 17.39	39.0	37.5	36.0	33.4	30.9
17.33 – 17.89	38.8	37.1	35.5	32.9	30.2
17.83 – 18.39	38.5	36.7	34.9	32.3	29.6
18.33 – 18.89	38.3	36.4	34.4	31.7	29.0
18.83 – 19.39	38.0	36.0	34.0	31.1	28.3
19.33 – 19.89	37.8	35.6	33.5	30.6	27.7
19.83 – 20.39	37.5	35.2	33.0	30.0	27.0
20.33 – 20.89	37.3	34.9	32.5	29.4	26.4
20.83 – 21.39	37.0	34.5	32.0	28.9	25.7

$S_k \leq 30 \text{ cm}$, $S_F \leq 35 \text{ cm}$ "UJB"

Height H [m]	Ground plan [m]				
	1.25 x 1.00	1.25 x 1.50	1.25 x 2.00	1.25 x 2.50	1.25 x 3.00
	Perm. FV [kN]				
	KK/ GK	KK/GK	KK/GK	KK/GK	KK/GK
1.83 – 6.39	41.7	41.9	42.1	41.4	40.7
6.33 – 6.89	41.3	41.5	41.7	41.0	40.3
6.83 – 7.39	40.8	41.1	41.3	40.6	40.0
7.33 – 7.89	40.3	40.6	40.9	40.3	39.6
7.83 – 8.39	39.8	40.2	40.5	39.9	39.2
8.33 – 8.89	39.4	39.7	40.1	39.5	38.9
8.83 – 9.39	38.9	39.3	39.7	39.1	38.5
9.33 – 9.89	38.4	38.9	39.3	38.7	38.2
9.83 – 10.39	38.0	38.4	38.9	38.3	37.8
10.33 – 10.89	37.5	38.0	38.5	38.0	37.5
10.83 – 11.39	37.0	37.5	38.1	37.6	37.1
11.33 – 11.89	36.5	37.1	37.7	37.2	36.8
11.83 – 12.39	36.1	36.7	37.3	36.8	36.4
12.33 – 12.89	35.6	36.2	36.8	36.3	35.8
12.83 – 13.39	35.2	35.8	36.4	35.8	35.3
13.33 – 13.89	34.8	35.4	36.0	35.3	34.7
13.83 – 14.39	34.4	35.0	35.6	34.8	34.1
14.33 – 14.89	33.9	34.5	35.1	34.3	33.6
14.83 – 15.39	33.5	34.1	34.7	33.8	33.0
15.33 – 15.89	33.1	33.7	34.3	33.3	32.4
15.83 – 16.39	32.6	33.2	33.8	32.8	31.9
16.33 – 16.89	32.2	32.8	33.4	32.4	31.3
16.83 – 17.39	31.8	32.4	33.0	31.9	30.7
17.33 – 17.89	31.4	32.0	32.6	31.4	30.2
17.83 – 18.39	30.9	31.5	32.1	30.9	29.6
18.33 – 18.89	30.6	31.1	31.7	30.3	29.0
18.83 – 19.39	30.2	30.8	31.3	29.8	28.3
19.33 – 19.89	29.9	30.4	30.9	29.3	27.7
19.83 – 20.39	29.6	30.0	30.4	28.7	27.0
20.33 – 20.89	29.2	29.6	30.0	28.2	26.4
20.83 – 21.39	28.9	29.2	29.6	27.7	25.7

B2 Shoring tower – free standing

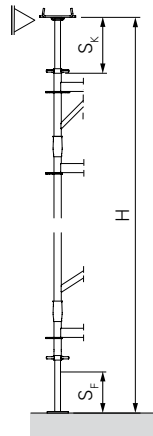
B2.1 Application conditions

Free standing

- height **H = 6.39 m**
- with wind **q ≤ 0.5 kN/m²**
- friction factor **μ = 0.3**

Calculation basis

DIN EN 12812 Shoring.

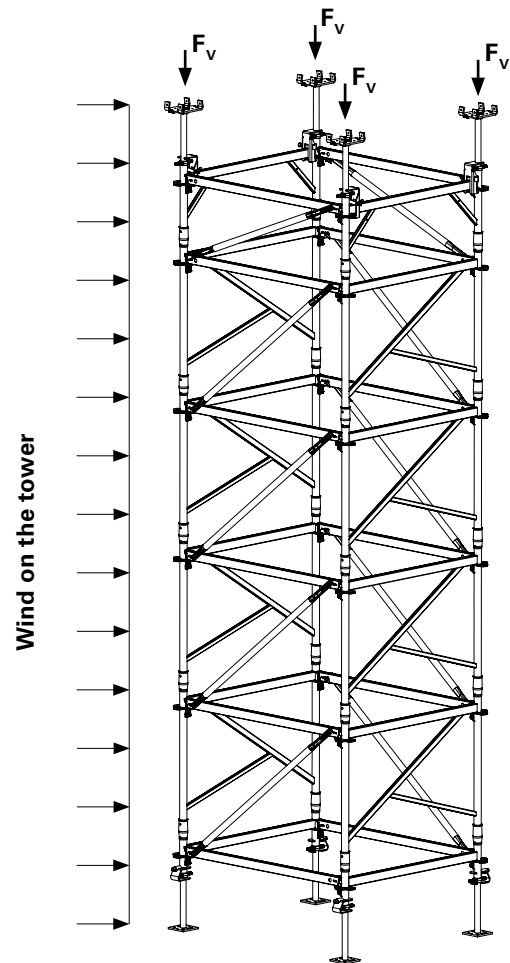


Spindle type featured on the head

- "KK" = Cross Forkhead TR 38-70/50
- "GK" = Head Spindle-2 TR 38-70/50

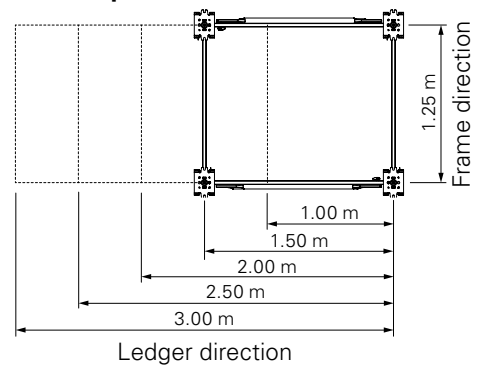
Spindle type featured on the base

- "TR" = Base Spindle TR 38-70/50



Wind on the tower

Ground plan



B2.2 Perm. Leg Load FV

With variable horizontal load F_H

S_k ≤ 30 cm, S_F ≤ 35 cm "TR"

Ground plan [m]										
1.25 x 1.00			1.25 x 1.50		1.25 x 2.00		1.25 x 2.50		1.25 x 3.00	
F _H [kN]	Perm. FV [kN]									
	KK/GK	min.*	KK/GK	min.*	KK/GK	min.*	KK/GK	min.*	KK/GK	min.*
0.00	47.3	5.8	47.8	5.8	48.3	5.8	45.5	5.8	42.7	5.8
0.13	45.6	8.4	46.1	8.0	46.6	7.6	43.7	7.6	40.8	7.6
0.27	43.9	11.0	44.4	10.2	44.9	9.4	41.9	9.4	38.9	9.4
0.40	42.3	13.7	42.7	12.5	43.3	11.3	40.1	11.3	37.0	11.3
0.53	39.7	17.9	39.7	15.8	39.7	13.7	37.2	13.7	34.8	13.7
0.67	36.0	22.2	36.0	19.1	36.0	16.1	34.2	16.1	32.3	16.1
0.80	32.2	29.6	32.2	25.1	32.2	20.7	31.0	20.7	29.9	20.7

* min. = Minimum load against sliding.

Minimum load is to be calculated with a partial safety factor of γ_F = 0.9.

B3 Shoring tower with additional frames – restrained at the top

B3.1 Application conditions

Ground plan with up to 2 additional frames - restrained at the top

- without wind $q = 0.0 \text{ kN/m}^2$
- with wind $q = 0.5 \text{ kN/m}^2$

Spindle type featured on the head

"KK" = Cross Forkhead
TR 38-70/50

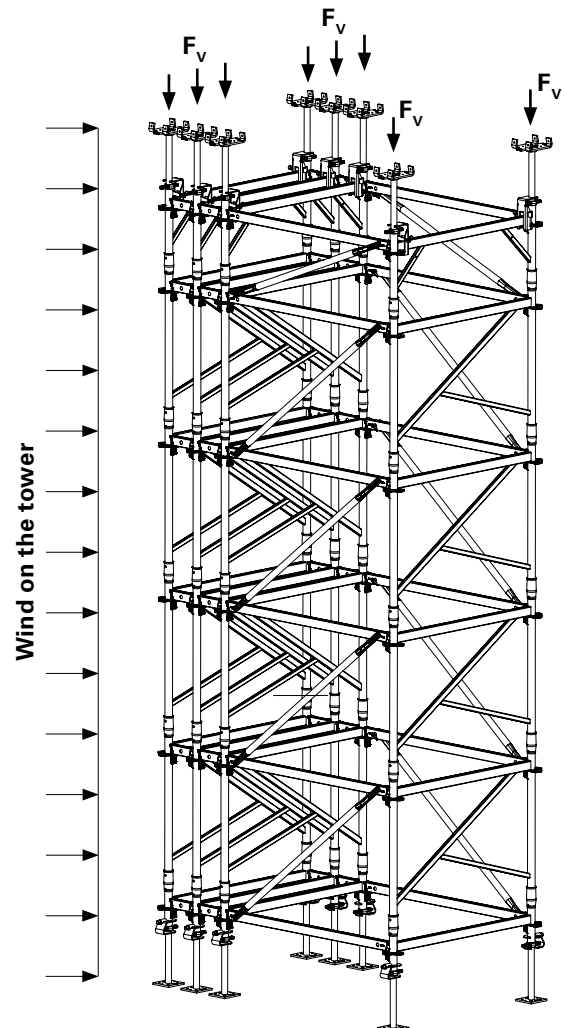
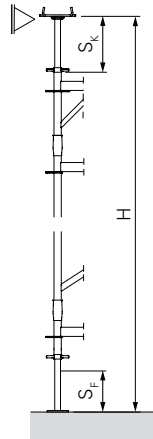
"GK" = Head Spindle-2
TR 38-70/50

Spindle type featured on the base

"TR" = Base Spindle TR 38-70/50

"UJB" = Adjustable Base Plate UJB
38-50/30

Calculation basis
DIN EN 12812 Shoring.



B3.2 Perm. leg load FV without wind $q = 0.0 \text{ kN/m}^2$

$S_K \leq 20 \text{ cm}$, $S_F \leq 45 \text{ cm}$ "TR"

Height H [m]	Ground plan [m] - UH 150 + UH 150				
	1.25 x 1.00	1.25 x 1.50	1.25 x 2.00	1.25 x 2.50	1.25 x 3.00
	Perm. FV [kN]				
	KK/GK	KK/GK	KK/GK	KK/GK	KK/GK
1.60 – 4.39	45.1	45.8	46.2	45.3	41.7
4.34 – 6.89	45.1	45.8	46.2	45.3	41.7
6.84 – 9.39	44.4	45.8	46.2	45.3	41.7

$S_K \leq 20 \text{ cm}$, $S_F \leq 45 \text{ cm}$ "TR"

Height H [m]	Ground plan [m] - UH 25 + UH 150				
	1.25 x 1.00	1.25 x 1.50	1.25 x 2.00	1.25 x 2.50	1.25 x 3.00
	Perm. FV [kN]				
	KK/GK	KK/GK	KK/GK	KK/GK	KK/GK
1.60 – 4.39	44.1	46.8	46.7	45.2	42.7
4.34 – 6.89	44.1	46.8	46.7	45.2	42.7
6.84 – 9.39	44.0	46.8	46.7	45.2	42.7

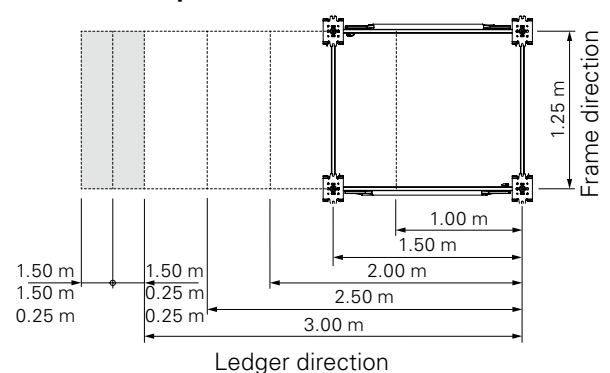
$S_K \leq 30 \text{ cm}$, $S_F \leq 35 \text{ cm}$ "UJB"

Height H [m]	Ground plan [m] - UH 150 + UH 150				
	1.25 x 1.00	1.25 x 1.50	1.25 x 2.00	1.25 x 2.50	1.25 x 3.00
	Perm. FV [kN]				
	KK/GK	KK/GK	KK/GK	KK/GK	KK/GK
1.60 – 4.39	40.5	40.9	40.0	39.4	38.4
4.34 – 6.89	40.1	40.7	40.0	39.4	38.4
6.84 – 9.39	40.1	40.7	40.0	39.4	38.4

$S_K \leq 30 \text{ cm}$, $S_F \leq 35 \text{ cm}$ "UJB"

Height H [m]	Ground plan [m] - UH 25 + UH 150				
	1.25 x 1.00	1.25 x 1.50	1.25 x 2.00	1.25 x 2.50	1.25 x 3.00
	Perm. FV [kN]				
	KK/GK	KK/GK	KK/GK	KK/GK	KK/GK
1.60 – 4.39	40.0	39.3	38.7	38.0	37.5
4.34 – 6.89	39.6	38.9	38.2	37.4	36.7
6.84 – 9.39	39.6	38.7	38.1	37.4	36.5

Ground plan



B3 Shoring tower with additional frames – restrained at the top

with wind $q = 0.5 \text{ kN/m}^2$

$S_K \leq 20 \text{ cm}$, $S_F \leq 45 \text{ cm}$ "TR"

Height H [m]	Ground plan [m] - UH 150 + UH 150				
	1.25 x 1.00	1.25 x 1.50	1.25 x 2.00	1.25 x 2.50	1.25 x 3.00
	Perm. FV [kN]				
	KK/GK	KK/GK	KK/GK	KK/GK	KK/GK
1.60 – 4.39	42.3	42.8	43.3	42.3	38.5
4.34 – 4.89	42.0	42.3	42.8	42.0	38.4
4.84 – 5.39	41.5	42.0	42.5	41.6	37.7
5.34 – 5.89	40.8	41.6	42.0	41.2	37.1
5.84 – 6.39	40.0	41.3	41.7	39.9	36.4
6.34 – 6.89	38.1	40.9	41.3	39.1	36.2
6.84 – 7.39	36.5	40.5	40.1	38.2	35.9
7.34 – 7.89	35.0	39.4	39.4	37.4	35.4
7.84 – 8.39	33.5	38.2	38.7	36.5	34.3
8.34 – 8.89	31.5	37.4	38.1	35.8	33.5
8.84 – 9.39	29.4	36.0	37.5	35.0	32.6

$S_K \leq 30 \text{ cm}$, $S_F \leq 35 \text{ cm}$ "TR"

Height H Höhe H [m]	Ground plan [m] - UH 150 + UH 150				
	1.25 x 1.00	1.25 x 1.50	1.25 x 2.00	1.25 x 2.50	1.25 x 3.00
	Perm. FV [kN]				
	KK/GK	KK/GK	KK/GK	KK/GK	KK/GK
1.60 – 4.39	37.5	37.6	37.0	36.1	35.3
4.34 – 4.89	37.3	37.3	36.5	35.7	34.9
4.84 – 5.39	36.9	37.2	36.5	35.6	34.8
5.34 – 5.89	36.0	36.8	36.0	35.2	34.4
5.84 – 6.39	35.0	36.3	35.5	34.4	33.4
6.34 – 6.89	34.0	35.4	34.8	33.7	32.6
6.84 – 7.39	33.0	35.1	34.0	32.9	31.7
7.34 – 7.89	31.5	34.6	33.4	32.3	30.9
7.84 – 8.39	31.0	34.0	32.5	31.3	30.2
8.34 – 8.89	29.8	33.3	31.8	30.5	29.0
8.84 – 9.39	28.2	32.5	31.2	29.7	28.2

$S_K \leq 20 \text{ cm}$, $S_F \leq 45 \text{ cm}$ "TR"

Height H [m]	Ground plan [m] - UH 25 + UH 150				
	1.25 x 1.00	1.25 x 1.50	1.25 x 2.00	1.25 x 2.50	1.25 x 3.00
	Perm. FV [kN]				
	KK/GK	KK/GK	KK/GK	KK/GK	KK/GK
1.60 – 4.39	40.7	43.7	44.0	42.0	39.2
4.34 – 4.89	40.0	43.4	43.6	41.7	38.9
4.84 – 5.39	39.3	43.0	43.1	41.3	38.5
5.34 – 5.89	38.8	42.2	42.5	40.6	37.8
5.84 – 6.39	38.2	41.4	41.8	39.8	37.0
6.34 – 6.89	38.0	41.1	41.5	39.7	36.8
6.84 – 7.39	37.8	40.8	41.2	39.6	36.6
7.34 – 7.89	37.1	40.2	40.6	39.0	36.0
7.84 – 8.39	36.4	39.6	39.9	38.3	35.3
8.34 – 8.89	35.4	39.2	39.6	38.0	34.9
8.84 – 9.39	33.6	38.8	39.2	37.6	34.4

$S_K \leq 30 \text{ cm}$, $S_F \leq 35 \text{ cm}$ "TR"

Height H [m]	Ground plan [m] - UH 25 + UH 150				
	1.25 x 1.00	1.25 x 1.50	1.25 x 2.00	1.25 x 2.50	1.25 x 3.00
	Perm. FV [kN]				
	KK/GK	KK/GK	KK/GK	KK/GK	KK/GK
1.60 – 4.39	36.4	36.1	35.2	34.6	34.0
4.34 – 4.89	36.4	35.8	34.8	34.1	33.5
4.84 – 5.39	36.1	35.3	34.5	33.7	33.0
5.34 – 5.89	35.7	34.9	34.0	33.1	32.4
5.84 – 6.39	35.0	34.3	33.4	32.6	31.7
6.34 – 6.89	34.1	33.3	32.3	31.5	31.1
6.84 – 7.39	33.7	32.9	31.9	31.3	30.6
7.34 – 7.89	33.0	32.5	31.5	30.6	30.0
7.84 – 8.39	32.6	32.0	31.4	30.4	29.6
8.34 – 8.89	32.1	31.5	30.7	29.7	29.0
8.84 – 9.39	31.8	31.0	30.3	29.4	28.6

$S_K \leq 20 \text{ cm}$, $S_F \leq 45 \text{ cm}$ "TR"

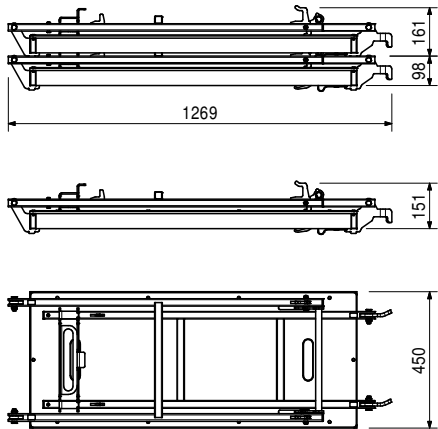
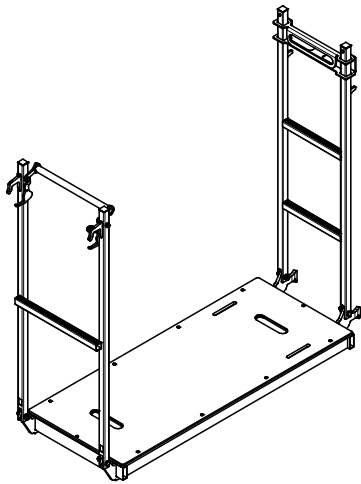
Height H [m]	Ground plan [m] - UH 25 + UH 25				
	1.25 x 1.00	1.25 x 1.50	1.25 x 2.00	1.25 x 2.50	1.25 x 3.00
	Perm. FV [kN]				
	KK/GK	KK/GK	KK/GK	KK/GK	KK/GK
1.60 – 4.39	42.6	44.9	44.0	41.7	38.9
4.34 – 4.89	41.9	44.8	43.9	41.7	38.7
4.84 – 5.39	41.2	44.6	43.7	41.6	38.4
5.34 – 5.89	40.5	44.6	43.5	41.1	37.9
5.84 – 6.39	39.8	43.5	43.2	40.6	37.4
6.34 – 6.89	39.6	43.2	43.1	40.6	37.4
6.84 – 7.39	39.3	42.9	43.0	40.6	37.4
7.34 – 7.89	38.6	42.3	42.8	40.6	37.4
7.84 – 8.39	37.9	41.6	41.6	39.7	36.6
8.34 – 8.89	37.5	41.3	41.3	39.5	36.4
8.84 – 9.39	37.0	41.0	40.9	39.2	36.1

$S_K \leq 30 \text{ cm}$, $S_F \leq 35 \text{ cm}$ "TR"

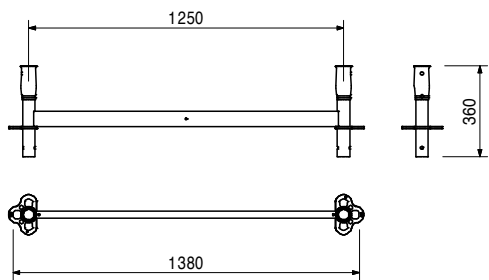
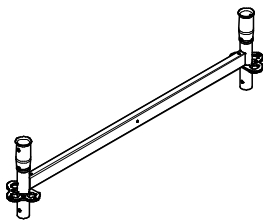
Height H [m]	Ground plan [m] - UH 25 + UH 25				
	1.25 x 1.00	1.25 x 1.50	1.25 x 2.00	1.25 x 2.50	1.25 x 3.00
	Perm. FV [kN]				
	KK/GK	KK/GK	KK/GK	KK/GK	KK/GK
1.60 – 4.39	37.8	36.2	35.5	34.8	34.4
4.34 – 4.89	36.8	36.1	35.3	34.5	33.8
4.84 – 5.39	36.8	35.8	35.1	34.4	33.6
5.34 – 5.89	36.3	35.6	34.6	33.9	33.0
5.84 – 6.39	35.9	35.1	34.0	33.3	32.5
6.34 – 6.89	35.0	34.3	33.3	32.4	31.7
6.84 – 7.39	34.6	33.7	32.9	32.3	31.5
7.34 – 7.89	33.9	33.2	32.4	31.7	30.7
7.84 – 8.39	33.9	32.9	32.2	31.5	30.6
8.34 – 8.89	33.3	32.6	31.9	31.0	30.0
8.84 – 9.39	33.0	32.3	31.5	30.8	29.7

Item no.	Weight kg	
125631	14.800	Platform MDS 125

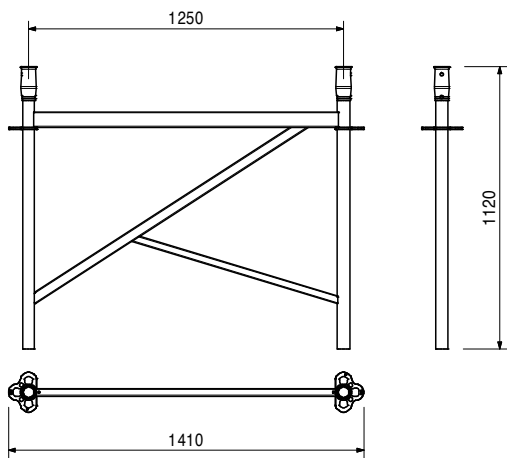
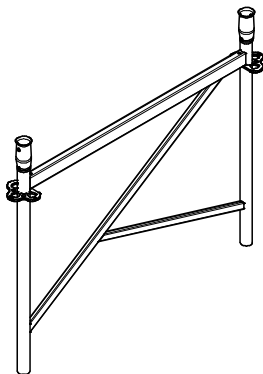
Technical Data
Permissible load 2.0 kN/m².



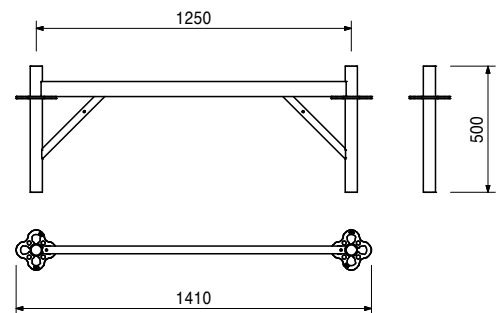
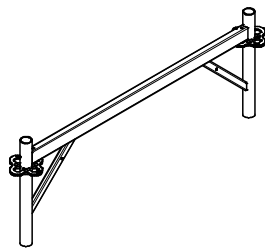
112012	6.650	Base Frame MDS
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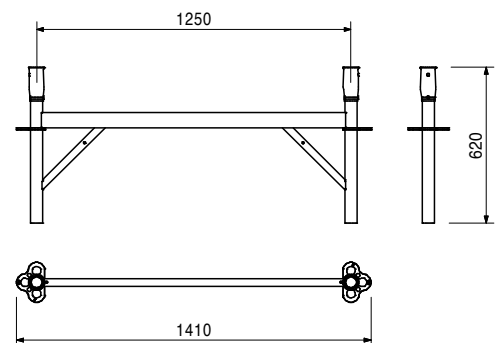
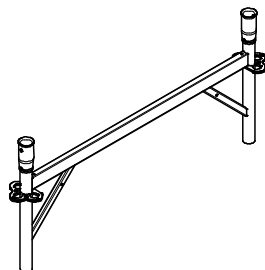
131806	15.100	Frame MDS 100 K
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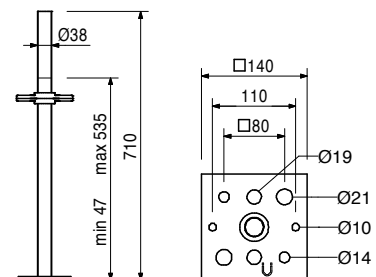
Item no.	Weight kg	
112059	8.640	End Frame MDS 50



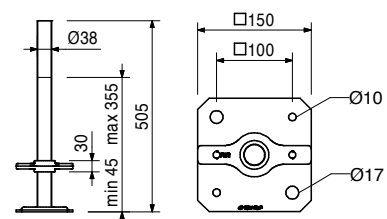
112034	9.190	Intermediate Frame MDS 50
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019780	5.250	Base Spindle TR 38-70/50 For heavily loaded shoring.	Note With captive silver Quick Jack Nut.
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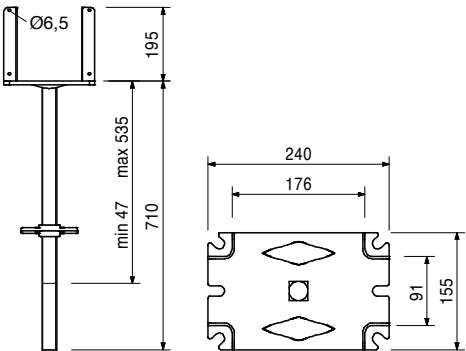
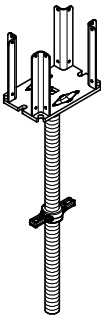
100411	3.390	Adj. Base Plate UJB 38-50/30	Note With captive red Quick Jack Nut.
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Item no.	Weight kg
019950	7.770

Cross Forkhead TR 38-70/50
Tilt-resistant head spindle for holding one or two GT 24 or VT 20 Girders.

Note
With captive Quick Jack Nut.

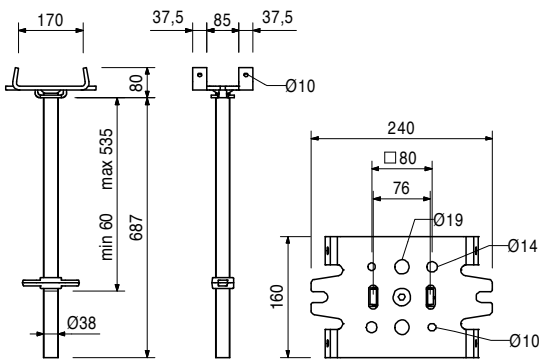
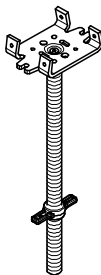


Accessories
Tension Strap 16-25, galv.

028590	0.568
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116081	7.040	Head Spindle-2 TR 38-70/50 Maximum inclination of the head plate on all sides 4.4°.
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Note
With locking device and captive Quick Jack Nut.

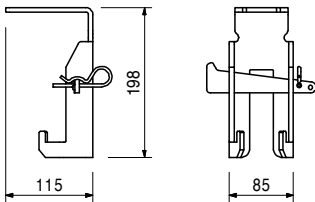
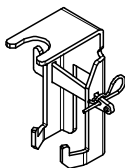


Accessories
Tension Strap 16-25, galv.
Cross Strap, galv.

028590	0.568
018300	0.564

109563	1.460	Head Spindle Locking UJH Connects Head Spindle and Section Spindle with Ledger UH when moving.
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Complete with
1 pc. 018060 Cotter Pin 4/1, galv.
Technical Data
Permissible load 2.1 kN.



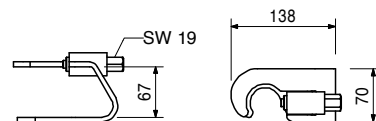
Item no.	Weight kg
100863	1.020

Spindle Locking UJS

Secures the Adjustable Base Plates and Section Spindles Ø 38 mm in the leg while moving.

Technical Data

Permissible load 1.5 kN.



114613	1.420
114595	2.070
114629	2.730
114632	4.390
114638	5.340
114641	4.710
117032	5.380
114645	6.040
116356	6.700
114648	7.360
114651	8.680
114654	11.300

Ledgers UH Plus

Ledger UH 25 Plus

Ledger UH 50 Plus

Ledger UH 75 Plus

Ledger UH 100 Plus

Ledger UH 125 Plus

Ledger UH 150 Plus

Ledger UH 175 Plus

Ledger UH 200 Plus

Ledger UH 225 Plus

Ledger UH 250 Plus

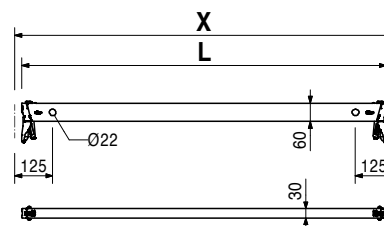
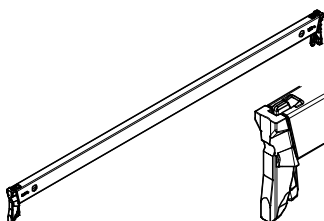
Ledger UH 300 Plus

Ledger UH 400 Plus

L	X
204	250
454	500
704	750
954	1000
1204	1250
1454	1500
1704	1750
1954	2000
2204	2250
2454	2500
2954	3000
3954	4000

Note

Longitudinally-stamped for easier identification.

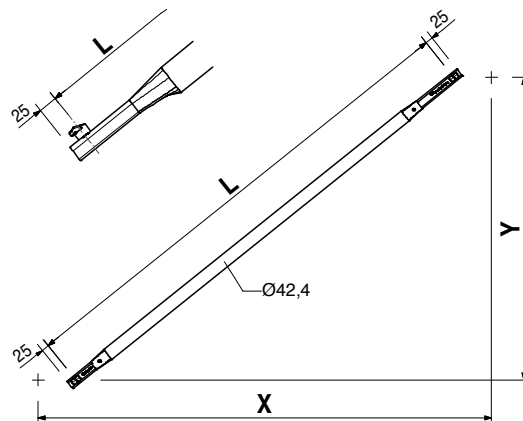
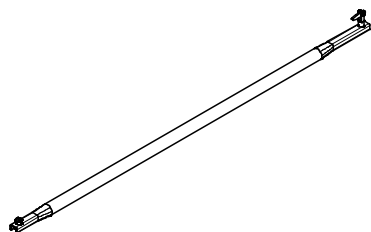


Item no.	Weight kg		L	X	Y
		Ledger Braces UBL			
115156	2.660	Ledger Brace UBL 100/50	901	1000	500
115513	4.640	Ledger Brace UBL 100/150	1677	1000	1500
106613	3.610	Ledger Brace UBL 104/100	1274	1040	1000
107867	3.790	Ledger Brace UBL 150/50	1347	1500	500
100055	4.440	Ledger Brace UBL 150/100	1601	1500	1000
102846	5.340	Ledger Brace UBL 150/150	1953	1500	1500
100057	6.380	Ledger Brace UBL 150/200	2358	1500	2000
109034	6.740	Ledger Brace UBL 175/200	2500	1750	2000
104391	5.000	Ledger Brace UBL 200/50	1820	2000	500
100059	5.510	Ledger Brace UBL 200/100	2016	2000	1000
102862	6.240	Ledger Brace UBL 200/150	2305	2000	1500
100061	7.150	Ledger Brace UBL 200/200	2658	2000	2000
130282	5.620	Ledger Brace UBL 225/50	2062	2250	500
130283	6.070	Ledger Brace UBL 225/100	2236	2250	1000
117689	7.580	Ledger Brace UBL 225/200	2829	2250	2000
100063	6.640	Ledger Brace UBL 250/100	2462	2500	1000
102861	7.260	Ledger Brace UBL 250/150	2705	2500	1500
100065	8.050	Ledger Brace UBL 250/200	3010	2500	2000
104762	7.490	Ledger Brace UBL 300/50	2795	3000	500
100067	7.830	Ledger Brace UBL 300/100	2926	3000	1000
104766	8.360	Ledger Brace UBL 300/150	3133	3000	1500
100069	9.040	Ledger Brace UBL 300/200	3400	3000	2000

Mounted in the holes of the ledger.

Note

Longitudinally-stamped for easier identification.
 UBL 150/250 identical to UBL 300/50,
 UBL 225/150 identical to UBL 175/200,
 UBL 250/50 identical to UBL 200/150.
 UBL 75/200 identical to UBL 225/50.
 UBL 100/100 identical to Diagonal Strut ST 100
 (Item no. 019940).



PERI UP Flex Shoring Tower MDS K



Item no.	Weight kg
019200	162.000

Trolley with Winch

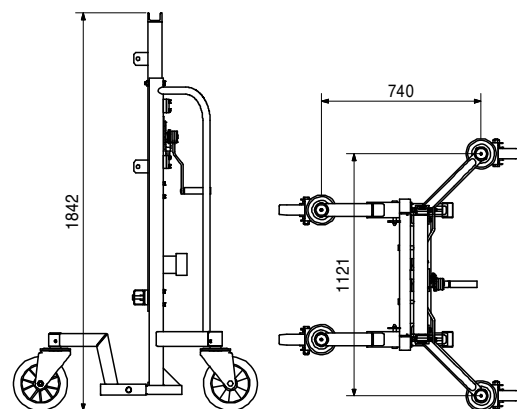
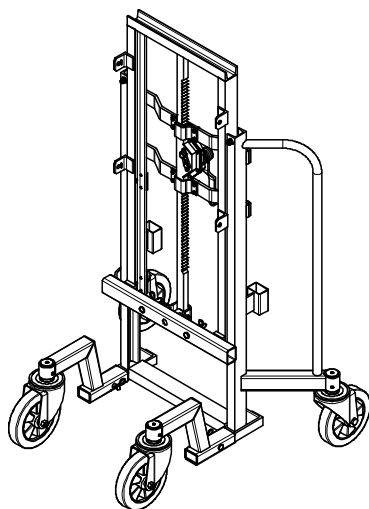
For moving towers and tables with MULTIPROP, PERI UP Flex, PERI UP Flex Plus, PERI UP Flex MDS K and PD 8 with appropriate support for the system.

Note

Follow Instructions for Use!

Technical Data

Permissible load-bearing capacity 1.0 t.



Accessories

118114	14.200
130501	27.600
118605	21.500
117954	21.200
118115	11.000

Connector MP - Trolley

Connector PERI UP - Trolley

Connector Rosett - Trolley

Connector Rosett Plus - Trolley

Connector PD 8 - Trolley

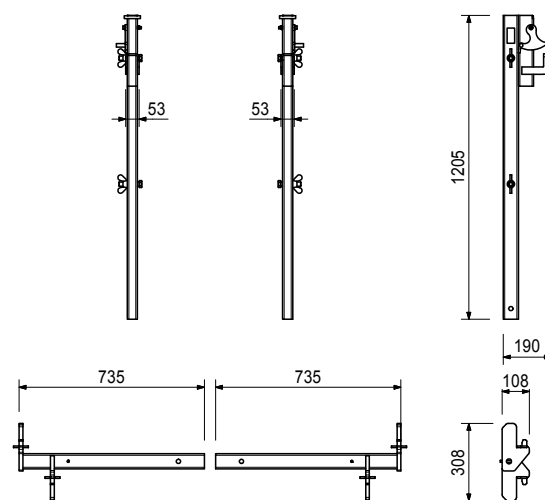
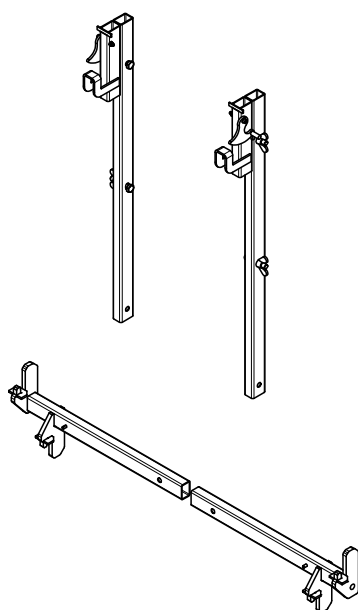
130501	27.600
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Connector PERI UP - Trolley

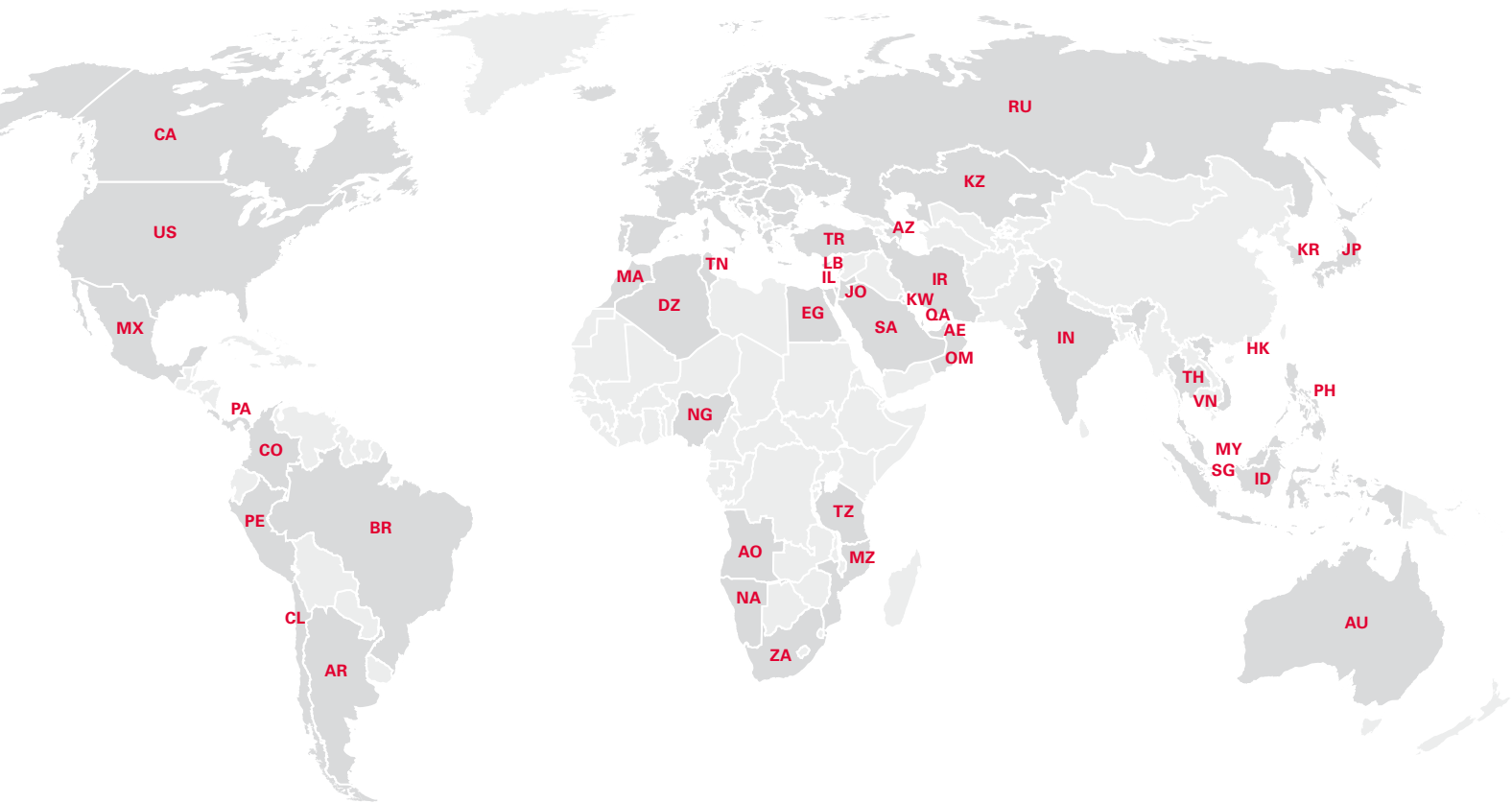
For moving PERI UP Flex Shoring Tower, Shoring Tower Plus and Shoring Tower MDS K with Trolley with Winch.

Note

Consisting of 4 parts:
Support left and right.



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