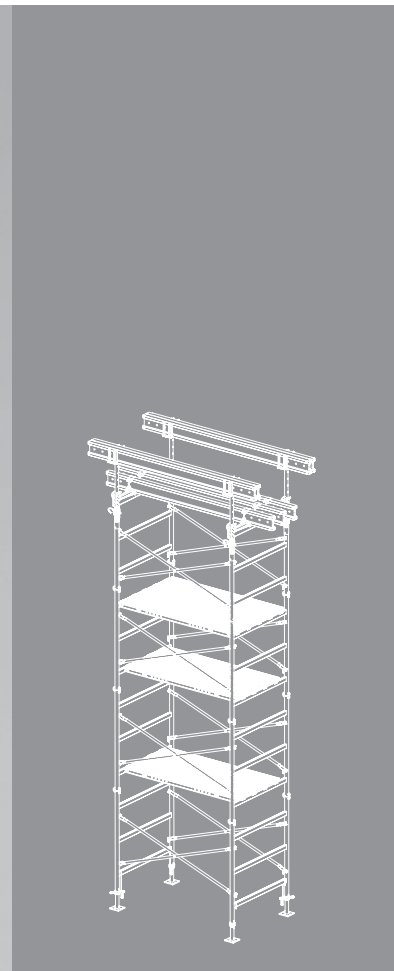
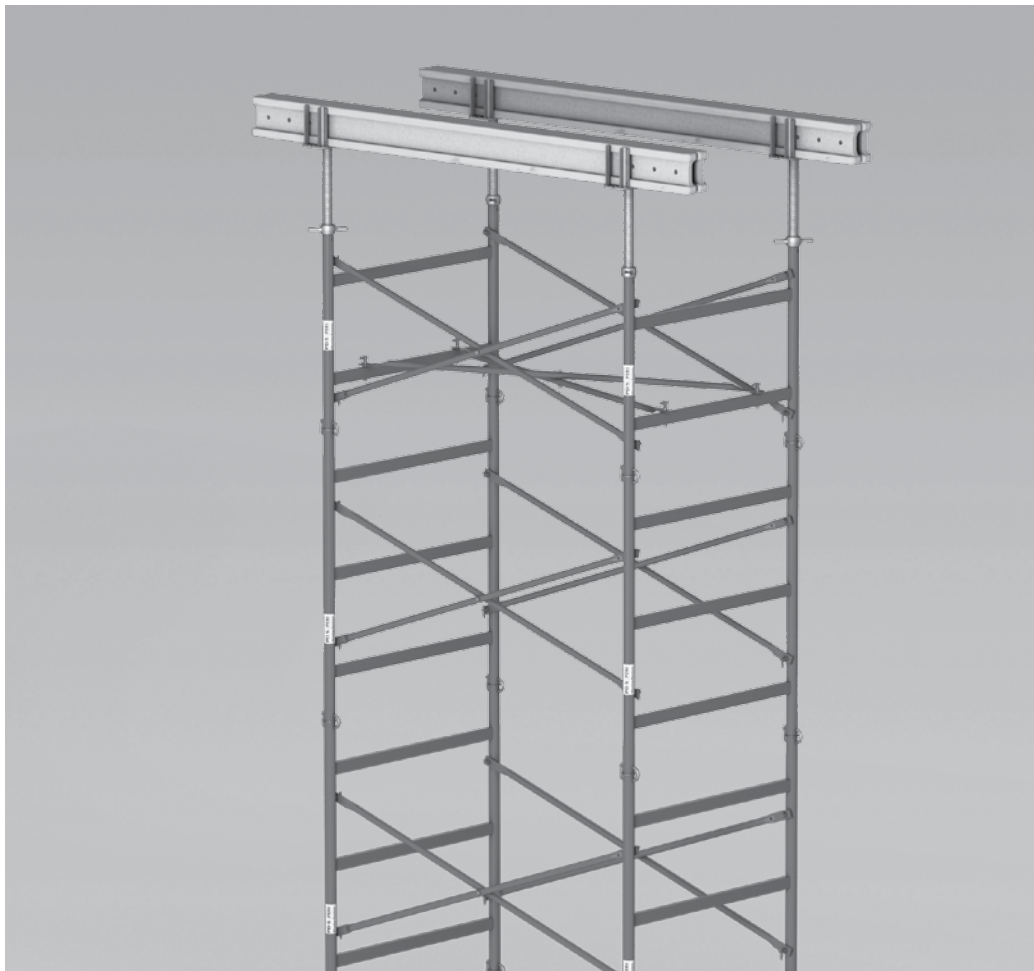
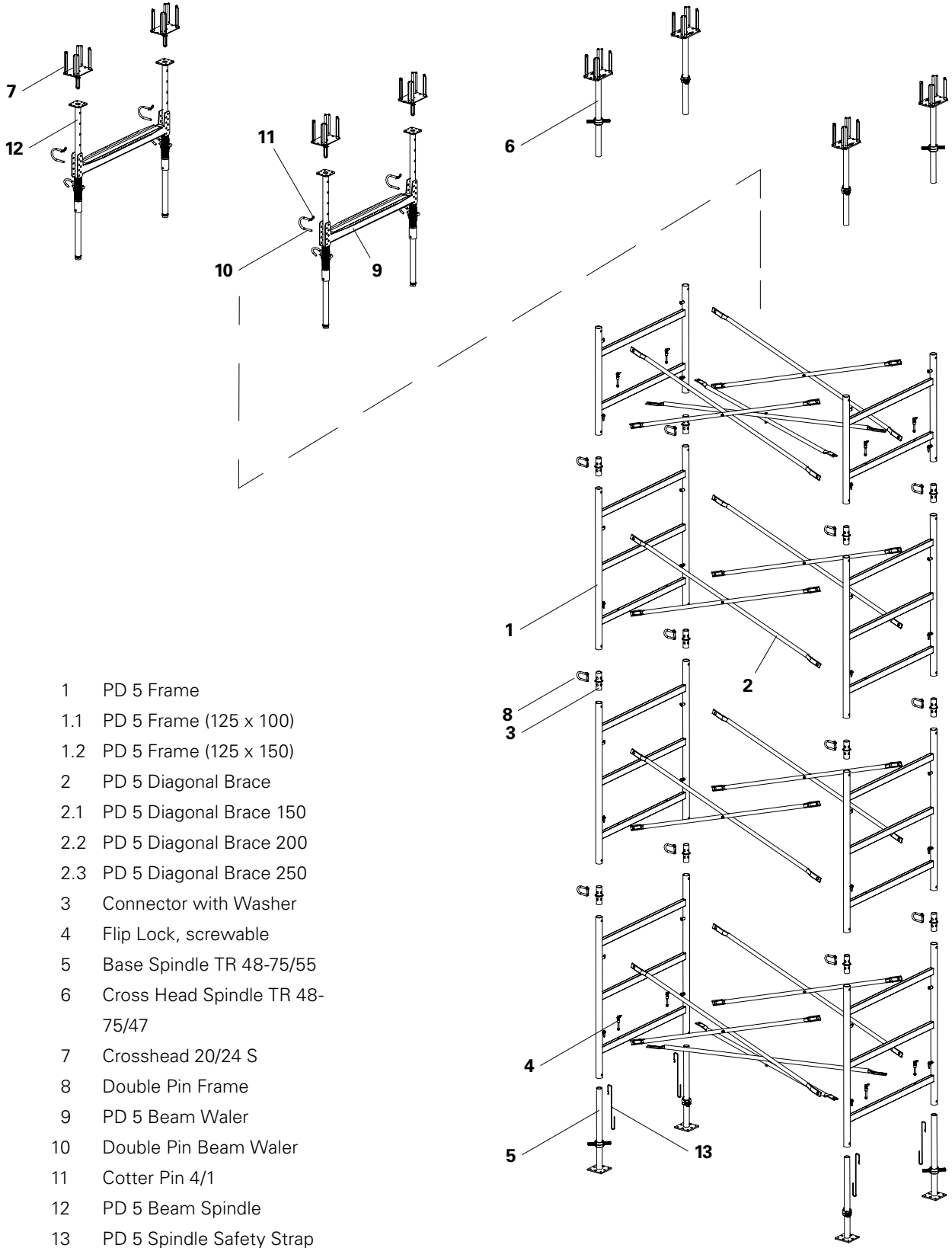


PD 5 Shoring System

Instructions for Assembly and Use – Standard Configuration – Issue 12/2018



Main components



- 1 PD 5 Frame
- 1.1 PD 5 Frame (125 x 100)
- 1.2 PD 5 Frame (125 x 150)
- 2 PD 5 Diagonal Brace
- 2.1 PD 5 Diagonal Brace 150
- 2.2 PD 5 Diagonal Brace 200
- 2.3 PD 5 Diagonal Brace 250
- 3 Connector with Washer
- 4 Flip Lock, screwable
- 5 Base Spindle TR 48-75/55
- 6 Cross Head Spindle TR 48-75/47
- 7 Crosshead 20/24 S
- 8 Double Pin Frame
- 9 PD 5 Beam Waler
- 10 Double Pin Beam Waler
- 11 Cotter Pin 4/1
- 12 PD 5 Beam Spindle
- 13 PD 5 Spindle Safety Strap

Overview

Main components	3
Key	4

Introduction

Target groups	5
Additional technical documentation	5
Intended use	6
Instructions on use	6
Cleaning and maintenance instructions	7

Safety instructions

Cross-system	8
System-specific	9
Storage and transportation	9
Safety during assembly	10

Assembly and Dismantling

A1 Vertical assembly	12
Base	12
Additional levels	15
Top level	17
General	17
"Slab formwork" application	18
"Beam with slab formwork" application	19
A2 Horizontal assembly	22
Base	22
Ensuring the right-angled position	22
Additional levels	23
Top level	25
Erecting the PD 5 tower	26
A3 Moving	27
Moving with the crane	27
Moving operations using the Trolley and Winch	28
A4 Dismantling	29
Dismantling the top level	29
Dismantling additional levels	29
A5 Bracing the PD 5 tower	30
Bracing with Push-Pull Props	30
Bracing with units	31

Logistics

B1 Storage and transportation	34
Pallets and stacking devices	34
Packaging units	35

Tables

C1 Load tables	36
PD 5 shoring tower	36
PD 5 shoring tower with Beam Waler	37
C2 Material requirements	40
Height adjustment	40
Increasing the leg load	40
Required components per tower	42
PD 5 shoring tower	42
PD 5 shoring tower with Beam Waler	42

Components

Components	44
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Key

Pictogram | Definition



Danger / warning / caution



Note



To be complied with



Load-bearing point



Visual check



Tip

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 situations in which 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).
- 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. Some safety installations which have possibly not been shown in these detailed descriptions must nevertheless 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 purposes, or use
- it for, e.g. concreting, or
- 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 health and safety 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 personnel

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 personnel must have received instruction** 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 for

safely assembling, modifying or dismantling the scaffolding.

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

- Instructions for Assembly and Use
 - MULTIFLEX Girder Slab Formwork
- Instructions for Use
 - Pallets and Stacking Devices
 - Trolley with Winch Unit
- Data Sheet for Anchor Bolt PERI 14/20 x 130
- PERI Design Tables - Formwork and Shoring
- Brochure for PD 5 Shoring System

Intended use

Product description

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

The PD 5 shoring system

- serves as support scaffolding for transferring vertical loads.
- has a temporary use on the construction site.
- allows a wide range of project-specific application possibilities.

Features

The PD 5 shoring system is used in shoring operations in a planned vertical position for transferring vertical and, in part, horizontal loads.

All main components are protected against corrosion by powder coating.

The main features of the PD 5 system are the rigid shoring frame and the tool-free assembly and dismantling operations by hand.

A special feature is the simultaneous support of slab formwork and beams within a shoring tower.

By combining the two frame heights, all support heights can be continuously realised. The very tight frame connections is carried out only by means of a Double Pin Frame.

The Diagonal Braces which provide stiffening in the longitudinal direction of the tower are also used horizontally for bracing purposes during assembly operations and are unchanged for the different frame heights.

System dimensions

Ground plans of the standard configuration

- 125 x 150 cm
- 125 x 200 cm - shown in Section A1
- 125 x 250 cm
- Assembly height up to 9.35 m.

Permissible load-bearing capacities

- Permissible load-bearing capacities comply with Design Class B1 in accordance with DIN EN 12812.
- Leg loads, see Section C.

Technical data

Operating temperature -20° C to +60° C

Instructions on use

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.

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

Cleaning and maintenance instructions

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

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

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

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

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

For cleaning work using pressurized water, a specially designed protective clothing and safety glasses must be worn.

Do not clean components suspended on crane lifting gear.

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

Cross-system

General

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

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
- functionality.

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 to 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 $\text{Ø } 48.3 \times 3.2 \text{ mm}$ according to EN 12811-1:2003 4.2.1.2.
- scaffold tube couplings according to EN 74.

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

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

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

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

- 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 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 (PPE) is required or specified in local regulations, the contractor must determine appropriate attachment points on the basis of the risk assessment.

The contractor stipulates the PPE to be used to prevent falling.

The contractor must

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

Utilisation

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

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

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

The PD 5 shoring system is not a climbing aid.

Suitable attachment points for personal protective equipment (PPE) are specified in the Section "Safety During Assembly".

Storage and transportation

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

Do not drop the components.

Use PERI lifting accessories and slings as well as only the lifting points provided on the component.

During the moving procedure

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

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

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

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

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

Attachment points for PSE



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

General information

- The use of personal protective equipment to prevent falling is regulated in the project-related risk assessment which is to be prepared by the contractor (user).
- When using personal protective equipment to prevent falling from a height, all valid standards and safety regulations must be taken into consideration by the scaffolding contractor.
- Each shoring tower must be secured against tipping by the user. See Section A5 "Bracing the PD 5 Tower".
- The application is valid for the assembly, modification and dismantling of shoring towers.

Permissible attachment points



All of the following rules must be complied with!

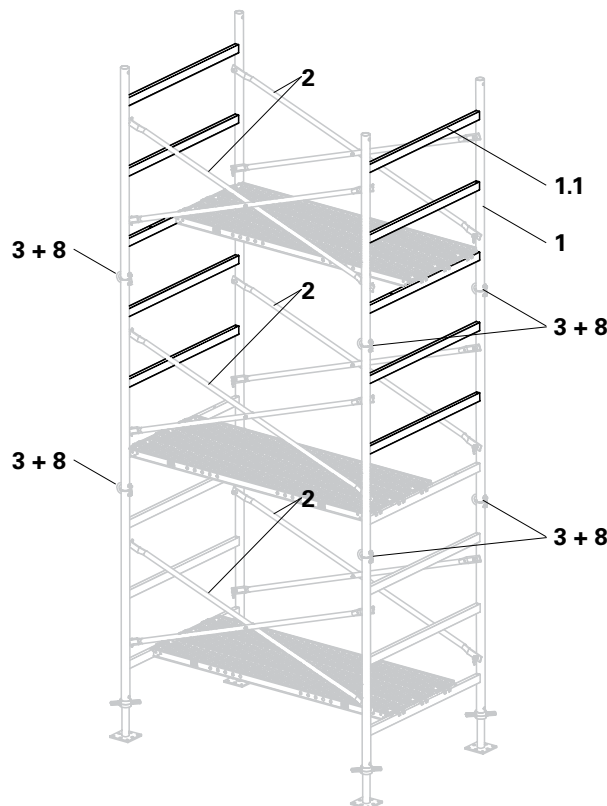
Permissible attachment points are:

- All cross bracing (1.1) of PD 5 Frames 100 or 150 (1),
 - which are braced with 2x Diagonal Braces (2),
 - which are properly connected to the PD 5 Frames positioned below by means of a Connector (3) and Double Pin (8).
- The shoring tower below the attachment level must be completely assembled. This means that all Diagonal Braces (2), Connectors (3) and Double Pins (8) have been installed.



Warning

- No safe working area is available during the assembly!
A fall can result in serious injury or even death.
⇒ Use personal protective equipment to prevent falling from a height.
- During assembly operations, components may slip off and fall to the ground!
Falling components could hit persons below which could lead to serious injuries or even death.
⇒ Wear a safety helmet, safety gloves and safety shoes.



Base



- The combination of the frame heights influences the load-bearing capacity, see Section C1 "Load Tables".
- To secure against tipping or horizontal movement, temporary support may be necessary during the installation process, see Section A5 "Bracing the PD 5 Tower".

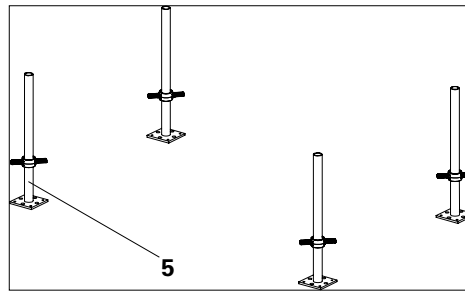


Fig. A1.01

Components

1	PD 5 Frame	2x
2	PD 5 Diagonal Brace	2x
5	Base Spindle TR 48-75/55	4x
13	PD 5 Spindle Safety Strap	4x

Assembly aids

20	Steel Deck UDG	4x
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Assembly

1. Spindle out the four Base Spindles TR 48-75/55 (5) to the required length and set up using the grid dimensions. (Fig. A1.01)
2. Insert one PD 5 frame (1) respectively into two Base Spindles TR 48-75/55 (5) (Fig. A1.02).



Note the set up of the frames: when inserting both PD 5 Frames, ensure that the cams are at the top and the gravity pins at the bottom.

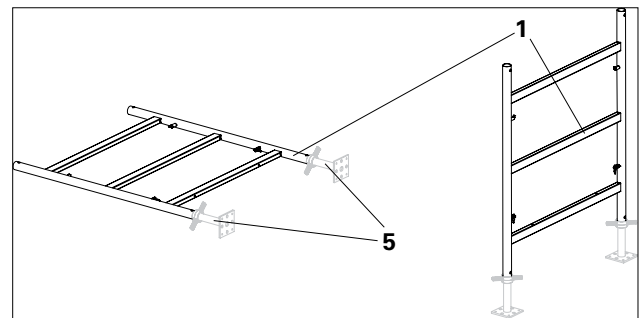


Fig. A1.02

3. Place PD 5 Frame in a vertical position and dimension as required.
4. Suspend the PD 5 Diagonal Brace (2) at the top on the cams (Fig. A1.03a) and then insert below over the gravity pin. Tilt the gravity pin downwards (Fig. A1.03b). Ensure that the Frame is secure against tipping. (Fig. A1.03)



Tilt the second frame slightly with the shoulder so that it is easier to hook in the Diagonal Brace.

Mount the PD 5 Diagonal Brace at the top on the cam.

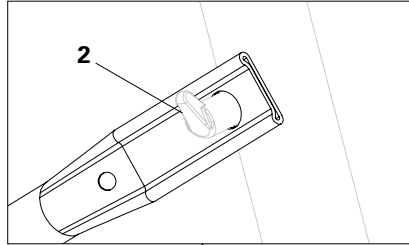


Fig. A1.03a

Insert the PD 5 Diagonal Brace at the bottom and tilt or close the gravity finger.

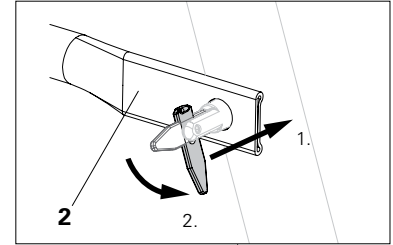


Fig. A1.03b

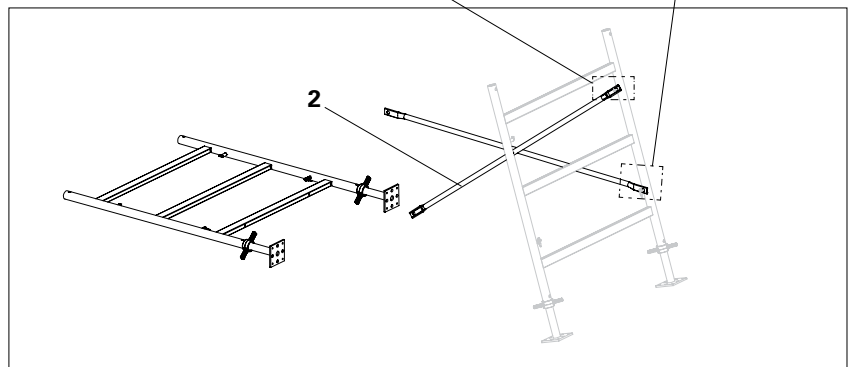


Fig. A1.03

5. Connect second PD 5 Frame with the PD 5 Diagonal Brace.
6. Mount the second PD 5 Diagonal Brace (2). (Fig. A1.04)
7. Lay out four Steel Decks UDG (20) on the bottom struts of the Frame. (Fig. A1.05)
 - The base level is thus aligned at right angles.
8. Horizontally align the base level using a spirit level.
9. Secure the Base Spindle (5) using Spindle Safety Straps (13). Attach the long side (13.1) to the Quick Jack Nut, then hang the short side (13.2) over the frame strut. (Fig. A1.05a).

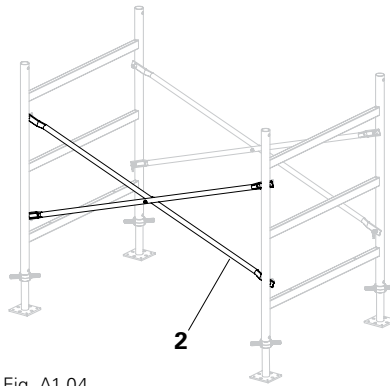


Fig. A1.04



When using Steel Decks UDG in the base, the perpendicularity of the system is ensured. If necessary, the complete assembly level can be covered with steel decking.

Alternatively:

Use four Flip Locks and PD 5 Diagonal Brace, see Section “A2 Horizontal Assembly”.

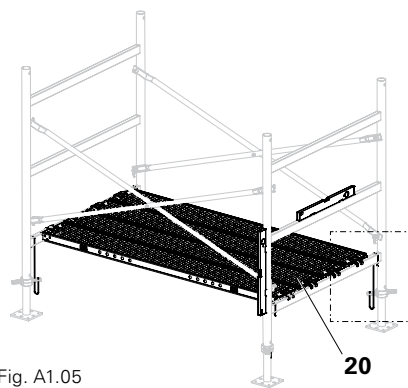


Fig. A1.05

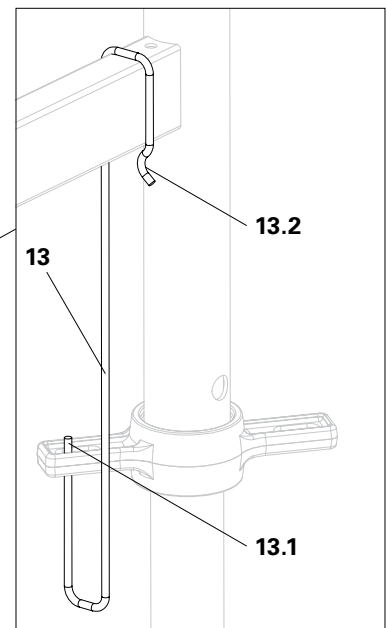


Fig. A1.05a

Additional levels

Components per level

1	PD 5 Frame	2x
2	PD 5 Diagonal Brace	2x
3	Connector with Washer	4x
8	Double Pin Frame	4x

Assembly aids

20	Steel Deck UDG	4x
-----------	----------------	----

Assembly

1. From the assembly level, insert the four Connectors with Washers (3) into the PD 5 Frame (1) of the lower level.
(Fig. A1.06 + Fig. A1.06a)

2. From the assembly level, mount additional PD 5 Frames on the lower level and secure with a Double Pin Frame (8). (Fig. A1.08a)



Note the set up of the frames: when inserting both PD 5 Frames, ensure that the cams are at the top and the gravity pins at the bottom.



Position the PD 5 Frame at an angle of 45 degrees on the PD 5 Frame of the lower level and let it slide down.
(Fig. A1.07)

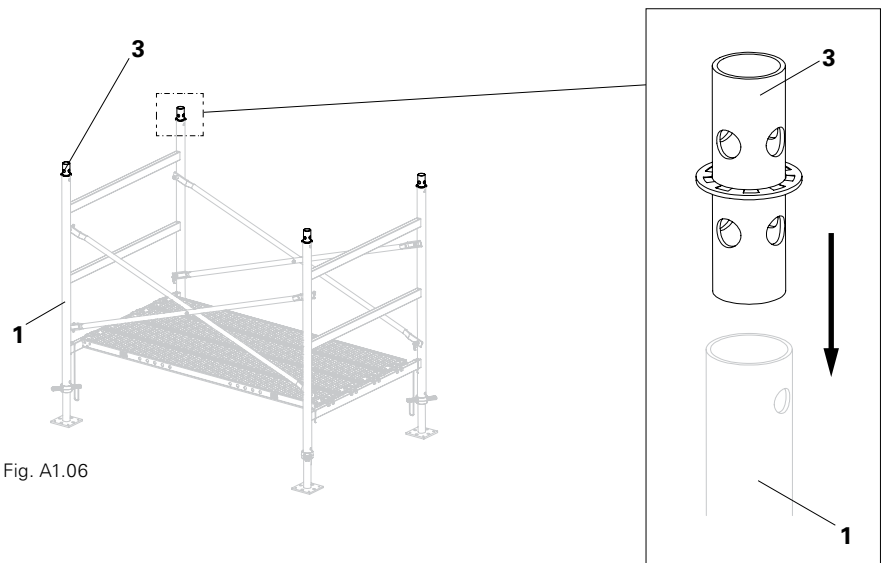


Fig. A1.06

Fig. A1.06a

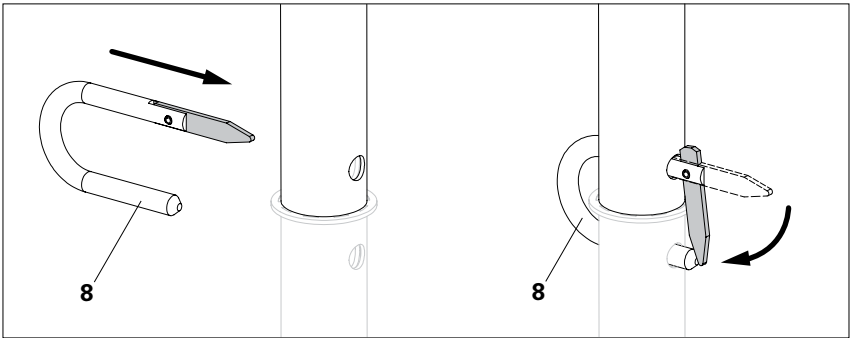


Fig. A1.08a

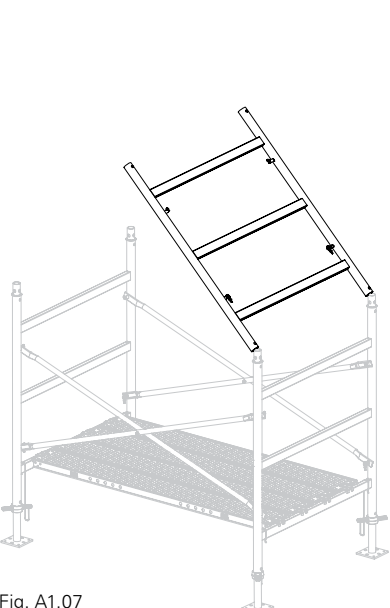


Fig. A1.07

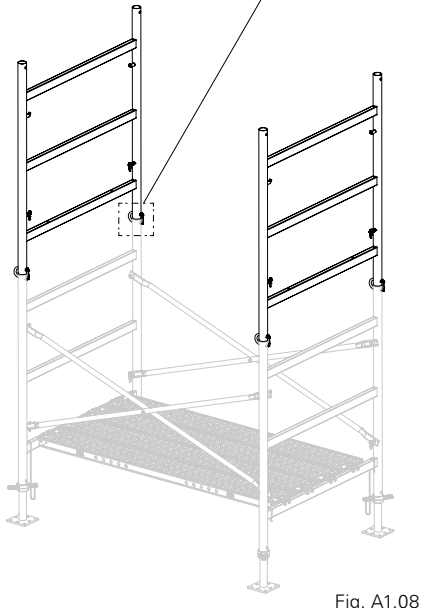


Fig. A1.08

3. Brace the level using PD 5 Diagonal Braces (2). (Fig. A1.09 + Fig. A1.09a)
4. For assembling the next higher level, install assembly decks. (Fig. A1.10)
5. Repeat Steps 1 to 4 for each additional level up to the top level.



Assembly heights and number of decks to be mounted according to the project-specific assembly instructions.



When assembling additional levels, decks (20) from the penultimate level can be removed and used for the next level. If necessary, install additional decking levels. (Fig. A1.10 to A1.13)

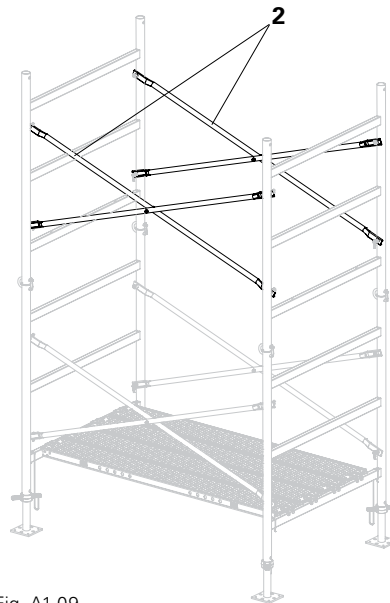


Fig. A1.09

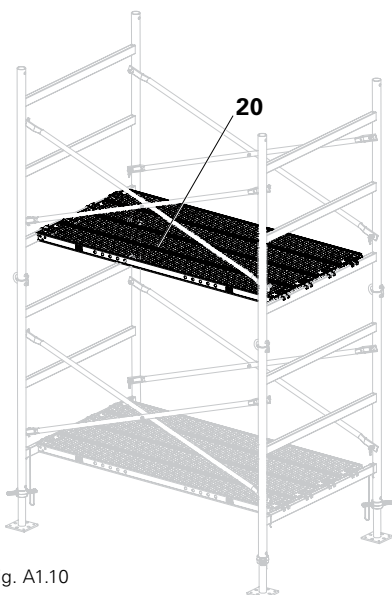


Fig. A1.10

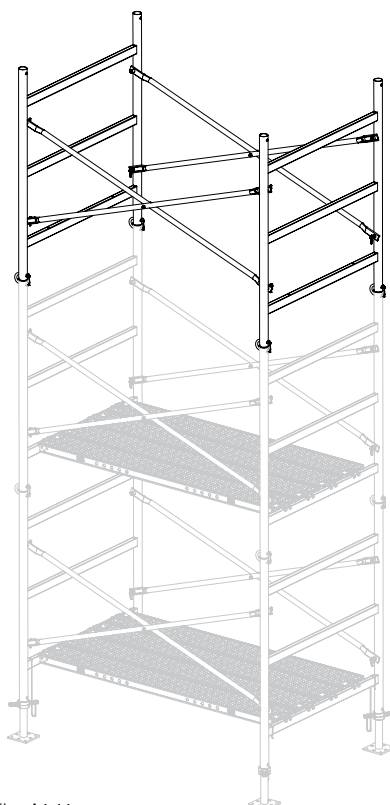


Fig. A1.11

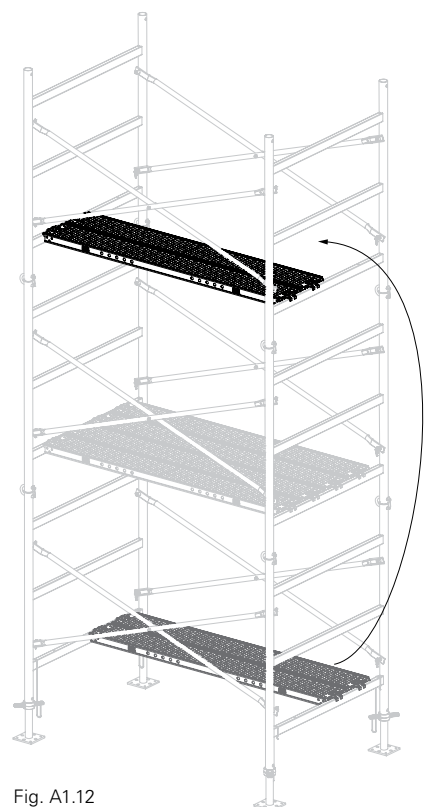


Fig. A1.12

Top level

General

Components

1	PD 5 Frame	2x
2	PD 5 Diagonal Brace	2x
3	Connector with Washer	4x
8	Double Pin Frame	4x

Assembly level

20	Steel Deck UDG	5x
-----------	----------------	----

Assembly

1. Assemble the top level as described in Section A1.2 "Additional Levels". (Fig. A1.13)



Install the top assembly level at a height from which the Cross Head Spindle or Beam Spindle can be safely mounted. (Fig. A1.14)

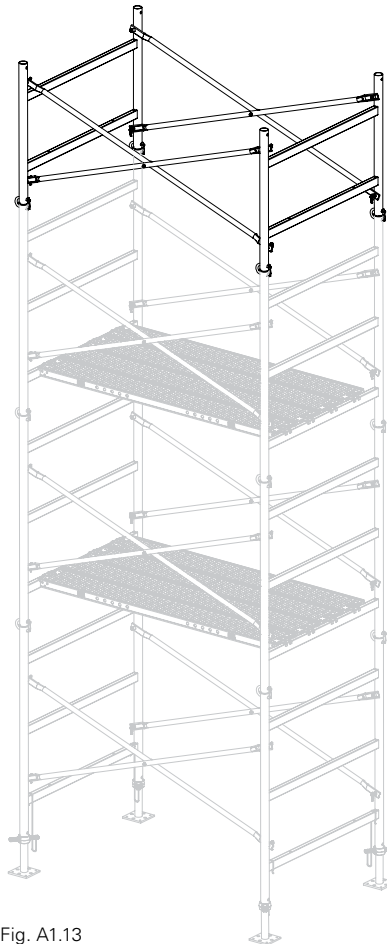


Fig. A1.13

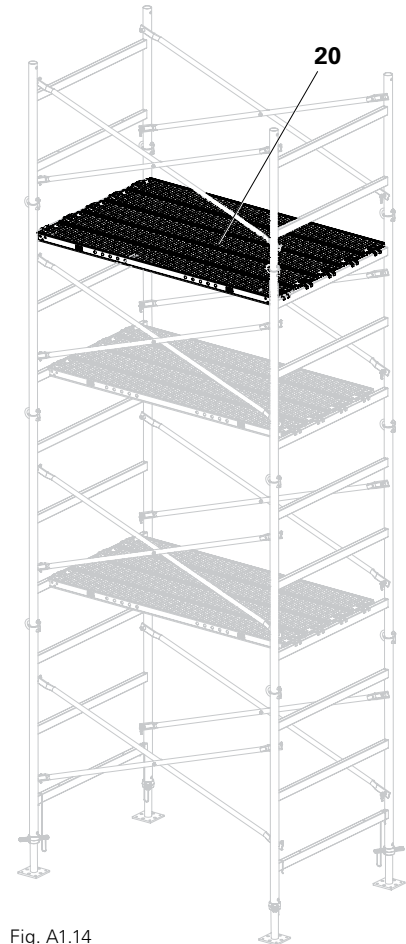


Fig. A1.14

“Slab Formwork” application

Components

-
- 6** Cross Head Spindle TR 48-75/47
4x
-

Assembly

1. Insert all Cross Head Spindles TR 48-75/47 (6) into the frame of the top level and spindle out to required length. (Fig. A1.15)

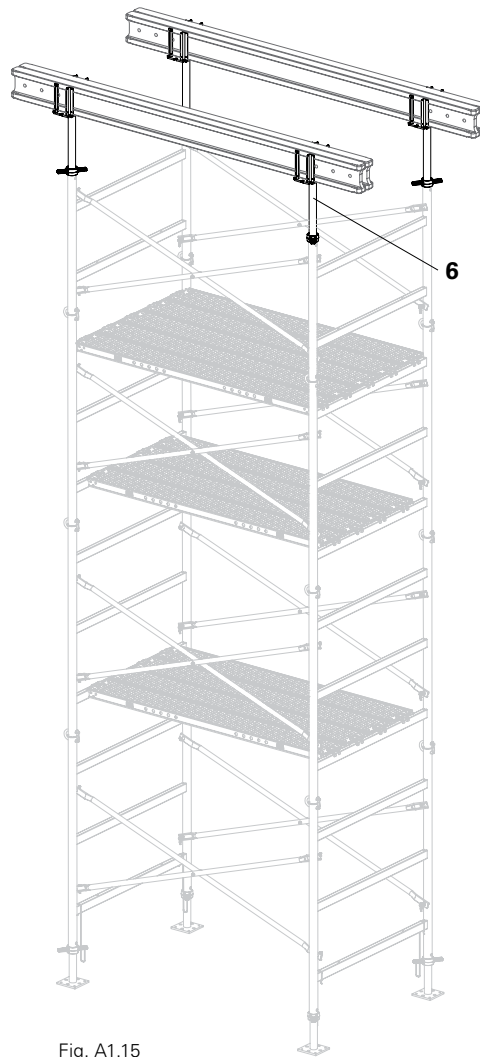


Fig. A1.15

“Beam with Slab Formwork” application

Components of top level beam

7	Crosshead 20/24 S	4x
9	Beam Waler	2x
10	Double Pin Beam Waler	4x
11	Cotter Pin 4/1	4x
12	PD 5 Beam Spindle	4x

Assembly

1. Disconnect all PD 5 Beam Spindles (12) with G-hooks (Fig. A1.16b) in advance and insert into the frame of the top level.
2. Insert Crossheads 20/24 S (7) in the PD 5 Beam Spindles. (Fig. A1.16 + A1.16a)

Alternatively

Crossheads 20/24 can be used instead of Crossheads 20/24 S. Secure Crossheads 20/24 with bolts and cotter pins.



For PD 5 Frame 100 in the top level:

The slab load must not be transferred from the Beam Spindle (12) to the Double Pin Frame (8).

For spindle extensions < 50 cm (x), the Spindle collides with the Double Pin Frame.

In the top level, one PD 5 Frame 150 must then be mounted.

Install a possibly required compensation frame in the penultimate level.

Adjustment dimension (x) Beam Spindle

with PD 5 Frame 100:	50 - 100 cm
with PD 5 Frame 150:	32 - 100 cm

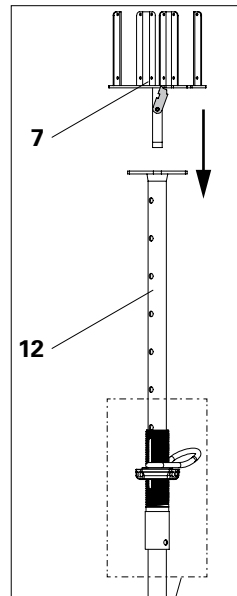


Fig. A1.16a

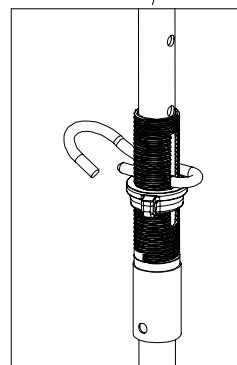


Fig. A1.16b

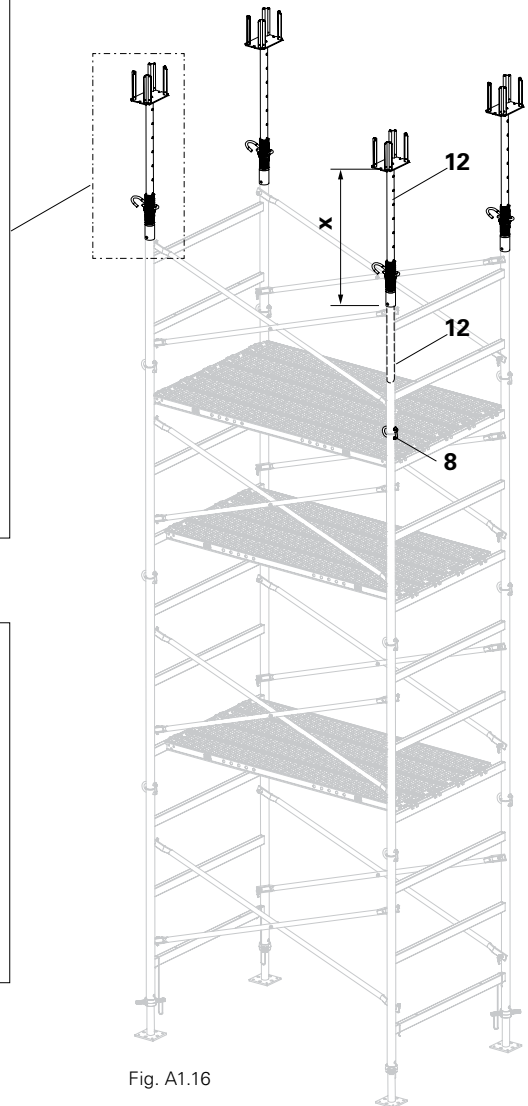


Fig. A1.16

3. Install PD 5 Beam Waler (9) between the PD 5 Beam Spindles (12). For this, insert the PD 5 Beam Waler diagonally between the PD 5 Beam Spindles. Attach one side ① below and slide the other side ② from top to bottom until the PD 5 Beam Waler is at the same height. (Fig. A1.17)
4. Set the PD 5 Beam Waler to the required length and secure using the Double Pin Beam Waler (10) and Cotter Pin 4/1 (11) on both sides. (Fig. A1.18)



For assembling the Beam Waler, there must be sufficient space above. (Fig. A1.17)

If necessary, release the connections with G-hooks again and extend the Beam Spindle to match the required dimension.

Then re-adjust the Beam Spindle with the G-hook to suit the required height.

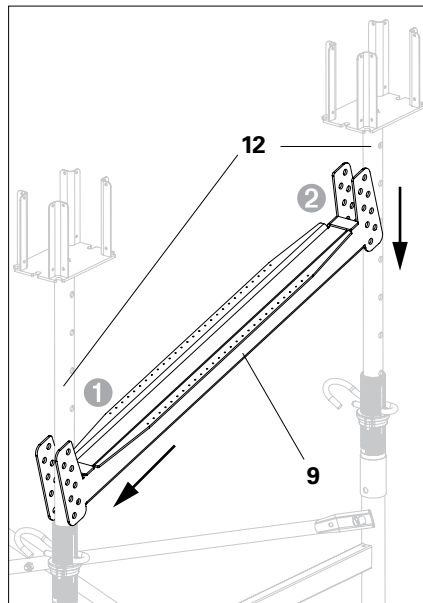


Fig. A1.17

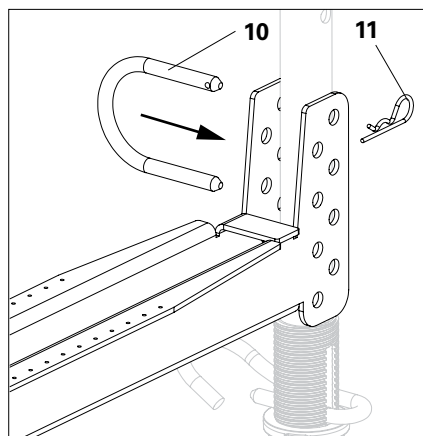


Fig. A1.18

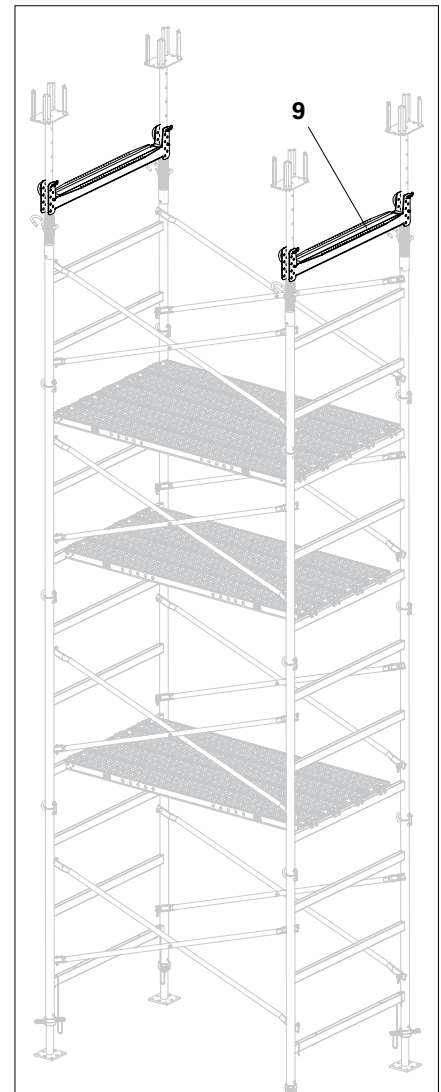


Fig. A1.19

A1 Vertical Assembly

Height adjustment

With each pair of holes in the PD 5 Beam Spindle, the height of the Beam Waler can be adjusted by 100 mm.

Within each pair of holes, the height of the Beam Waler can be adjusted in increments of 25 mm.

Hole 1+5, right row	= +/- 0 mm
Hole 2+6, left row	= + 25 mm
Hole 3+7, right row	= + 50 mm
Hole 4+8, left row	= + 75 mm

(Fig. A1.22)

Assembly example

For the right row of holes, see Fig. A1.21.

For the left row of holes, see Fig. A1.22.

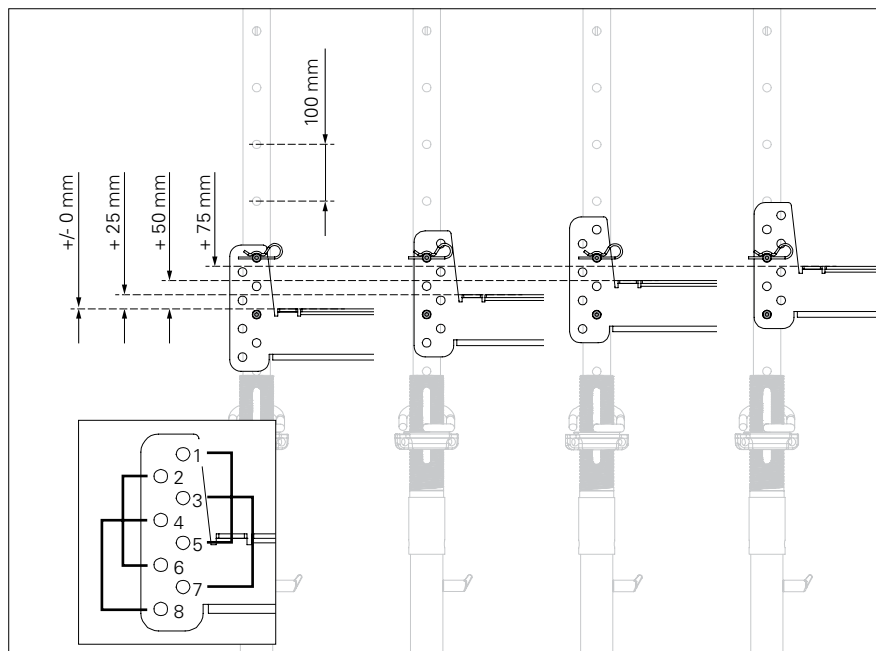


Fig. A1.20

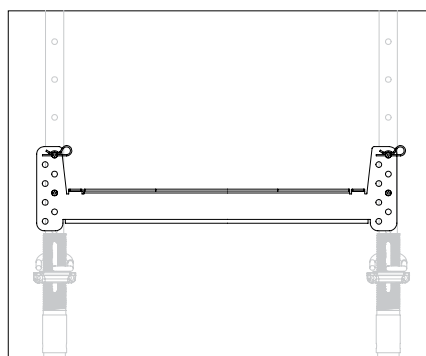


Fig. A1.21

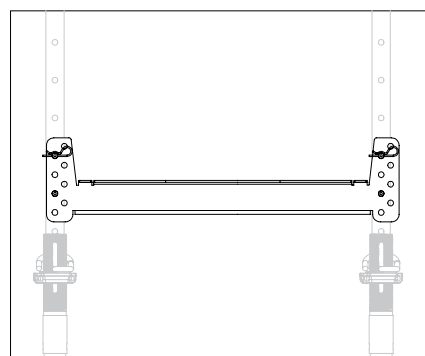
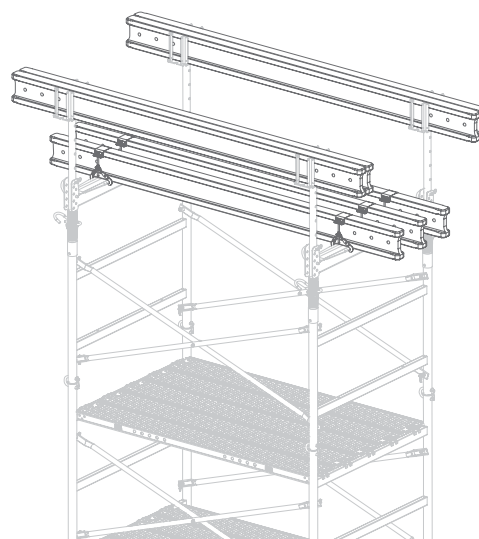


Fig. A1.22



Base

Assembly

Base assembly as described in Section A1.1 "Base".

Ensuring a right-angled position

Additional components

2	PD 5 Diagonal Brace	1x
4	Flip Lock, screwable	4x
13	PD 5 Spindle Safety Strap	4x

Assembly

1. Insert Flip Lock (4) through the hole in the frame strut and tighten from below with using the collar nut. Align the securing plate (4.1) parallel to the frame strut and in the tilting direction. Flip Lock thereby secured even if the tower is laid down. (Fig. A2.01 + A2.01a)
2. Mount one PD 5 Diagonal Brace (2) in the base:
Straighten the screwable Flip Locks (4), attach PD 5 Diagonal Brace (2) and fold back the screwable Flip Locks. (Fig. A2.02)
3. Secure the Base Spindles TR 48-75/55 (5) using PD 5 Spindle Safety Straps (13). Attach the long side (13.1) to the Quick Jack Nut, then hang the short side (13.2) over the frame strut. (Fig. A2.03)

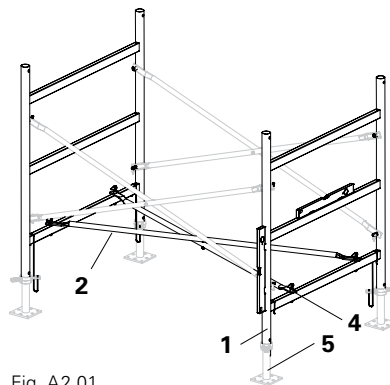


Fig. A2.01

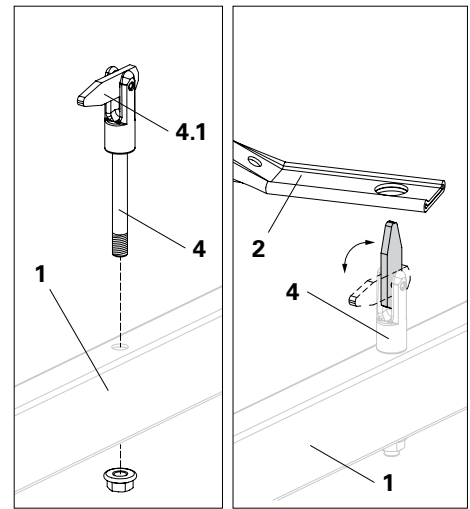


Fig. A2.01a

Fig. A2.02

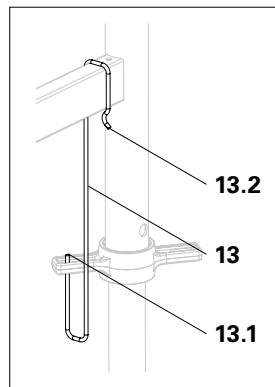


Fig. A2.03



Alternatively: mount 2 scaffold tubes \varnothing 48 mm crosswise with 4 Swivel Couplings RS 60/48 on the frame strut.

Additional levels

Components per level

1	PD 5 Frame	2x
2	PD 5 Diagonal Brace	2x
3	Connector with Washer	4x
8	Double Pin Frame	4x

Assembly

1. Position girders or timbers on the ground as an assembly aid. Take into account the length of the finished PD 5 tower.
2. Tip the base sideways onto the timbers (or girders). (Fig. A2.04)
3. Insert four Connectors with Washers (3) into the PD 5 Frames (1) of the lower level and secure them on one side using the Double Pin Frame (8). (Fig. A2.05 and Fig. A2.05a)

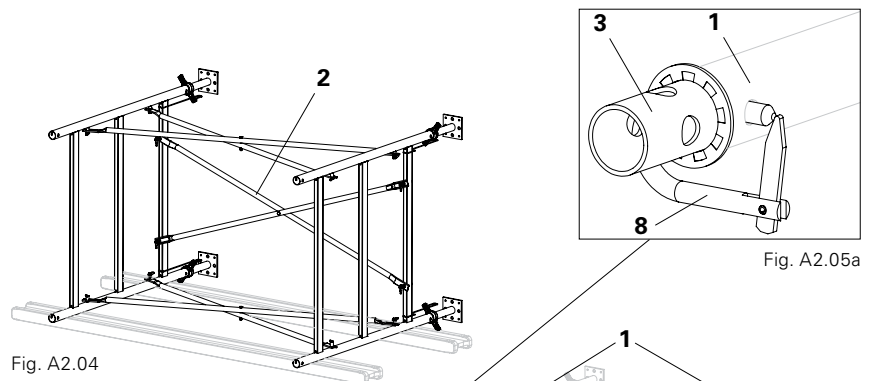


Fig. A2.04

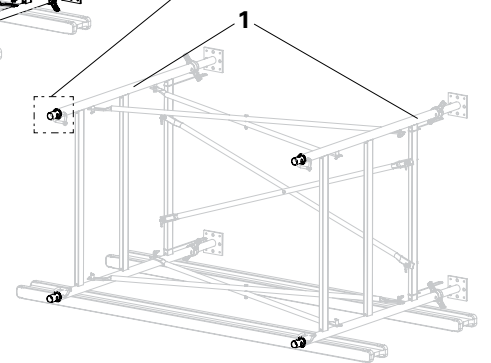


Fig. A2.05

A2 Horizontal Assembly

4. Attach two PD 5 Frames to the PD 5 Frame on the lower level, remove the Double Pin Frame (8) inserted on one side and insert on both sides in order to secure both PD 5 Frames. (Fig. A2.06)
5. Mount one PD 5 Diagonal Brace (2) on the lower side, see Section "A1 Vertical Assembly - Base". (Fig. A2.07)
6. Mount a second PD 5 Diagonal Brace (2) on the upper side. The PD 5 Diagonal Brace must rest on the tilted gravity pins. (Fig. A2.07 + A2.07a)
7. Repeat Points 3 to 6 for each additional level until the required height has been reached.

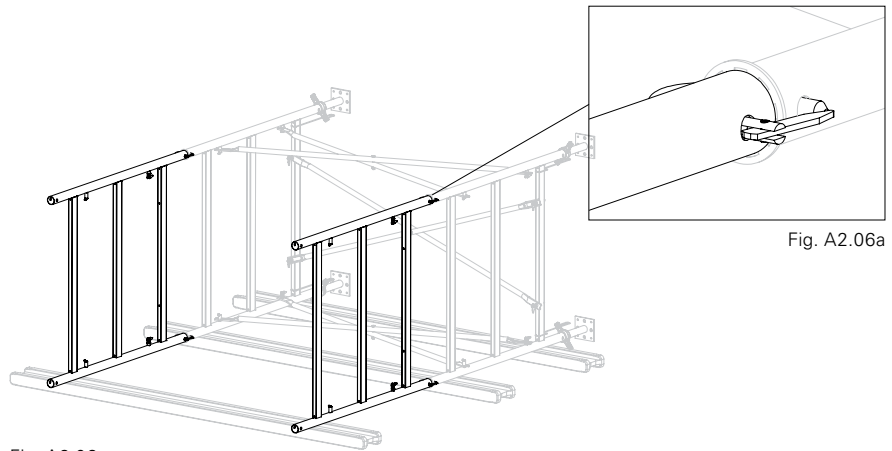


Fig. A2.06

Fig. A2.06a



Has the gravity pin been sufficiently tilted so that the Diagonal Brace cannot fall out?

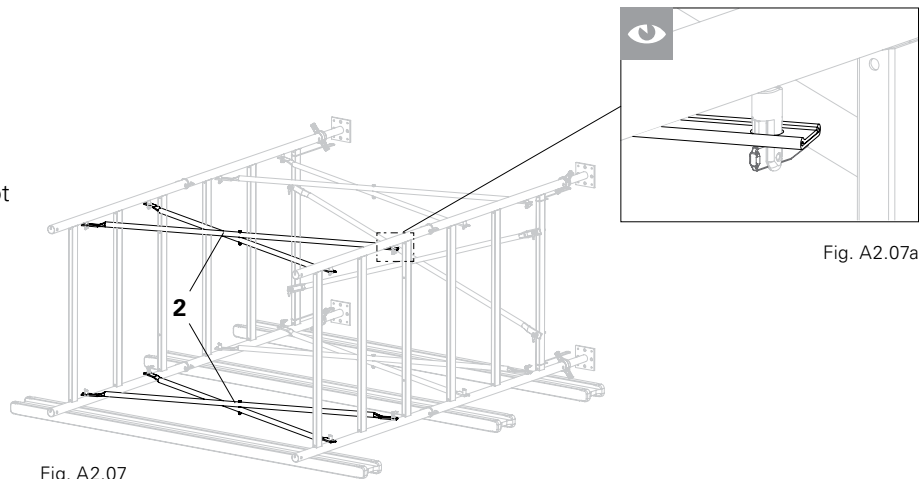


Fig. A2.07

Fig. A2.07a

Top level / "Slab Formwork" application

See Section "A1 Vertical Assembly - Top Level", take the following into account:

- With horizontal assembly, one PD 5 Diagonal Brace (2) must be mounted in the top level. (See Section "A2 Horizontal Assembly - Base". (Fig. A2.08)
- The Cross Head Spindles TR 48-75/47 (6) must be secured with PD 5 Spindle Safety Straps (13). (Fig. A2.08a)



Horizontal assembly of the "Beam with Slab Formwork" application takes place correspondingly.

For assembling the Beam Waler, see Section "A1 Vertical Assembly - Top Level".

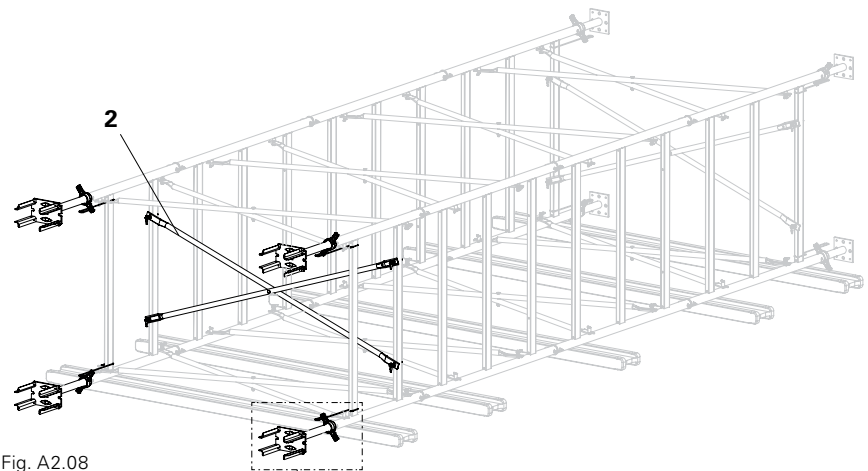


Fig. A2.08

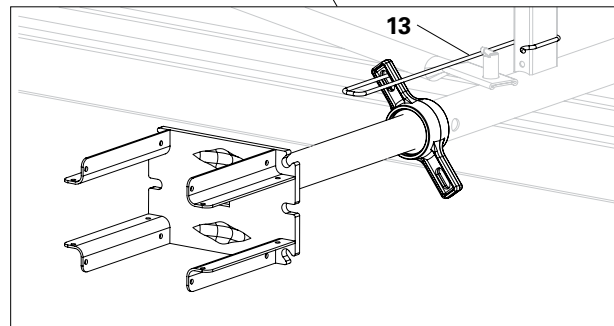


Fig. A2.08a

Erecting the PD 5 tower



Warning

- Risk of injury from falling components!
⇒ Ensure that all Standards are tightly connected!
⇒ Do not stand under the suspended load.
- Risk of falling! A fall can result in serious injury!
⇒ Remove the lifting gear with site personnel in a safe working position!

Erection

1. Completely spindle in the bottom Base Spindles (5) in order to prevent overloading the components during erection.
 2. Wrap four chains or textile lifting means, e.g. round slings, around below the cross brace (1.1) and inside the Diagonal Brace (2).
 3. Carefully lift the PD 5 tower with the crane.
 4. Whilst suspended on the crane lifting gear, horizontally adjust the Base Spindles to the required height.
 5. Remove the lifting gear from a safe working position.
- (Fig. A2.09 + A2.09a)

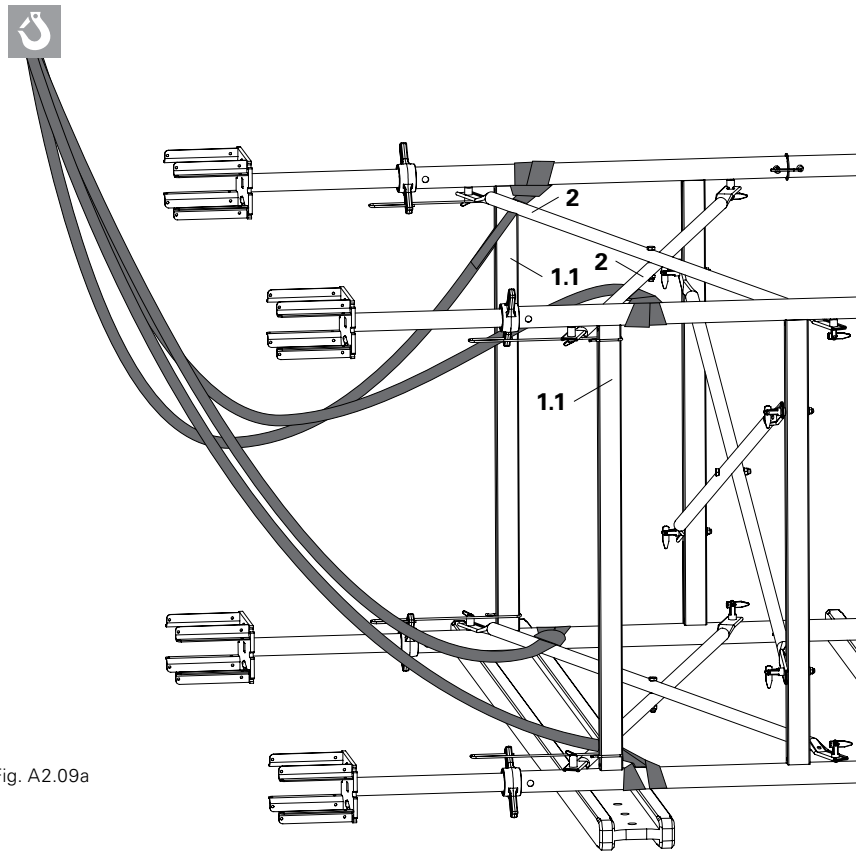


Fig. A2.09a

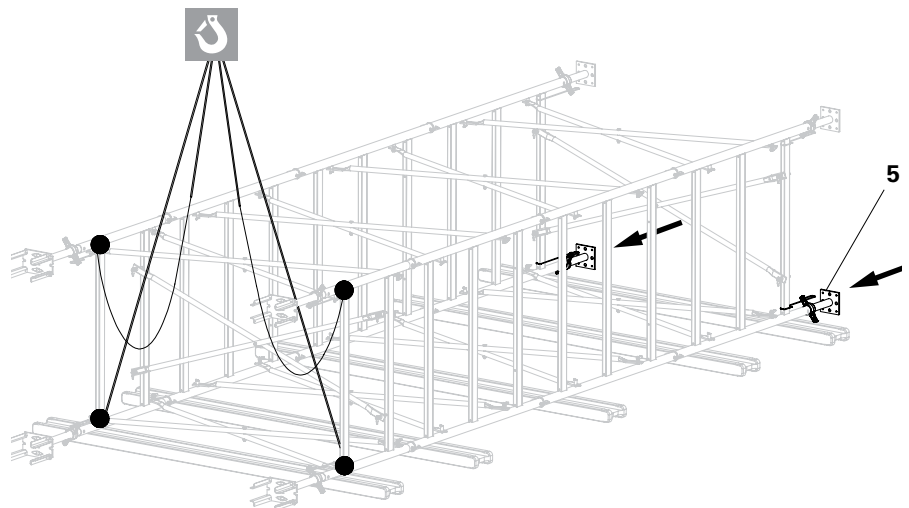


Fig. A2.09

Moving by Crane



Warning

- Risk of injury from falling components!
⇒ Ensure that all Standards are tightly connected!
⇒ Do not stand under the suspended load.
- Risk of falling! A fall can result in serious injury!
⇒ Remove the lifting gear with site personnel in a safe working position!

Lifting

1. Wrap four chains or textile lifting means, e.g. round slings, around below the cross brace and inside the Diagonal Brace. (Fig. A3.01 + A3.01a)
2. Carefully lift the formwork with the crane.



Have all Spindle Safety Straps (13) been fitted?
Have all Double Pin Frames (8) been fitted?

Setting down

1. Slowly lower the tower over the required position but do not set it down yet.
2. Check the load-bearing capacity of the ground.
3. Adjust Base Spindles to the required height.
4. Slowly lower the tower until the crane is completely relieved of the load.
5. Check to ensure that the tower is securely positioned.
6. Remove the lifting gear from a safe working position.



Is the tower in a vertical position?

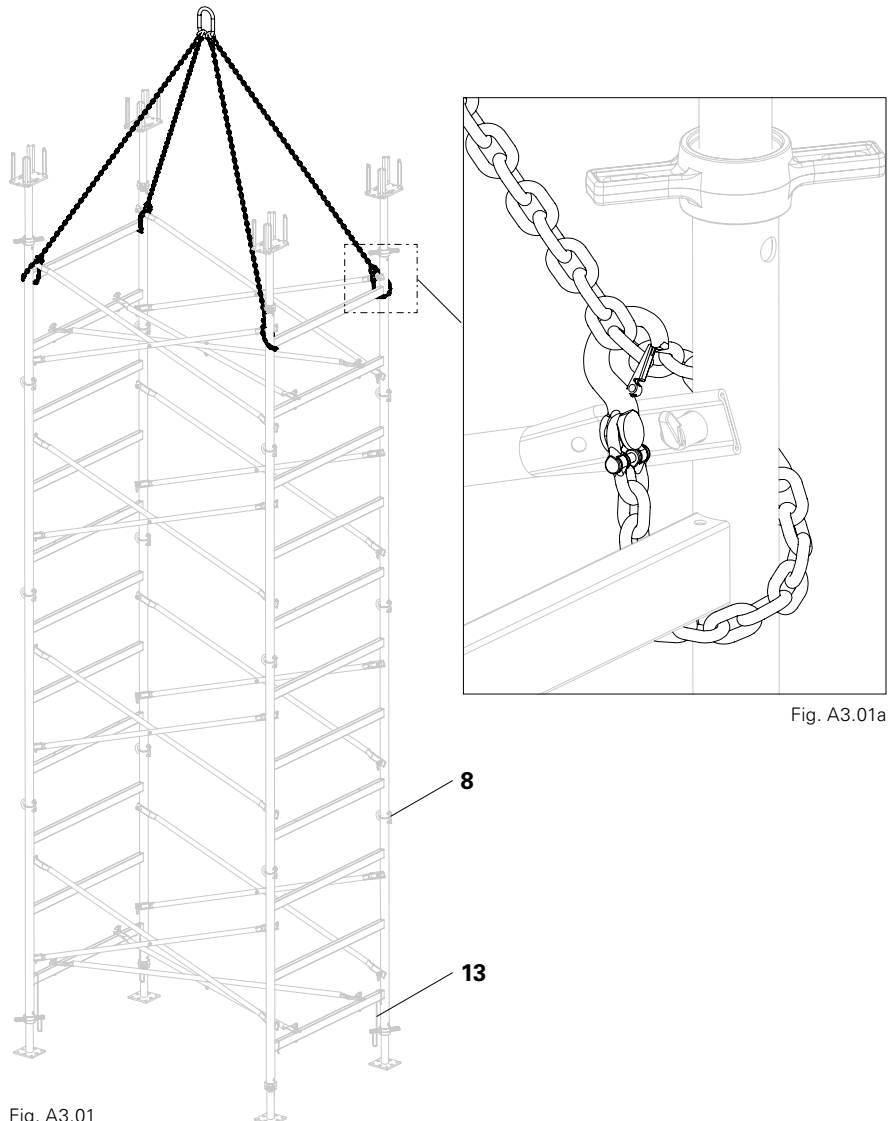


Fig. A3.01

Fig. A3.01a

Moving operations using the Trolley and Winch



Warning

Risk of tipping! A falling tower could hit people and seriously injure or kill them.

⇒ Ensure that the Trolley with Winch is in a stable position.

⇒ Max. tower height 6.00 m

⇒ Always follow the Instructions for Use for the "Trolley with Winch".



- Do not exceed the permissible load-bearing capacity.
- Transport loads only on flat and sufficiently load-bearing surfaces.
- Remove any obstacles in the way.
- Do not move on sloping surfaces.
- Move the tower slowly and without the aid of power-driven vehicles, max. speed 1 km/h.
- Carrying site personnel is forbidden.
- Do not lift the tower when under load.

When using the Trolley with Winch for transportation, the Connector PD 8 - Trolley must be used. (See Fig. A3.03 and Instructions for Use for the Trolley with Winch Fig. A3.04)

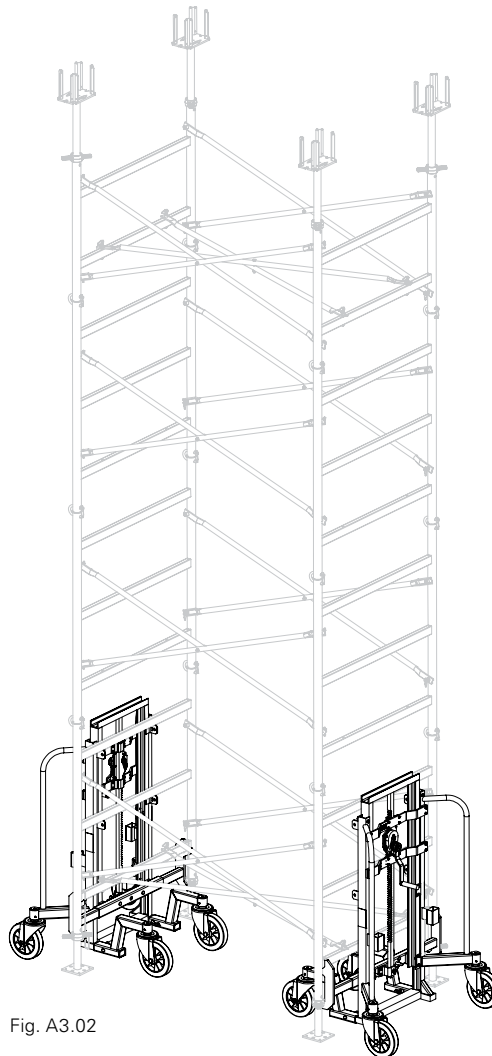


Fig. A3.02



Fig. A3.04

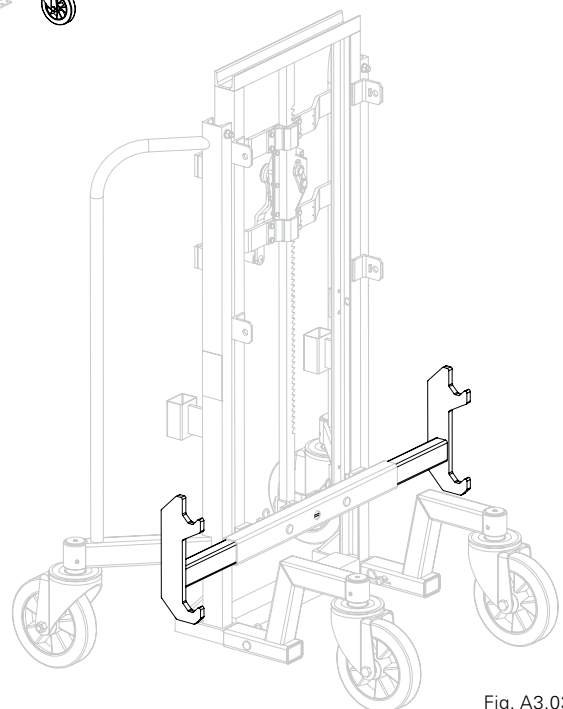


Fig. A3.03

Dismantling the top level



Warning

- Falling or shifting scaffolding units can cause serious injuries.
⇒ Secure the scaffolding unit with temporary support, see Section A5 "Bracing the PD 5 Tower".
- Do not remove the G-hook as the Beam Spindle may fall out. Risk of crushing.
⇒ Remove the G-hook only after the Beam Spindle has been dismantled.



- All work is to be carried out using a suitable working platform.
- Position the shoring tower free of load.
- Remove slab formwork.
- Dismantle the shoring tower in accordance with the project-specific instructions.

Dismantling additional levels



Warning

Falling or shifting scaffolding units can cause serious injuries.
Secure scaffolding unit with temporary support, see Section A5. "Bracing the PD 5 Tower".



For safe storage and transportation place components in PERI Pallets, see Section B1.

Vertical dismantling

Per level:

- Level as described in Section A1 "Vertical Assembly - Additional Levels", dismantling takes place in reverse order.
- Move assembly decks downwards.
- Optional at the base level: loosen the Spindle Safety Straps and remove.
- Remove Base Spindles.

Dismantling horizontally

Moving the shoring tower by means of the Trolley with Winch into the crane area.

1. From a safe working position, wrap lifting gear around below the cross brace and inside the Diagonal Brace. (Fig. A3.01 + A3.01a)
2. Lift the tower with the crane and completely spindle in the subsequent bottom Base Spindles.
3. Carefully lower the tower with the crane and position on timbers.
4. Dismantle tower as described in Section A2 but in reverse order.

Support with Push-Pull Props



- To secure against tipping or horizontal movement, temporary support may be required during assembly, modification or dismantling operations.
- Mount three Push-Pull Props as assembly aids.
- Alternatively, corresponding mounting support on sufficiently load-bearing components already installed is possible.

Components

14	Push-Pull Prop RS	3x
15	Swivel Coupling RS 60/48	3x
16	Base Plate RS	3x
17	Anchor Bolt PERI 14/20 x 130	3x



Take into consideration the Data Sheet for Anchor Bolt PERI 14/20 x 130.

Assembly

1. Fix the Swivel Coupler (15) on the frame strut of the PD 5 Frame and align.
2. Attach Swivel Coupler (15) to threaded part (14.1) of the Push-Pull Prop RS (14). (Fig. A5.01)
3. Fix Base Plate (16) to the ground with Anchor Bolts (17). Inclination angle of the Push-Pull Prop to the ground approx. 60°.
4. Fix Push-Pull Prop RS (14) to the Base Plate (16) with bolts and cotter pins. (Fig. A5.01a)
5. Mount additional Push-Pull Props RS as described in Steps 1 - 4.

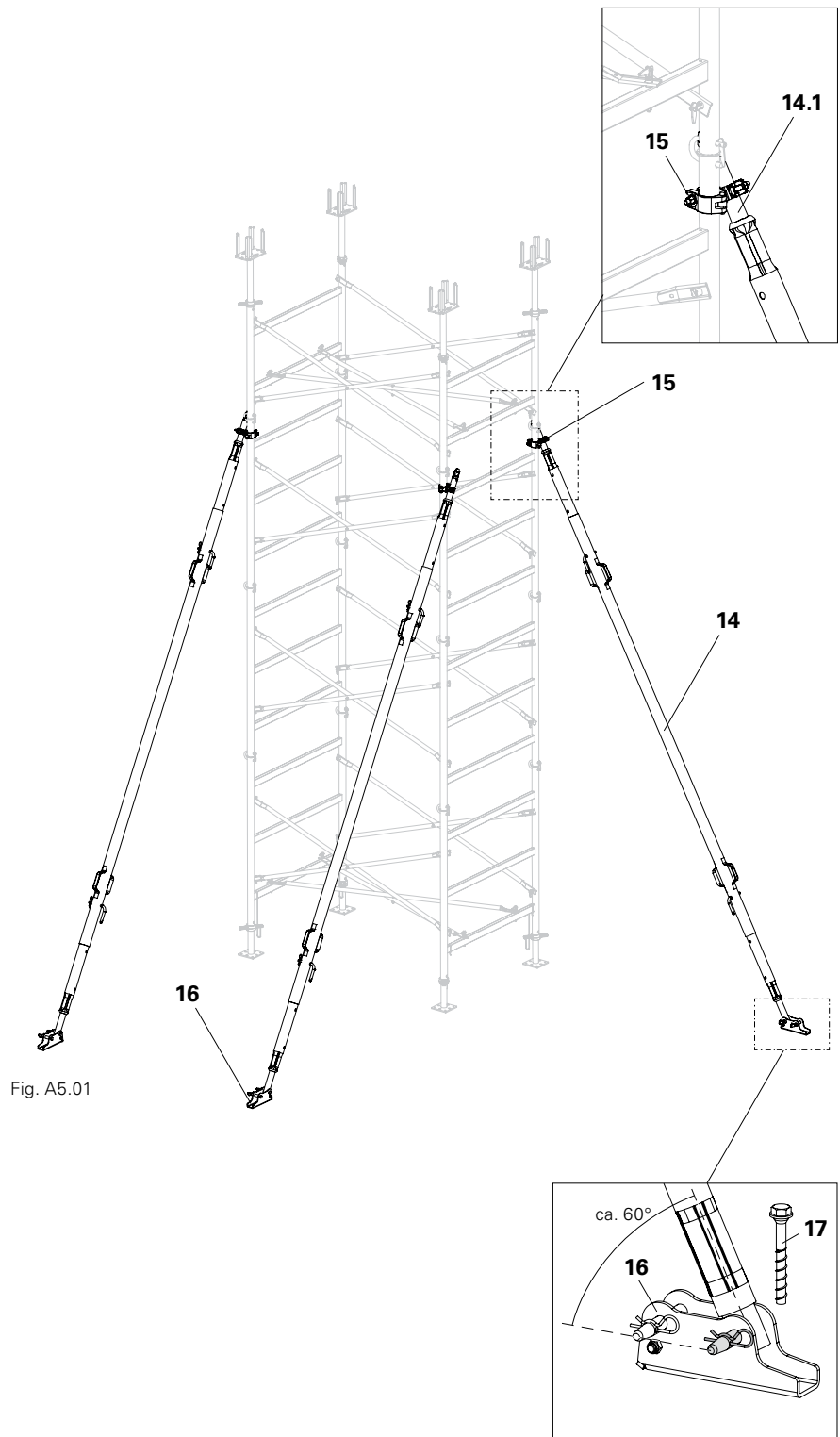


Fig. A5.01

Fig. A5.01a

Bracing by means of connected units



- To secure against tipping or horizontal movement, temporary support may be necessary during the installation process.
- Mount three Push-Pull Props as assembly aids.
- Alternatively, corresponding mounting support on sufficiently load-bearing components already installed is possible.

Components

5	PD 5 Diagonal Brace	2x
14	Push-Pull Prop RS	2x
15	Swivel Coupling RS 60/48	3x
16	Base Plate RS	2x
17	Anchor Bolt PERI 14/20 x 130	2x

Assembly

- Secure first shoring tower against tipping, see Section A5 "Bracing with Push-Pull Props".
- Connect an additional shoring tower with PD 5 Diagonal Braces (5) and Push-Pull Prop (14).



Alternatively:

Instead of a PD 5 Diagonal Brace, mount 2 scaffold tubes \varnothing 48 mm crosswise with 4 Swivel Couplings RS 60/48 on the frame strut.

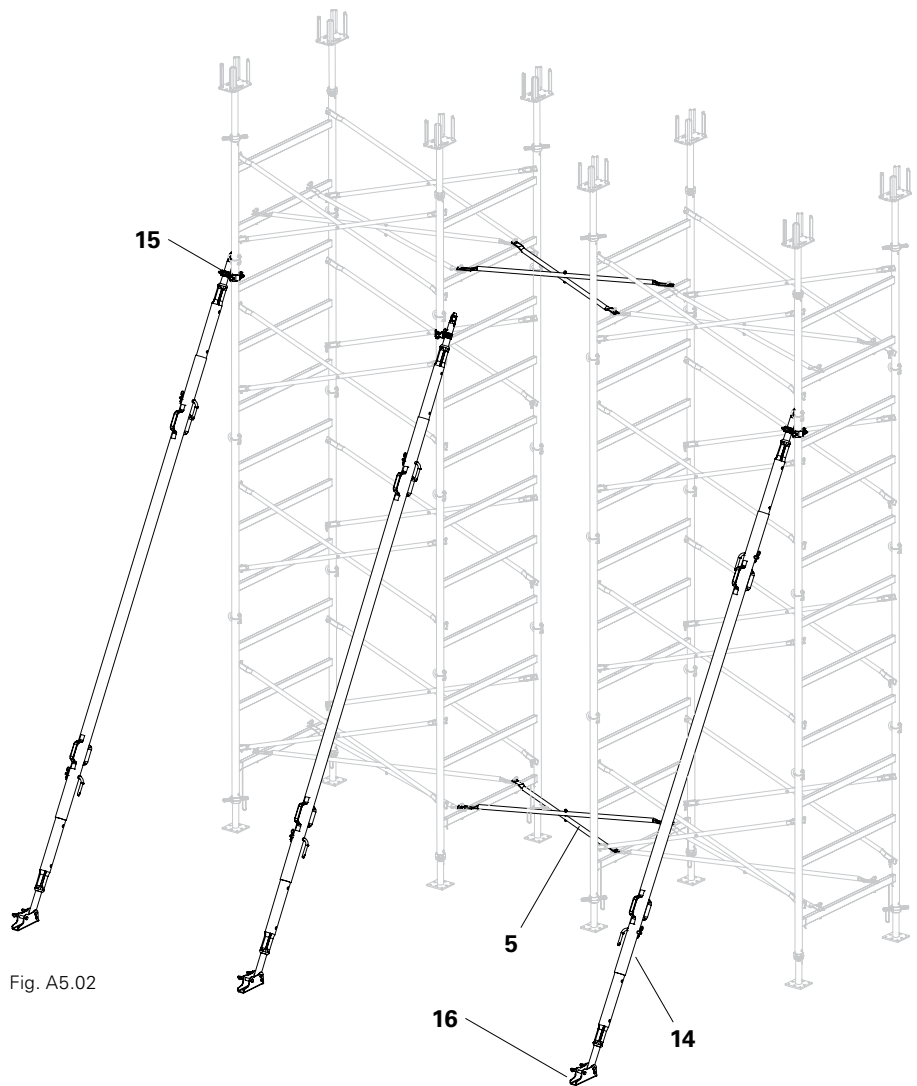


Fig. A5.02

Example with three PD 5 towers

Components

5	PD 5 Diagonal Brace	4x
14	Push-Pull Prop RS	3x
15	Swivel Coupling RS 60/48	3x
16	Base Plate RS	3x
17	Anchor Bolt PERI 14/20 x 130	3x



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

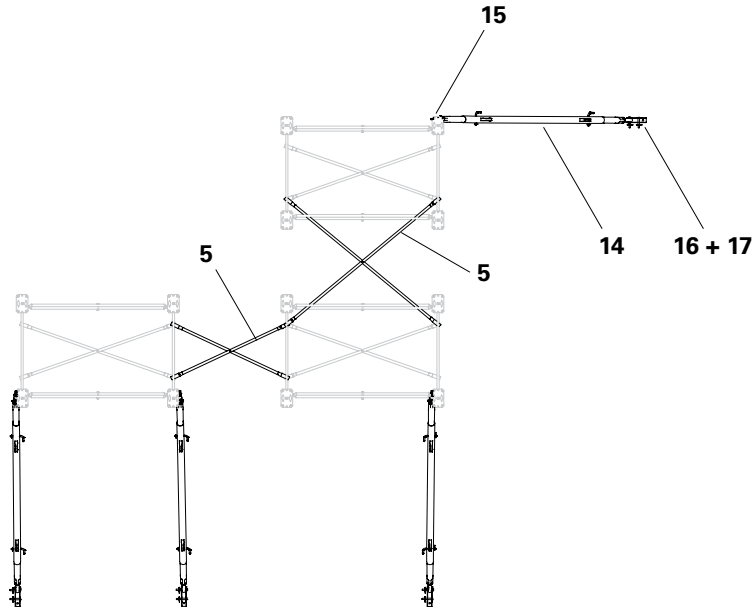


Fig. A5.03a

Top view

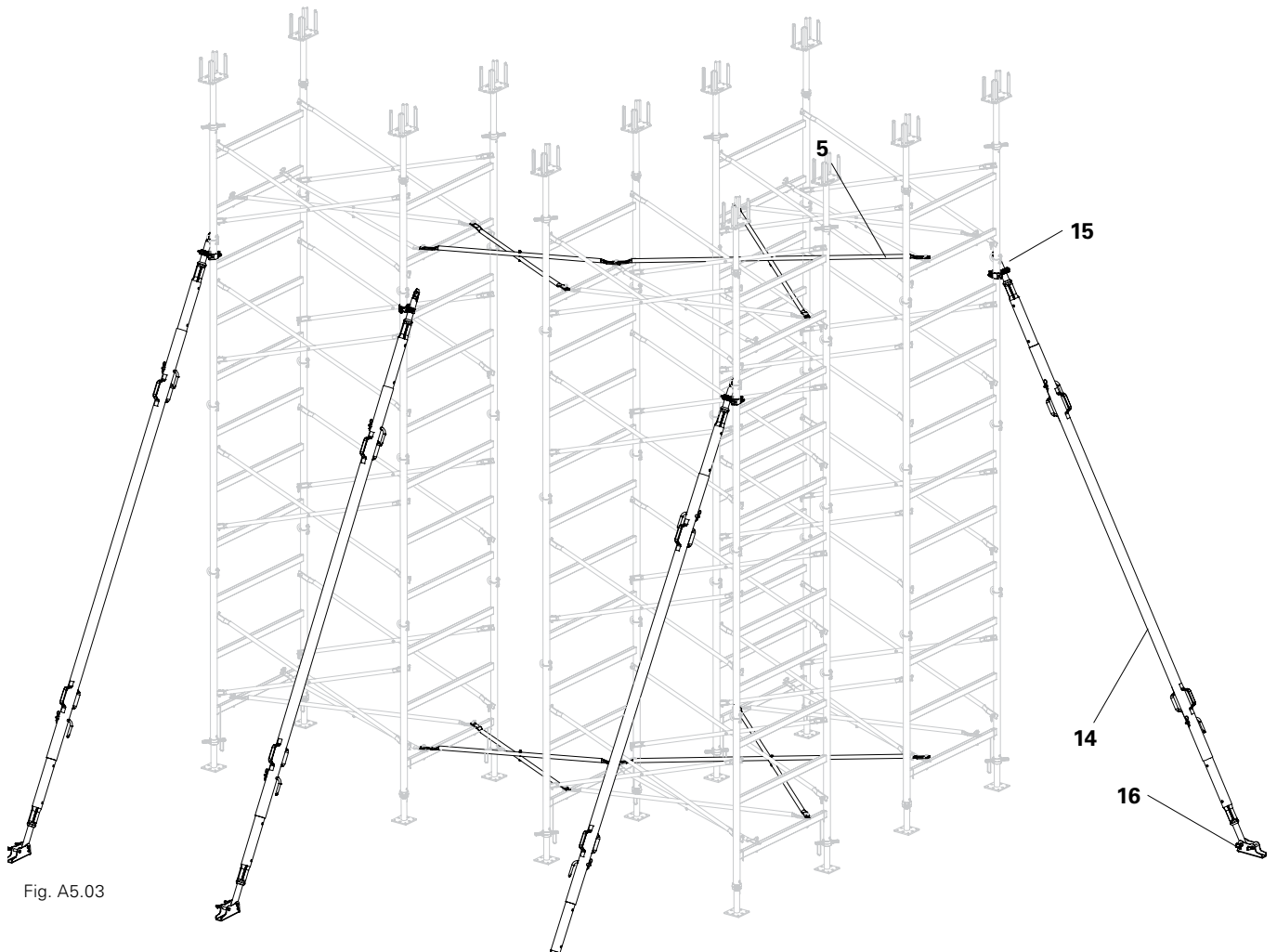


Fig. A5.03

Pallets and Stacking Devices



- Instructions for Use for PERI Pallets and Stacking Devices must always be taken into consideration.
- Manually-created transportation units must be correctly stacked and secured.
- Store and transport components of the same size in one stack.

PERI Pallets and Stacking Devices are suitable for lifting by crane or forklift. They can also be moved with the PERI Pallet Lifting Trolley. All Pallets and Stacking Devices can be lifted using both the longitudinal and front sides. The number of stacks which can be stored and transported is dependent on the respective national regulations.

Pallet RP-2 80 x 120

(Fig. B1.01)

Pallet RP-2 80 x 150

(Fig. B1.02)

Load-bearing capacity = 1.5 t.

Crane sling angle $\leq 15^\circ$ from the vertical.

Stacking height: max. 4 pallets on top of each other.

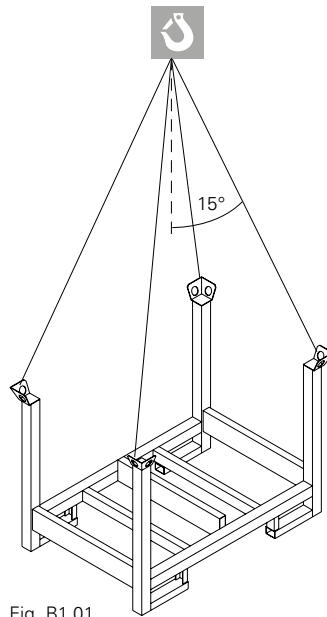


Fig. B1.01

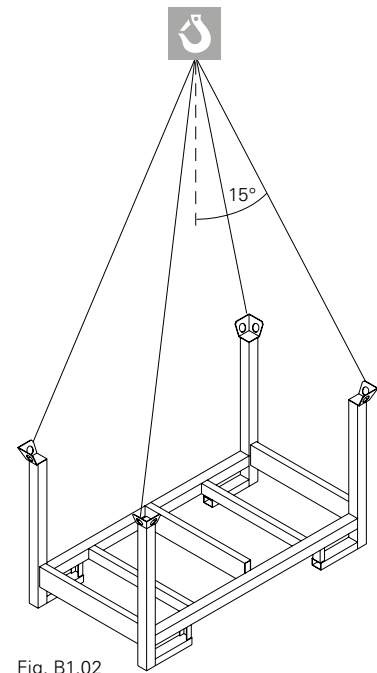


Fig. B1.02

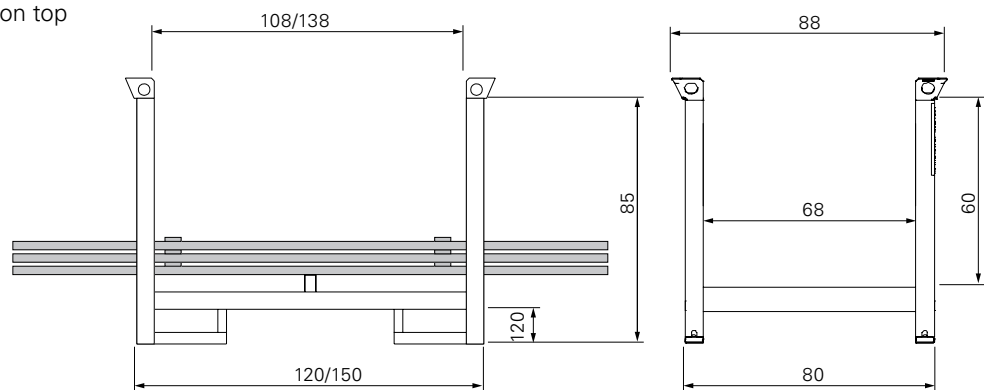


Fig. B1.02a

Packaging units

Weights including packaging.

PD 5 Frame 100

bundles of 20 pieces,
with steel strapping and edge protection

2x strapping.

Weight approx. 290 kg.

(Fig. B1.03)

PD 5 Frame 150

bundles of 20 pieces,
with steel strapping and edge protection

2x strapping.

Weight approx. 430 kg.

(Fig. B1.03)

Beam Waler

30 pieces in Pallet RP-2 80 x 120,
with timber plates and steel strapping

2x strapping,

Weight approx. 484 kg.

(Fig. B1.04)

PD 5 Diagonal Brace 100

100 pieces in Pallet RP-2 80 x 150,
with timber plates and steel strapping

2x strapping,

Weight approx. 701 kg.

(Fig. B1.05)

PD 5 Diagonal Brace 120

100 pieces in Pallet RP-2 80 x 150,
with timber plates and steel strapping

2x strapping,

Weight approx. 879 kg.

(Fig. B1.05)

PD 5 Diagonal Brace 150

100 pieces in Pallet RP-2 80 x 150,
with timber plates and steel strapping

2x strapping,

Weight approx. 1064 kg.

(Fig. B1.05)

Base Spindle

150 pieces,
loose in Crate Pallet,
Weight approx. 1114 kg.

Double Pin Frame

500 pieces, 10 sacks each with 50 pieces.

in Hardware Box,

Weight approx. 235 kg.

Double Pin Beam Waler

500 pieces, 10 sacks each with 50 pieces.

in Hardware Box,

Weight approx. 275 kg.

Spindle Safety Strap

1000 pieces, 10 sacks each with 100 pieces.

in Hardware Box,

Weight approx. 177 kg.

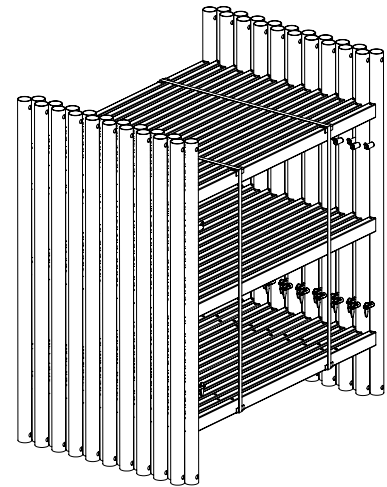


Fig. B1.03

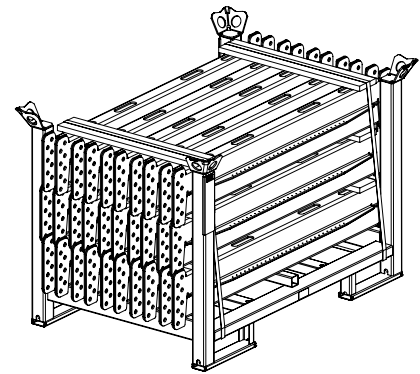


Fig. B1.04

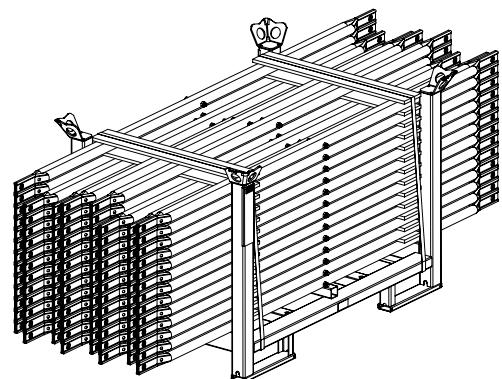


Fig. B1.05

PD 5

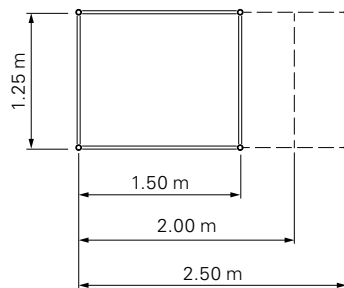
According to DIN EN 12812		Perm. leg load								
Tower height [m]	Dynamic pressure q [kN/m ²]	Ground plan [m]								
		1.25 x 1.50			1.25 x 2.00			1.25 x 2.50		
		0.0 [kN/m ²]	0.5 [kN/m ²]	0.8 [kN/m ²]	0.0 [kN/m ²]	0.5 [kN/m ²]	0.8 [kN/m ²]	0.0 [kN/m ²]	0.5 [kN/m ²]	0.8 [kN/m ²]
2.12 – 2.65		54.7	52.1	50.5	54.7	51.4	49.3	54.7	50.6	48.1
2.62 – 3.15		54.0	50.6	48.4	54.0	49.5	46.8	54.0	48.5	45.3
3.12 – 3.65	(1)	(53.3)	(49.0)	(46.3)	(53.3)	(47.7)	(44.3)	(53.3)	(46.4)	(42.4)
		40.0	38.4	37.4	39.9	38.2	37.2	39.8	38.0	37.0
3.62 – 4.15		52.3	47.9	44.8	52.3	46.4	42.6	52.3	45.0	40.4
4.12 – 4.65		51.3	46.7	43.4	51.4	45.2	40.9	51.4	43.6	38.5
4.62 – 5.15	(1)	(50.4)	(45.6)	(41.9)	(50.4)	(43.9)	(39.2)	(50.5)	(42.1)	(36.5)
		37.8	35.6	34.3	37.8	35.5	34.0	37.8	35.4	33.6
5.12 – 5.65		49.4	44.5	40.4	49.5	42.6	37.5	49.5	40.7	34.5
5.62 – 6.15		48.4	43.4	39.0	48.5	41.3	35.7	48.6	39.3	32.5
6.12 – 6.65	(1)	(47.5)	(42.3)	(37.5)	(47.6)	(40.1)	(34.0)	(47.7)	(37.8)	(30.6)
		35.7	32.9	31.3	35.7	32.8	30.7	35.8	32.7	30.2
6.62 – 7.15		47.4	41.5	36.4	47.5	39.1	32.7	47.6	36.8	28.9
7.12 – 7.65		47.2	40.7	35.3	47.4	38.2	31.3	47.5	35.7	27.3
7.62 – 8.15	(1)	(47.1)	(40.0)	(34.2)	(47.3)	(37.3)	(29.9)	(47.4)	(34.7)	(25.7)
		35.7	32.9	30.8	35.7	32.5	28.8	35.8	32.1	25.5
8.12 – 8.65		47.0	39.2	33.1	47.2	36.4	28.6	47.4	33.6	24.1
8.62 – 9.15		46.9	38.4	32.0	47.1	35.5	27.2	47.3	32.6	22.4
9.12 – 9.65	(1)	(46.7)	(37.6)	(30.9)	(47.0)	(34.6)	(25.9)	(47.2)	(31.5)	(20.8)
		35.7	32.9	30.4	35.7	32.2	25.6	35.8	31.5	20.8

(1) The higher load-bearing capacity is only achieved if 3 x PD 5 Frames 100 are used in the head area instead of 2 x PD 5 Frames 150. See Section "C2 Material Requirements".

Application conditions

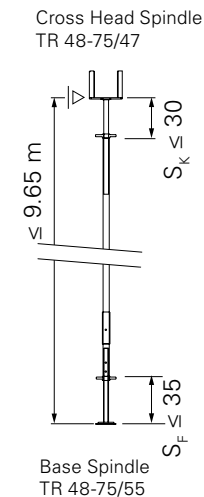
- restrained at the top
- $h \leq 9.65$ m

Ground plan



Height dimensions

- Spindle extensions
- Shoring tower height



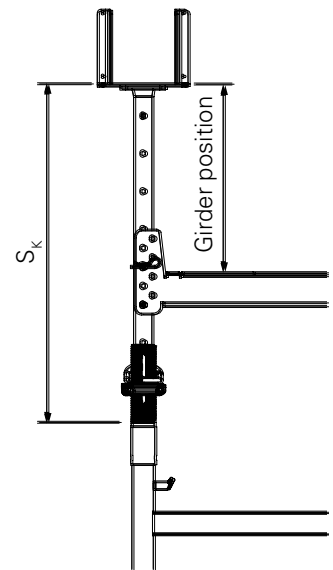
PD 5 shoring tower with Beam Waler

According to DIN EN 12812		Perm. leg load for ground plan 1.25 x 1.50 m								
Girder position	≤ 20 cm			≤ 25 cm			≤ 30 cm			
Spindle extension	55 ≤ S _k ≤ 85 cm S _F ≤ 30 cm			60 ≤ S _k ≤ 90 cm S _F ≤ 30 cm			65 ≤ S _k ≤ 95 cm S _F ≤ 30 cm			
Tower height [m]	Dynamic pressure q									
	0.0 [kN/m ²]	0.5 [kN/m ²]	0.8 [kN/m ²]	0.0 [kN/m ²]	0.5 [kN/m ²]	0.8 [kN/m ²]	0.0 [kN/m ²]	0.5 [kN/m ²]	0.8 [kN/m ²]	
2.61 – 3.35	42.2	38.5	36.9	41.1	37.7	36.1	40.1	36.9	35.3	
3.11 – 3.85	42.5	38.0	35.7	41.2	36.9	34.7	39.8	35.8	33.6	
3.61 – 4.35 (2)	(42.8) 36.4	(37.5) 34.0	(34.6) 32.8	(41.2) 35.8	(36.1) 33.4	(33.3) 31.9	(39.5) 35.2	(34.7) 32.9	(32.0) 31.1	
4.11 – 4.85	42.3	37.6	34.5	41.4	36.5	33.3	40.5	35.4	32.2	
4.61 – 5.35	41.8	37.3	34.3	41.6	36.8	33.4	41.4	36.0	32.5	
5.11 – 5.85 (2)	(41.2) 34.8	(37.8) 31.9	(34.2) 30.2	(41.8) 34.2	(37.2) 31.3	(33.4) 29.3	(42.3) 33.5	(36.7) 30.6	(32.7) 28.5	
5.61 – 6.35	40.7	37.9	34.0	40.9	37.3	33.2	41.2	36.6	32.4	
6.11 – 6.85	40.1	37.9	33.9	40.1	37.3	33.0	40.1	36.6	32.0	
6.61 – 7.35 (2)	(39.6) 33.3	(38.0) 29.9	(33.8) 27.6	(39.3) 32.6	(37.3) 29.1	(32.7) 26.7	(39.0) 31.9	(36.6) 28.3	(31.7) 25.9	
7.11 – 7.85	38.7	36.7	33.1	38.1	35.9	32.0	37.5	35.0	30.9	
7.61 – 8.35	37.7	35.4	32.4	36.8	34.4	31.3	35.9	33.4	30.2	
8.11 – 8.85 (2)	(36.8) 32.1	(34.1) 28.7	(31.7) 26.2	(35.6) 31.0	(33.0) 27.7	(30.5) 24.9	(34.4) 30.0	(31.8) 26.6	(29.4) 23.6	
8.61 – 9.35	35.9	32.8	30.9	34.4	31.5	29.8	32.8	30.2	28.6	

According to DIN EN 12812		Perm. leg load for ground plan 1.25 x 1.50 m				
Girder position	≤ 35 cm			≤ 40 cm		
Spindle extension	70 ≤ S _k ≤ 100 cm S _F ≤ 30 cm			75 ≤ S _k ≤ 105 cm S _F ≤ 30 cm		
Tower height [m]	Dynamic pressure q					
	0.0 [kN/m ²]	0.5 [kN/m ²]	0.8 [kN/m ²]	0.0 [kN/m ²]	0.5 [kN/m ²]	0.8 [kN/m ²]
2.61 – 3.35	39.0	36.1	34.4	37.9	35.2	33.6
3.11 – 3.85	38.4	34.7	32.6	37.1	33.6	31.5
3.61 – 4.35	(37.9) 34.5	(33.4) 32.3	(30.7) 30.3	(36.3) 33.9	(32.0) 31.8	(29.4) 29.4
4.11 – 4.85	39.5	34.3	31.1	38.6	33.2	30.0
4.61 – 5.35	41.2	35.2	31.6	41.0	34.4	30.6
5.11 – 5.85	(42.8) 32.8	(36.1) 30.0	(32.0) 27.6	(43.4) 32.2	(35.5) 29.3	(31.2) 26.8
5.61 – 6.35	41.5	36.0	31.6	41.7	35.4	30.7
6.11 – 6.85	40.1	36.0	31.1	40.1	35.4	30.2
6.61 – 7.35	(38.8) 31.1	(36.0) 27.6	(30.7) 25.0	(38.5) 30.4	(35.3) 26.8	(29.7) 24.1
7.11 – 7.85	36.9	34.2	29.9	36.3	33.3	28.8
7.61 – 8.35	35.0	32.4	29.1	34.1	31.4	28.0
8.11 – 8.85	(33.1) 28.9	(30.6) 25.6	(28.3) 22.3	(31.9) 27.9	(29.4) 24.5	(27.1) 21.0
8.61 – 9.35	31.3	28.8	27.5	29.7	27.5	26.3

Height dimensions

- Beam Spindle extension [S_k]
- Girder position



(2) The higher load-bearing capacity is only achieved if 3 x PD 5 Frames 100 are used in the base area instead of 2 x PD 5 Frames 150. See Section "C2 Material Requirements".

The perm. leg load is calculated as the sum of the load proportions from the slab formwork and the PD 5 Beam Waler (max Q = 20 kN. max M = 6.25 kNm).

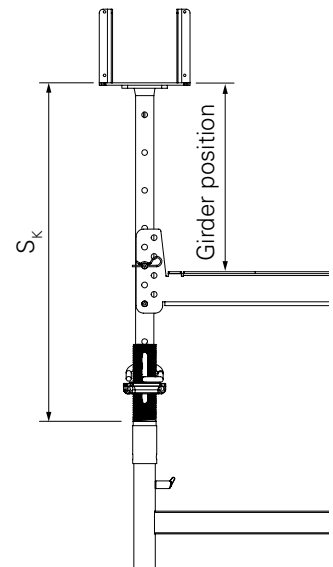
PD 5 shoring tower with Beam Waler

According to DIN EN 12812		Perm. leg load for ground plan 1.25 x 2.00 m								
Girder position	≤ 20 cm			≤ 25 cm			≤ 30 cm			
Spindle extension	55 ≤ S _k ≤ 85 cm S _F ≤ 30 cm			60 ≤ S _k ≤ 90 cm S _F ≤ 30 cm			65 ≤ S _k ≤ 95 cm S _F ≤ 30 cm			
Tower height [m]	Dynamic pressure q									
	0.0 [kN/m ²]	0.5 [kN/m ²]	0.8 [kN/m ²]	0.0 [kN/m ²]	0.5 [kN/m ²]	0.8 [kN/m ²]	0.0 [kN/m ²]	0.5 [kN/m ²]	0.8 [kN/m ²]	
2.61 – 3.35	41.8	37.8	35.7	40.8	36.9	34.9	39.8	36.1	34.0	
3.11 – 3.85	42.3	37.0	34.1	41.0	35.9	33.1	39.7	34.8	32.1	
3.61 – 4.35 (2)	(42.8)	(36.2)	(32.6)	(41.2)	(34.8)	(31.4)	(39.5)	(33.5)	(30.1)	
	36.4	34.0	31.7	35.8	33.2	30.7	35.2	32.4	29.7	
4.11 – 4.85	42.3	36.2	32.1	41.1	35.0	31.0	40.0	33.8	29.8	
4.61 – 5.35	41.8	36.2	31.7	41.1	35.2	30.6	40.4	34.1	29.6	
5.11 – 5.85 (2)	(41.2)	(36.2)	(31.2)	(41.0)	(35.3)	(30.3)	(40.8)	(34.5)	(29.3)	
	35.0	32.0	29.2	34.3	31.2	28.2	33.6	30.4	27.2	
5.61 – 6.35	40.7	36.2	30.7	40.5	35.3	29.8	40.2	34.5	28.8	
6.11 – 6.85	40.2	36.1	30.3	39.9	35.3	29.2	39.7	34.5	28.2	
6.61 – 7.35 (2)	(39.7)	(34.2)	(25.8)	(39.4)	(33.3)	(24.7)	(39.2)	(32.3)	(23.7)	
	33.9	30.1	25.8	33.0	29.3	24.7	32.1	28.5	23.7	
7.11 – 7.85	38.7	35.3	28.9	38.1	34.3	27.9	37.6	33.4	26.8	
7.61 – 8.35	37.8	34.4	28.0	36.9	33.4	27.0	36.0	32.3	26.0	
8.11 – 8.85 (2)	(36.9)	(33.6)	(27.1)	(35.7)	(32.4)	(26.1)	(34.5)	(31.3)	(25.2)	
	32.1	28.7	24.4	31.0	27.7	23.3	30.0	26.7	22.3	
8.61 – 9.35	36.0	32.7	26.2	34.5	31.5	25.3	33.0	30.2	24.3	

According to DIN EN 12812		Perm. leg load for ground plan 1.25 x 2.00 m				
Girder position	≤ 35 cm			≤ 40 cm		
Spindle extension	70 ≤ S _k ≤ 100 cm S _F ≤ 30 cm			75 ≤ S _k ≤ 105 cm S _F ≤ 30 cm		
Tower height [m]	Dynamic pressure q					
	0.0 [kN/m ²]	0.5 [kN/m ²]	0.8 [kN/m ²]	0.0 [kN/m ²]	0.5 [kN/m ²]	0.8 [kN/m ²]
2.61 – 3.35	38.9	35.3	33.2	37.9	34.5	32.4
3.11 – 3.85	38.4	33.7	31.0	37.1	32.6	30.0
3.61 – 4.35	(37.9)	(32.1)	(28.9)	(36.3)	(30.8)	(27.6)
	34.6	31.5	28.6	34.0	30.7	27.6
4.11 – 4.85	38.8	32.6	28.7	37.6	31.4	27.6
4.61 – 5.35	39.7	33.1	28.5	39.0	32.1	27.5
5.11 – 5.85	(40.6)	(33.6)	(28.4)	(40.4)	(32.8)	(27.4)
	32.9	29.6	26.2	32.2	28.8	25.2
5.61 – 6.35	40.0	33.6	27.8	39.8	32.8	26.8
6.11 – 6.85	39.4	33.7	27.2	39.2	32.8	26.2
6.61 – 7.35	(38.9)	(31.4)	(22.6)	(38.7)	(30.5)	(21.5)
	31.3	27.8	22.6	30.4	27.0	21.5
7.11 – 7.85	37.0	32.5	25.8	36.4	31.6	24.8
7.61 – 8.35	35.2	31.3	25.0	34.3	30.3	24.0
8.11 – 8.85	(33.3)	(30.1)	(24.2)	(32.1)	(28.9)	(23.2)
	29.0	25.7	21.2	27.9	24.7	20.1
8.61 – 9.35	31.5	28.9	23.4	30.0	27.6	22.4

Height dimensions

- Beam Spindle extension [SK]
- Girder position



(2) The higher load-bearing capacity is only achieved if 3 x PD 5 Frames 100 are used in the base area instead of 2 x PD 5 Frames 150. See Section "C2 Material Requirements".

The perm. leg load is calculated as the sum of the load proportions from the slab formwork and the PD 5 Beam Waler (max Q = 20 kN, max M = 6.25 kNm).

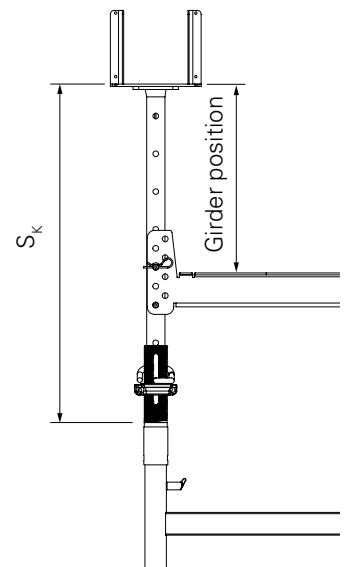
PD 5 shoring tower with Beam Waler

According to DIN EN 12812		Perm. leg load for ground plan 1.25 x 2.50 m								
Girder position		≤ 20 cm			≤ 25 cm			≤ 30 cm		
Spindle extension		55 ≤ S _k ≤ 85 cm S _F ≤ 30 cm			60 ≤ S _k ≤ 90 cm S _F ≤ 30 cm			65 ≤ S _k ≤ 95 cm S _F ≤ 30 cm		
Tower height [m]	Dynamic pressure q [kN/m ²]	0.0	0.5	0.8	0.0	0.5	0.8	0.0	0.5	0.8
		[kN/m ²]	[kN/m ²]	[kN/m ²]	[kN/m ²]	[kN/m ²]	[kN/m ²]	[kN/m ²]	[kN/m ²]	[kN/m ²]
2.61 – 3.35		41.4	37.1	34.5	40.5	36.2	33.7	39.6	35.4	32.8
3.11 – 3.85		42.1	36.0	32.5	40.8	34.9	31.5	39.6	33.8	30.5
3.61 – 4.35	(2)	(42.8)	(34.9)	(30.6)	(41.2)	(33.6)	(29.4)	(39.5)	(32.3)	(28.2)
		36.5	34.1	30.6	35.9	33.0	29.4	35.3	31.8	28.2
4.11 – 4.85		42.3	34.8	29.8	40.9	33.5	28.6	39.5	32.3	27.4
4.61 – 5.35		41.8	34.7	29.0	40.6	33.5	27.9	39.4	32.3	26.7
5.11 – 5.85	(2)	(41.2)	(34.6)	(28.2)	(40.3)	(33.4)	(27.1)	(39.3)	(32.3)	(25.9)
		35.2	32.1	28.2	34.4	31.1	27.1	33.7	30.2	25.9
5.61 – 6.35		40.7	34.5	27.4	40.0	33.4	26.3	39.3	32.3	25.2
6.11 – 6.85		40.2	34.3	26.6	39.7	33.3	25.5	39.2	32.3	24.4
6.61 – 7.35	(2)	(39.7)	(34.2)	(25.8)	(39.4)	(33.3)	(24.7)	(39.2)	(32.3)	(23.7)
		33.9	30.1	25.8	33.0	29.3	24.7	32.1	28.5	23.7
7.11 – 7.85		38.7	33.8	24.8	38.2	32.8	23.8	37.7	31.8	22.7
7.61 – 8.35		37.8	33.4	23.7	37.0	32.3	22.8	36.1	31.3	21.8
8.11 – 8.85	(2)	(36.9)	(33.0)	(22.6)	(35.8)	(31.9)	(21.8)	(34.6)	(30.7)	(20.9)
		32.1	28.6	22.6	31.0	27.7	21.8	30.0	26.8	20.9
8.61 – 9.35		36.0	32.6	21.5	34.6	31.4	20.8	33.1	30.2	20.0

According to DIN EN 12812		Perm. leg load for ground plan 1.25 x 2.50 m					
Girder position		≤ 35 cm			≤ 40 cm		
Spindle extension		70 ≤ S _k ≤ 100 cm S _F ≤ 30 cm			75 ≤ S _k ≤ 105 cm S _F ≤ 30 cm		
Tower height [m]	Dynamic pressure q [kN/m ²]	0.0	0.5	0.8	0.0	0.5	0.8
		[kN/m ²]	[kN/m ²]	[kN/m ²]	[kN/m ²]	[kN/m ²]	[kN/m ²]
2.61 – 3.35		38.8	34.6	32.0	37.9	33.7	31.2
3.11 – 3.85		38.3	32.7	29.5	37.1	31.7	28.5
3.61 – 4.35		(37.9)	(30.9)	(27.0)	(36.2)	(29.6)	(25.8)
		34.6	30.7	27.0	34.0	29.6	25.8
4.11 – 4.85		38.0	31.0	26.3	36.6	29.7	25.1
4.61 – 5.35		38.2	31.1	25.5	37.0	29.9	24.3
5.11 – 5.85		(38.4)	(31.2)	(24.8)	(37.4)	(30.0)	(23.6)
		32.9	29.2	24.8	32.2	28.3	23.6
5.61 – 6.35		38.6	31.2	24.0	37.9	30.2	22.9
6.11 – 6.85		38.7	31.3	23.3	38.3	30.3	22.2
6.61 – 7.35		(38.9)	(31.4)	(22.6)	(38.7)	(30.5)	(21.5)
		31.3	27.8	22.6	30.4	27.0	21.5
7.11 – 7.85		37.1	30.8	21.7	36.6	29.8	20.7
7.61 – 8.35		35.3	30.2	20.9	34.4	29.1	20.0
8.11 – 8.85		(33.5)	(29.6)	(20.1)	(32.3)	(28.5)	(19.2)
		29.0	25.8	20.1	28.0	24.9	19.2
8.61 – 9.35		31.7	29.0	19.3	30.2	27.8	18.5

Height dimensions

- Beam Spindle extension [SK]
- Girder position

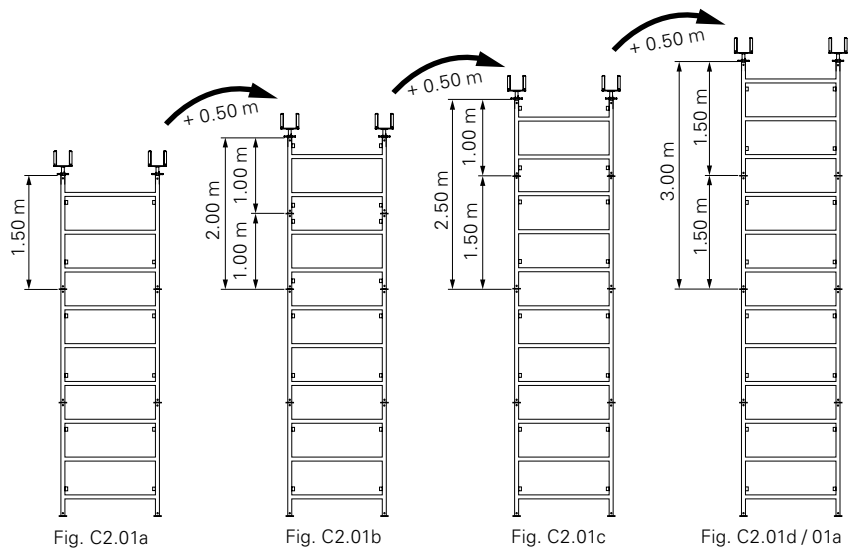


(2) The higher load-bearing capacity is only achieved if 3 x PD 5 Frames 100 are used in the base area instead of 2 x PD 5 Frames 150. See Section "C2 Material Requirements".

The perm. leg load is calculated as the sum of the load proportions from the slab formwork and the PD 5 Beam Waler (max Q = 20 kN, max M = 6.25 kNm).

Height adjustment for the "Slab Formwork" application

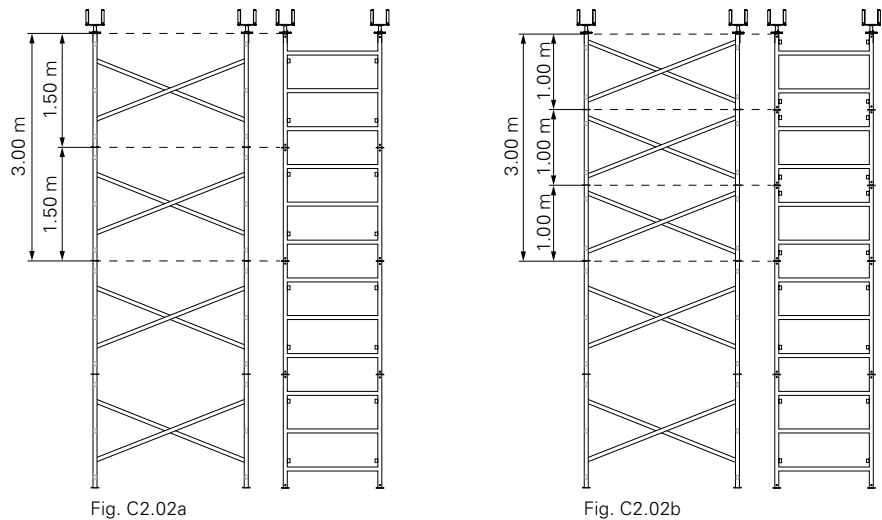
Height adjustment takes place in the **head area** through the selection of PD 5 Frames (heights 100 or 150) as well as adjusting the spindle extension. (Fig. C2.01a - C2.01d). See also the following section "Increasing the Leg Load".



Increasing the leg load for the "Slab Formwork" application

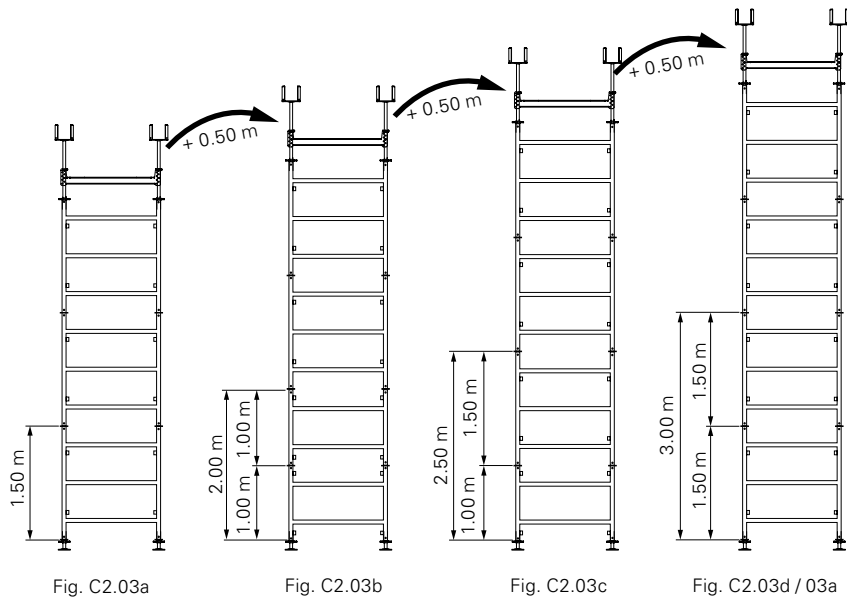
For some heights, the load-bearing capacity can be increased by using 3 x PD 5 Frame 100 (Fig. C2.02b) instead of 2 x PD 5 Frame 150 (Fig. C2.02a) in the **head area**.

See "Permissible Leg Loads" table in Section "C1 Load Tables".



Height adjustment for the “Beam with Slab Formwork” application

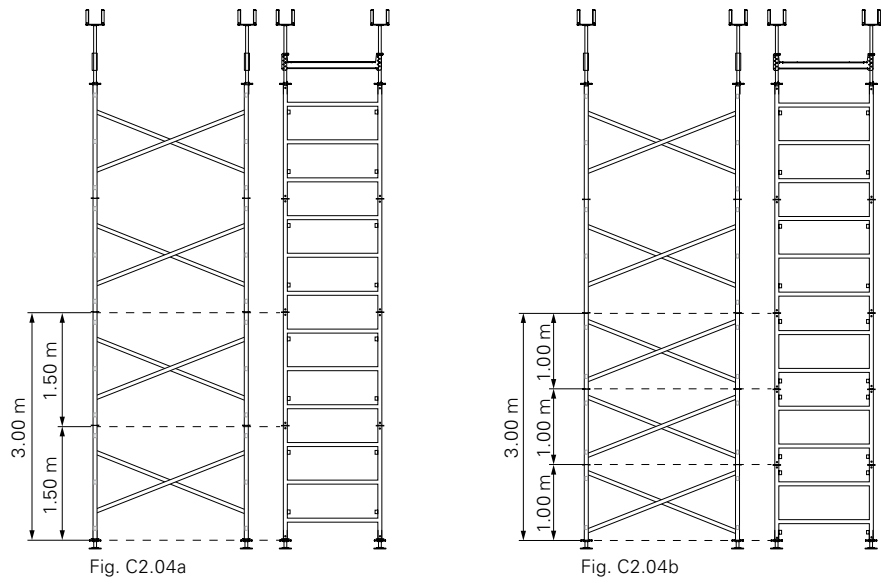
Height adjustment takes place in the **base area** through the selection of PD 5 Frames (heights 100 or 150) as well as adjusting the spindle extension. (Fig. C2.03a - C2.03d). See also the following section “Increasing the Leg Load”.



Increasing the leg load for the “Beam with Slab Formwork” application

For some heights, the load-bearing capacity can be increased by using 3 x PD 5 Frame 100 (Fig. C2.04b) instead of 2 x PD 5 Frame 150 (Fig. C2.04a) in the **base area**.

See “Permissible Leg Loads” table in Section “C1 Load Tables”. (Fig. C2.03a + C2.03b).



Required components per tower

PD 5 shoring tower								
Component Tower height	Base Spindle TR 48-75/55	PD 5 Frame (125 x 150)	PD 5 Frame (125 x 100)	Double Pin Frame	Connector with Washer	Cross Head Spindle TR 48-75/47	PD 5 Spindle Safety Strap	PD 5 Diagonal Brace 150 / 200 / 250
2.12 – 2.65	4	0	4	4	4	4	4	4
2.62 – 3.15	4	2	2	4	4	4	4	4
3.12 – 3.65	4	4	0	4	4	4	4	4
3.62 – 4.15	4	2	4	8	8	4	4	6
4.12 – 4.65	4	4	2	8	8	4	4	6
4.62 – 5.15	4	6	0	8	8	4	4	6
5.12 – 5.65	4	4	4	12	12	4	4	8
5.62 – 6.15	4	6	2	12	12	4	4	8
6.12 – 6.65	4	8	0	12	12	4	4	8
6.62 – 7.15	4	6	4	16	16	4	4	10
7.12 – 7.65	4	8	2	16	16	4	4	10
7.62 – 8.15	4	10	0	16	16	4	4	10
8.12 – 8.65	4	8	4	20	20	4	4	12
8.62 – 9.15	4	10	2	20	20	4	4	12
9.12 – 9.65	4	12	0	20	20	4	4	12

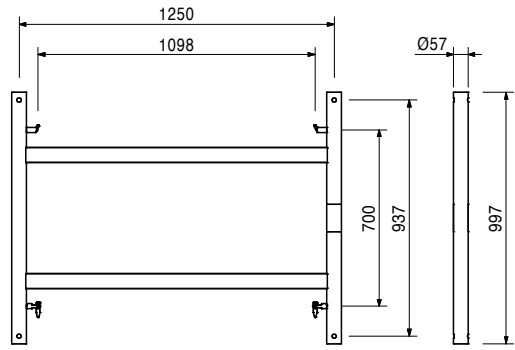
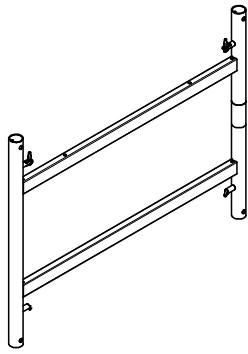
PD 5 shoring tower with Beam Waler											
Component Tower height	Base Spindle TR 48-75/55	PD 5 Frame (125 x 150)	PD 5 Frame (125 x 100)	Double Pin Frame	Connector with Washer	PD 5 Beam Spindle	Crosshead 20/24 S	PD 5 Beam Waler	Double Pin Beam Waler	PD 5 Spindle Safety Strap	PD 5 Diagonal Brace 150 / 200 / 250
2.61 – 3.35	4	0	4	4	4	4	4	4	4	4	4
3.11 – 3.85	4	2	2	4	4	4	4	4	4	4	4
3.61 – 4.35	4	4	0	4	4	4	4	4	4	4	4
4.11 – 4.85	4	2	4	8	8	4	4	4	4	4	6
4.61 – 5.35	4	4	2	8	8	4	4	4	4	4	6
5.11 – 5.85	4	6	0	8	8	4	4	4	4	4	6
5.61 – 6.35	4	4	4	12	12	4	4	4	4	4	8
6.11 – 6.85	4	6	2	12	12	4	4	4	4	4	8
6.61 – 7.35	4	8	0	12	12	4	4	4	4	4	8
7.11 – 7.85	4	6	4	16	16	4	4	4	4	4	10
7.61 – 8.35	4	8	2	16	16	4	4	4	4	4	10
8.11 – 8.85	4	10	0	16	16	4	4	4	4	4	10
8.61 – 9.35	4	8	4	20	20	4	4	4	4	4	12

Material adjustment for any increases in leg load has not been taken into consideration.

PD 5 Shoring System

Item no.	Weight kg
132464	14.500

PD 5 Frame 100



132550	0.320
018140	0.550

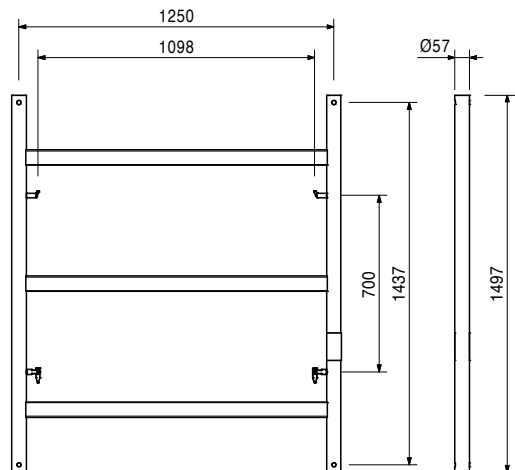
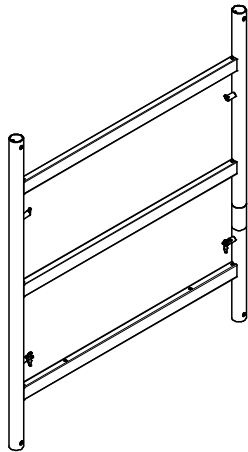
Accessories

Double Pin Frame

Connector with Washer, galv.

132468	21.500
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PD 5 Frame 150



132550	0.320
018140	0.550

Accessories

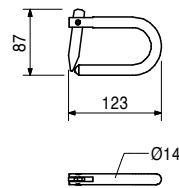
Double Pin Frame

Connector with Washer, galv.

132550	0.320
--------	-------

Double Pin Frame

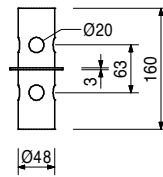
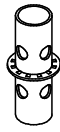
Tension-proof connection of PD 5 Frames.



PD 5 Shoring System

Item no.	Weight kg
018140	0.550

Connector with Washer, galv.
To connect Frames R 180, R 150 and R 110.



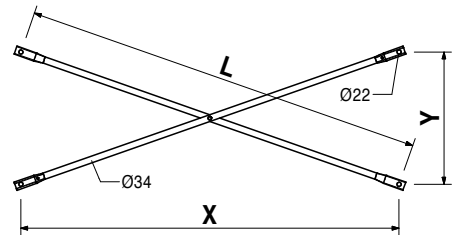
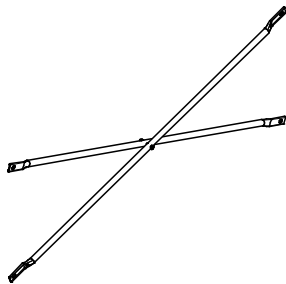
018050	0.171
018060	0.014

Accessories
Pin Ø 16 x 65/86, galv.
Cotter Pin 4/1, galv.

132470	6.570
132472	8.350
132474	10.200

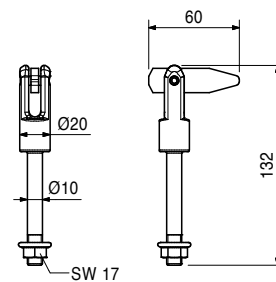
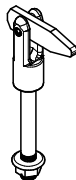
PD 5 Diagonal Braces
PD 5 Diagonal Brace 150
PD 5 Diagonal Brace 200
PD 5 Diagonal Brace 250
For bracing PD 5 Frames in longitudinal direction and as horizontal bracing.

L	X	Y
1655	1500	700
2119	2000	700
2656	2500	700



132541	0.181
--------	-------

Flip Lock, screwable
For connecting Diagonal Braces as horizontal bracing.



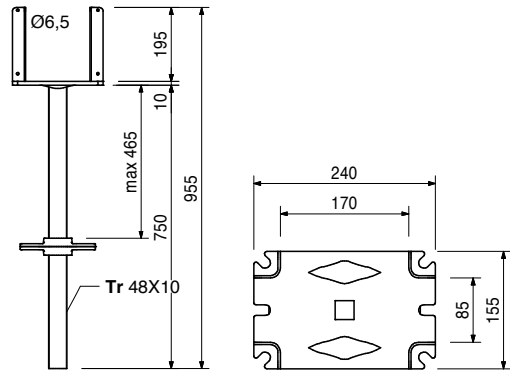
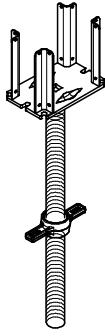
PD 5 Shoring System



Item no.	Weight kg
018630	9.580

Cross Head Spindle TR 48-75/47, galv.
 Head spindle for PD 8 Slab Table and Flex Plus Shoring.

Complete with
 1 pc. 018270 Quick Jack Nut TR 48, galv.



Accessories

028590	0.568
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Tension Strap 16-25, galv.

124112	9.410
124109	12.200
123771	14.900

Steel Decks UDG 25

Steel Deck UDG 25 x 150

Steel Deck UDG 25 x 200

Steel Deck UDG 25 x 250

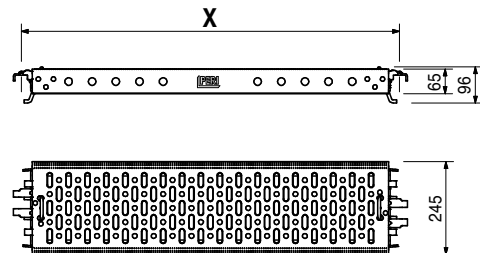
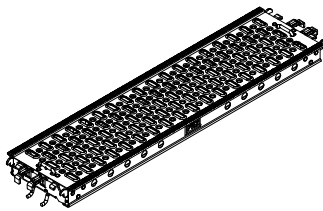
Mounted on Ledger UH and PD 5 Frames.

X	perm. p [kN/m ²]	max. p [kN/m ²]
1500	6.0	19.6
2000	6.0	10.9
2500	4.5	6.9

Note

Perm. p according to DIN EN 12811-1.

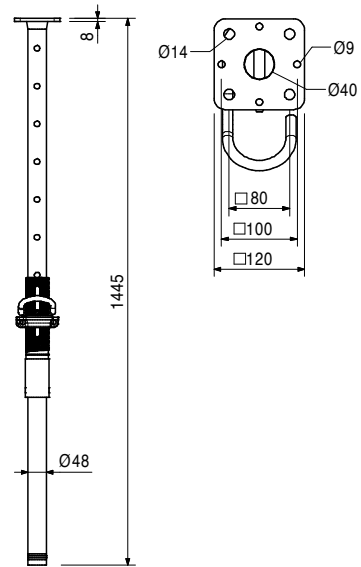
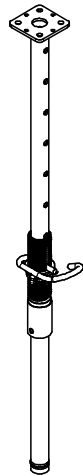
max. p = maximum possible load without deflection limitation.



Item no.	Weight kg
132457	10.000

PD 5 Beam Spindle

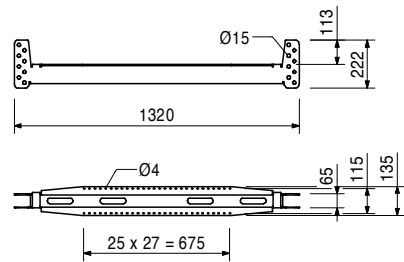
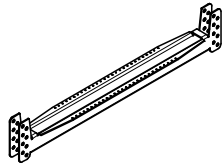
Simultaneous connection of PD 5 Beam Waler and support of the slab formwork.



132540	14.800
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PD 5 Beam Waler

For connecting to PD 5 Beam Spindle.



Accessories

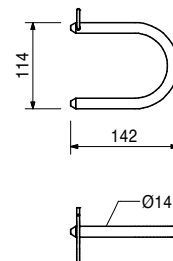
132544	0.399
--------	-------

Double Pin Beam Waler

132544	0.399
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Double Pin Beam Waler

For fixing the Beam Waler to the Beam Spindle.



Accessories

018060	0.014
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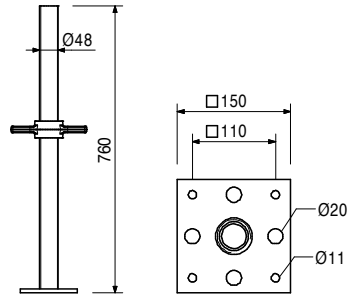
Cotter Pin 4/1, galv.

PD 5 Shoring System



Item no.	Weight kg
132584	6.840

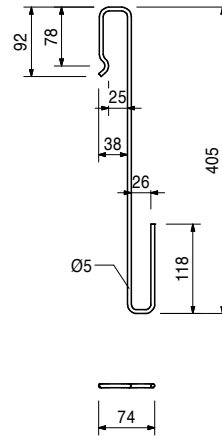
Base Spindle TR 48-75/55



132864	0.102
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PD 5 Spindle Safety Strap

For securing the Base Spindle and Cross Head Spindle.



PD 5 Shoring System



Item no.	Weight kg
019200	162.000

Trolley with Winch

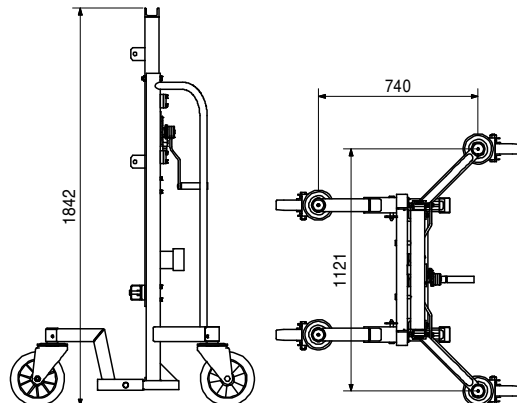
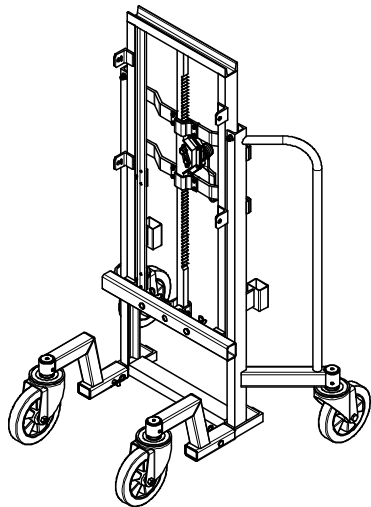
For moving towers and tables with MULTIPROP, PERI UP Flex, PERI UP Flex Plus, PERI UP Flex MDS K and PD 8 with appropriate support for the system.

Note

Follow Instructions for Use!

Technical Data

Permissible load-bearing capacity 1.0 t.



Accessories

118114	14.200
130501	27.400
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

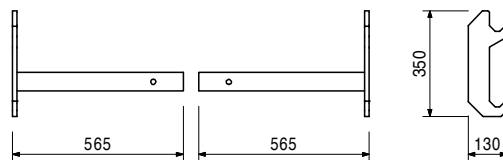
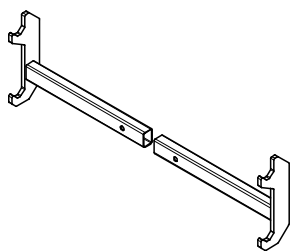
118115	11.000
--------	--------

Connector PD 8 - Trolley

For moving PD 8/PD 8 Eco Systems with Trolley with Winch.

Note

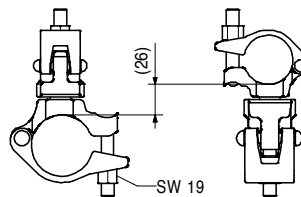
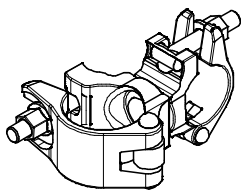
Consisting of 2 parts:
Support left and right.



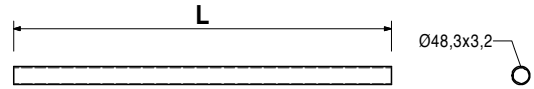
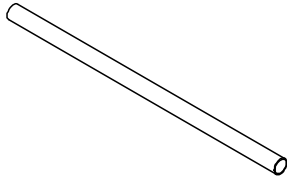
017000	1.540
--------	-------

Red. Swivel Coupling RS 60/48, galv.

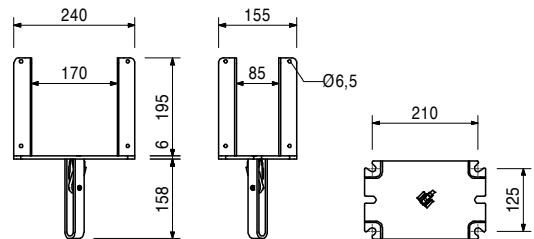
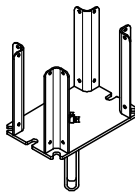
For Scaffold Tubes Ø 48 mm and Ø 60 mm.



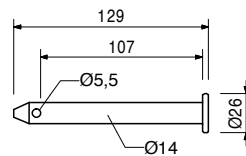
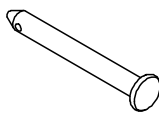
Item no.	Weight kg		L
		Scaffold Tube Steel Ø 48.3 x 3.2	
026415	3.550	Scaff. Tube Steel Ø 48.3 x 3.2, special length	
026417	0.000	Cutting Cost Scaffold Tube	
026411	3.550	Scaff. Tube Steel Ø 48.3 x 3.2, l = 1.0 m	1000
026412	7.100	Scaff. Tube Steel Ø 48.3 x 3.2, l = 2.0 m	2000
026413	10.650	Scaff. Tube Steel Ø 48.3 x 3.2, l = 3.0 m	3000
026414	14.200	Scaff. Tube Steel Ø 48.3 x 3.2, l = 4.0 m	4000
026419	17.750	Scaff. Tube Steel Ø 48.3 x 3.2, l = 5.0 m	5000
026418	21.600	Scaff. Tube Steel Ø 48.3 x 3.2, l = 6.0 m	6000



028680	3.190	Crossheads 20/24, galv.	Note Required hole diameter of the prop end plate Ø 40 mm. Girder overlap on both sides minimum 16.3 cm for GT 24 and 15 cm for VT 20.
027890	3.080	Crosshead 20/24 S, galv. Crosshead 20/24, galv. With or without self-locking coupling. For tilt-resistant support of one or two GT 24 or VT 20 Girders.	



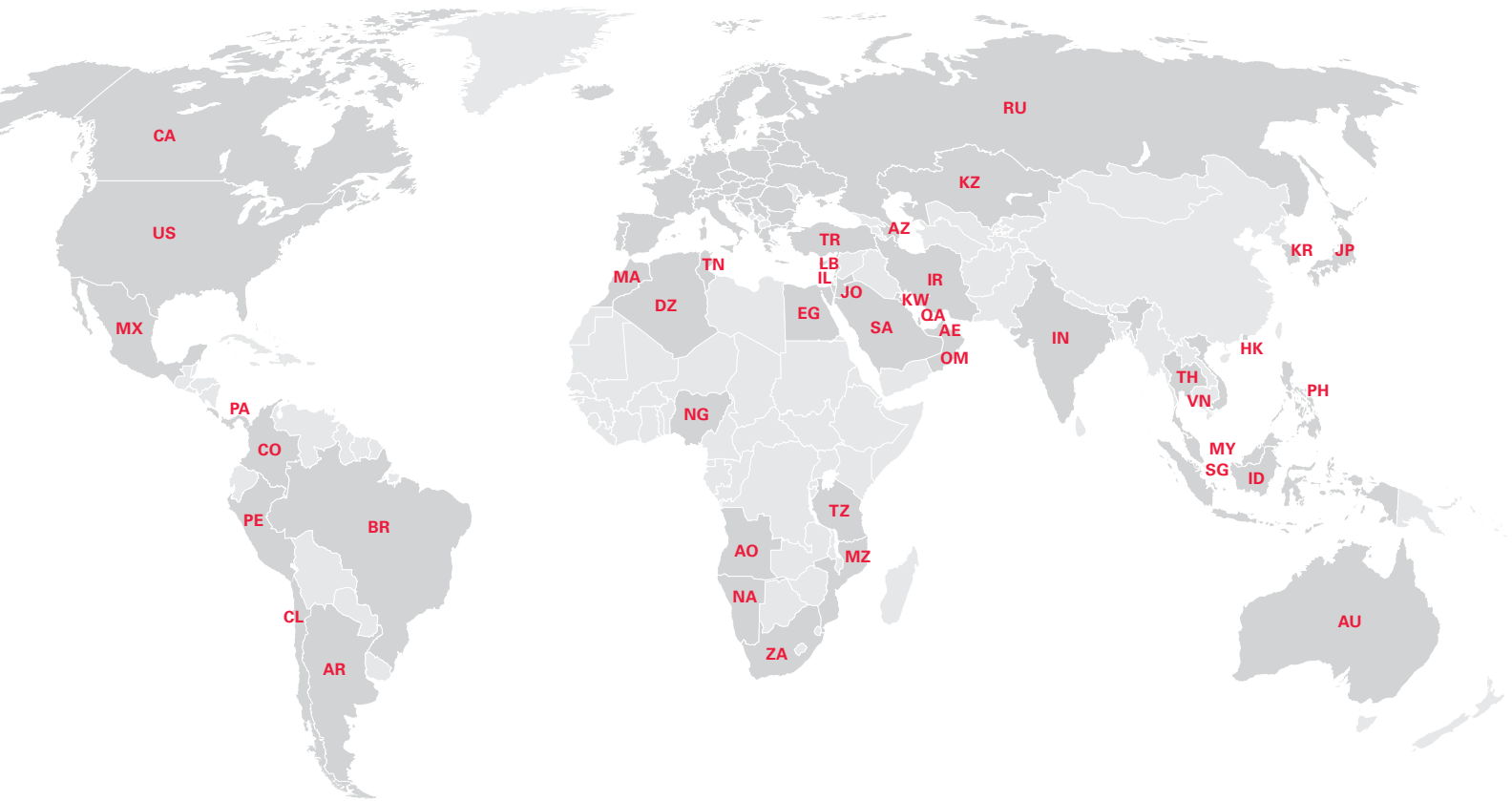
027990	0.150	Bolt Ø 14 x 107, galv. For different connections.
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		Accessories
018060	0.014	Cotter Pin 4/1, galv.
018060	0.014	Cotter Pin 4/1, galv.



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PERI

PERI GmbH Formwork Scaffolding Engineering

Rudolf-Diesel-Strasse 19
89264 Weissenhorn
Germany
Tel. +49 (0)7309.950-0
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 89264 Weissenhorn
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 Tel. +49 (0)7309.950-0
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 info@peri.com
 www.peri.com

