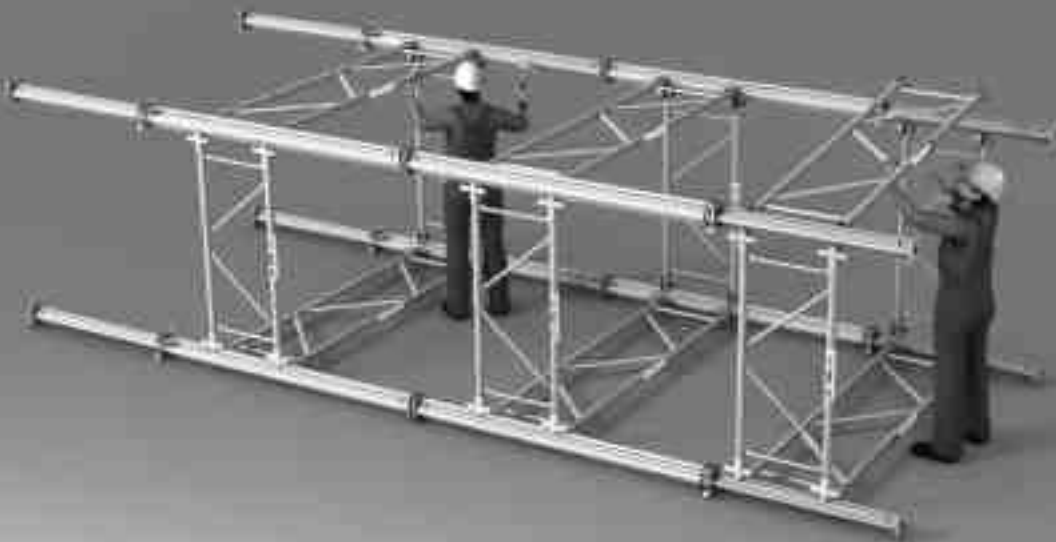


MULTIPROP System

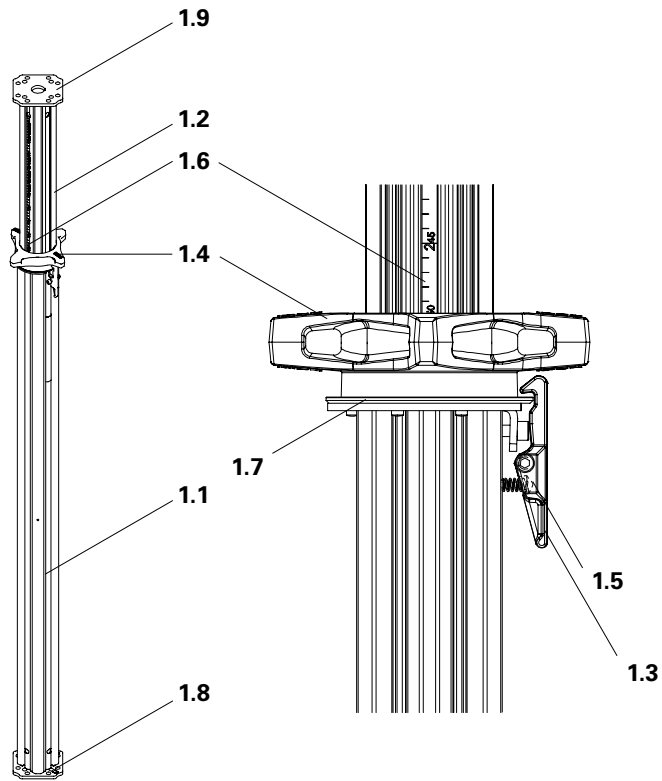
Instructions for Assembly and Use – Standard Configuration



Main components

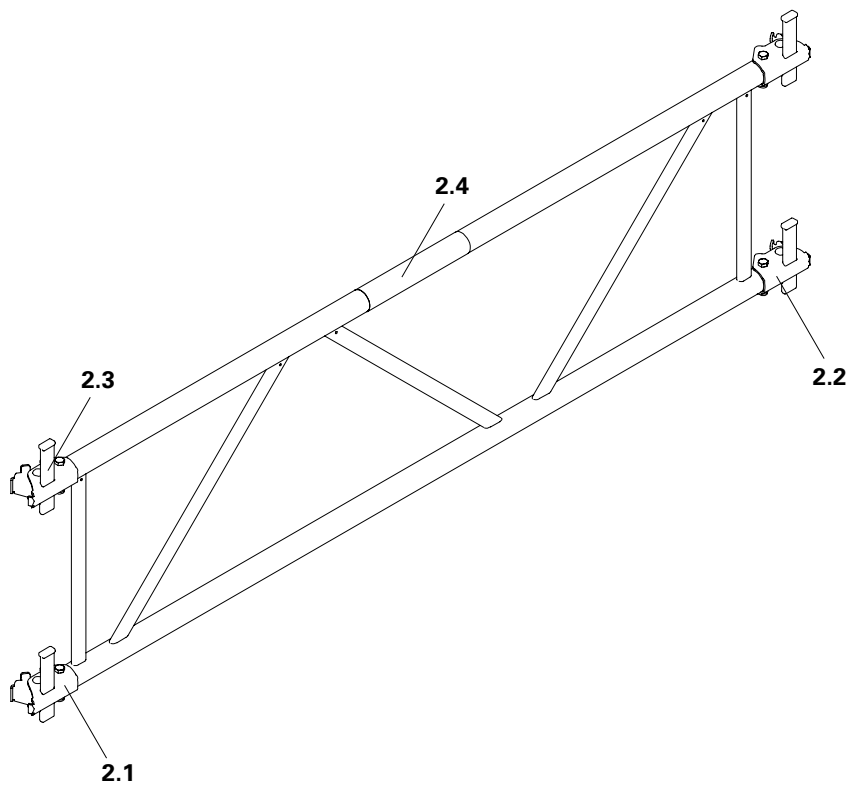
1 MULTIPROP MP

- 1.1 Outer tube
- 1.2 Inner tube
- 1.3 Securing hook
- 1.4 Adjusting collar
- 1.5 Pressure spring
- 1.6 Measuring tape
- 1.7 Rubbing plate
- 1.8 Base plate
- 1.9 Head plate



2 Frame MRK

- 2.1 Wedge Coupling C
- 2.2 Wedge Coupling D
- 2.3 Wedge
- 2.4 Adhesive label / Type



Overview

Main components	1
Accessories	2
Key	3

Introduction

Target groups	4
Additional technical documentation	4
Intended use	5
Care and maintenance instructions	6

Safety instructions

Cross-system	7
System-specific	8
Storage and transportation	8

Assembly and Dismantling

A1	MULTIPROP as Individual Prop	
	Adjusting the extension length	10
A2	MULTIPROP System	
	Connecting the props	11
	Frame MRK	12
	Compression Brace Head MP/SRU	14
	Tilting Base MKF	15
	Tilting Forkhead MKK	16
	Base MP 50	17
A3	Horizontal Assembly	
	With 4 legs	18
	With multiple number of legs	21
	Erecting the tower	22
A4	Vertical Assembly	
	First level	24
	Additional levels	25
A5	Bracing MULTIPROP Towers	
	Installing the Brace Connector MPR	26
	Support with Push-Pull Props	28
	Support in units	29
A6	MULTIPROP Accessories	
	MULTIPROP Strap U100 – U140	30
	Connecting MULTIPROP with MPB 24	30
	Compression Brace Head MP/SRU	
	With Connector MP/SRU	31
A7	Dismantling	
	Vertical dismantling	32
	Horizontal dismantling	32
A8	Storage and Transportation	33

Application

B1	Structural Scaffold Tube Bracings	
	Scaffold Tube Coupler MG	34
B2	Frame	
	Use as scaffold girder	35
B3	Tables and Towers	
	Lowering	36
	Moving with trolley and winch	36
	Moving along with pole	37
	Tables	38

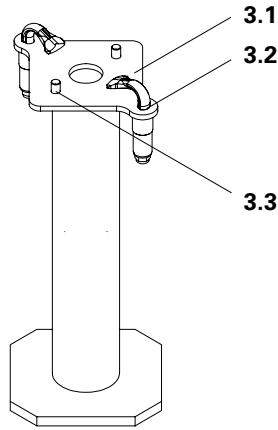
Components

Components	40
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Accessories

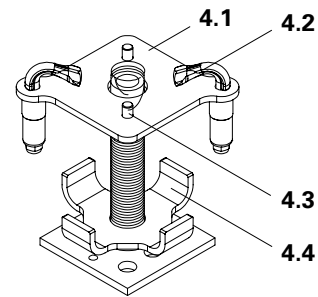
3 Base MP 50

- 3.1 Head plate
- 3.2 Clamping claw
- 3.3 Centering pin



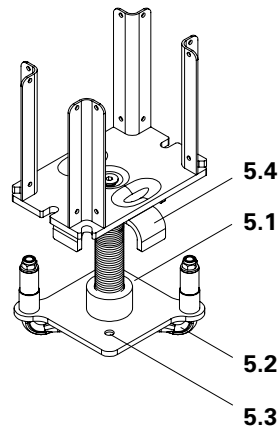
4 Tilting Base MKF

- 4.1 Head plate
- 4.2 Clamping claw
- 4.3 Centering pin
- 4.4 Rotary wing



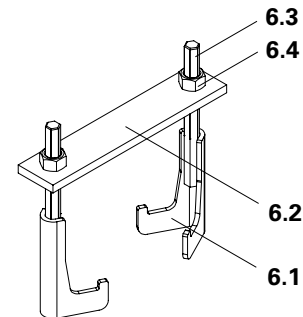
5 Tilting Forkhead MKK

- 5.1 Base plate
- 5.2 Clamping claw
- 5.3 Centering pin
- 5.4 Rotary wing



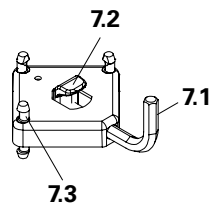
6 MULTIPROP Strap U100 – U140

- 6.1 Suspension fastening
- 6.2 Plate
- 6.3 Hex. bolt M16
- 6.4 Hex. nut M16, SW 24



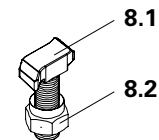
7 Connector MPV-2

- 7.1 Clamping lever
- 7.2 Clamping jaws
- 7.3 Centering pin



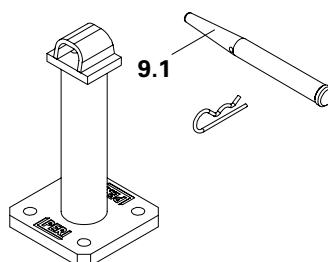
8 MULTIPROP Bolt with Nut

- 8.1 Bolt M12
- 8.2 Nut M12



9 Compression Brace Head MP/SRU

- 9.1 Fitting Pin 21 with Cotter Pin



Key

Pictogram | Definition

	Safety instructions
	Note
	Visual check
	Tip
	Lifting point
	Safety helmet
	Safety gloves
	Safety shoes
	Eye protection
	PPE
	Misapplication

Dimension specifications

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

Load details are usually given in kg. Other measurement units, e.g. t, are shown in the illustrations.

Conventions

- Instructions are numbered (1., 2., 3.)
- Multiple position numbers, i.e. alternative components, are represented with a slash: 1 / 2.

Arrows

Actions

Forces

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 featured in these detailed drawings must nevertheless be available.

Target groups

Contractors

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

- assemble, modify and dismantle the formwork system, or use
- e.g. for concreting, or
- who have them used, e.g. for forming operations.

Construction site coordinator

The Safety and Health Protection Coordinator*

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

Qualified persons

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

Technically 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 technically qualified workers must have received instructions** which contain at least the following points:

- An explanation of the plan for the assembly, modification or dismantling of the scaffolding in an understandable form and language.
- Description of 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!

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

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

Additional technical documentation

- Approvals:
 - Approval Z-8.22-802 Shoring System MULTIPROP
 - Approval Z-8.312-824 Alu Beam MULTIPROP
- Type tests:
 - MULTIPROP System
 - MULTIPROP System with Base MP 50
 - Compression Brace Head MP/SRU with MULTIPROP
- Instructions for Assembly and Use:
 - MULTIPROP MP 120, 250, 350, 480, 625 Slab Props
 - SKYDECK Panel Slab Formwork
 - GRIDFLEX Girder Grid Slab Formwork
 - MULTIFLEX Girder Slab Formwork
- Instructions for Use:
 - Trolley with Winch
 - Pallets and Stacking Devices
- Data Sheet for Anchor Bolt PERI 14/20 x 130
- PERI Design Tables
- Brochure:
 - MULTIPROP Aluminium Slab Props

Intended use

Product description

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

These Instructions for Assembly and Use describe the standard configuration for shoring in accordance with the provisions of DIN EN 12812.

MULTIPROP Slab Props MP can be used in combination with the Frame MRK as a table or tower to transfer vertical loads. The outer tubes of the MULTIPROP Slab Props are powder coated. The Frames MRK can be mounted on both the outer and inner tube without changing the system dimensions. The integrated measuring tape and free-running collar allow accurate and fast height adjustment. The MULTIPROP Slab Prop has a fail-safe feature which prevents the inner tube from unintentionally slipping out. Markings on the outer tube facilitate the exact assembly of the Frame MRK. For any assembly work, only a hammer is required.

Features

The MULTIPROP System is used in shoring construction in planned perpendicular position to transfer vertical loads.

Main components

MULTIPROP 120, L = 0.80 – 1.20 m
MULTIPROP 250, L = 1.45 – 2.50 m
MULTIPROP 350, L = 1.95 – 3.50 m
MULTIPROP 480, L = 2.60 – 4.80 m
MULTIPROP 625, L = 4.30 – 6.25 m

MULTIPROP Frame MRK, Steel

Frame MRK 62.5
Frame MRK 75
Frame MRK 90
Frame MRK 120
Frame MRK 137.5
Frame MRK 150

MULTIPROP Frame MRK, Aluminium

Frame MRK 201.5
Frame MRK 225
Frame MRK 230
Frame MRK 237
Frame MRK 266
Frame MRK 296

System dimensions

Assembly heights as single props according to the permissible extension lengths 0.80 m – 6.25 m or 1.30 m – 6.75 m together with Base MP 50. Assembly heights as system with Frame MRK up to a maximum of 14.40 m, or 14.90 m with Base MP 50. In the ground plan, square or rectangular depending on the Frame MRK used, from 0.625 m to 2.96 m.

Permissible load-bearing capacity = leg loads

Correspond to design class B1 as per DIN EN 12812.

The load-bearing capacity of the shoring towers in the MULTIPROP System is dependent on the position of the MULTIPROP Frame MRK. The capacities are stated in the relevant current versions of the type test.

Instructions on use

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

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

Changes to PERI components are not permitted.

Care and maintenance instructions

Clean the panels after every 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 care and maintenance costs as low as possible.

Never use steel brushes or hard metal scrapers to clean powder-coated or galvanised components.

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

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

Do not clean components when suspended on a crane.

Repairs must be carried out by PERI-trained 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 are 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 shall be compiled by the contractor. The 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 must be observed in the respective countries where they are being used.

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 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 $\varnothing 48.3 \times 3.2$ 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 determined.

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

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

- create another risk assessment with appropriate measures for ensuring the stability of the formwork system being carried out based on the results,
- and arrange for an extraordinary inspection by a qualified person. The aim of this inspection is to identify and rectify any damage in good time in order to guarantee the safe use of the formwork 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 formwork systems may only be carried out by technically qualified personnel under the supervision of an authorized person. The technically qualified personnel must have received appropriate training for the work to be carried out with regard to specific risks and dangers.

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

Before initial use, the safe functioning of the scaffold must be checked by a qualified person. The result 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 system, e.g.

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

If personal protective equipment (PPE) is required or specified in local regulations, the contractor must determine appropriate attachment points on the basis of the risk assessment. The personal protective equipment 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 of the formwork.
- ensure and prove that all loads are safely transferred.

Utilisation

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

If the formwork 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 coordinate all work.

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 crosswise.

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

Secure wedge couplers with a 500 g hammer up to the rebound impact.

Storage and transportation

Store and transport components ensuring that no unintentional change in their position is possible. Detach load-bearing devices and lifting gear from the lowered components only if they are in a stable position and no unintentional change of their position is possible.

Do not drop the components.

Use PERI load-bearing devices and lifting gear as well as only those 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 jobsite must be free of obstacles and tripping hazards as well as being slip-resistant.

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

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

Extension length



- Lift the prop so that the adjusting collar runs downwards.
- If the prop is partially loaded up to 15 kN, it can be continuously readjusted with the adjusting collar.
- Use a Wing Nut Spanner HD in order to allow the prop to spindle unencumbered with loads > 60 kN.
- Occasionally grease the rubbing plate for easier handling.



The pallets RP serve as a secure prop support.

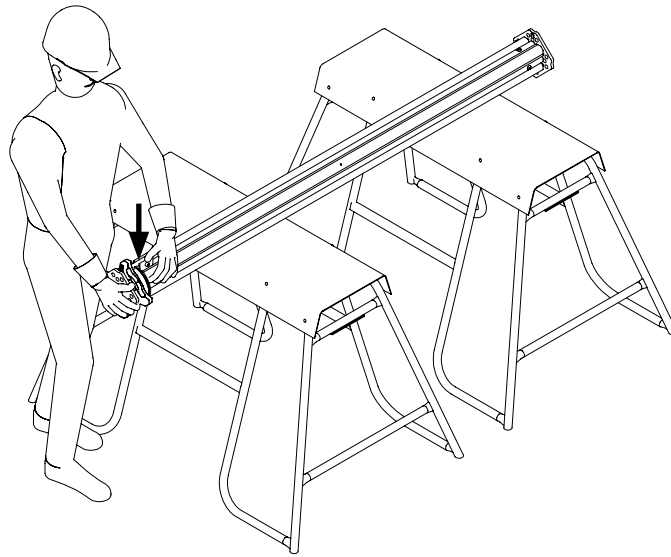


Fig. A1.01

Preparation

Place MULTIPROP Prop with retracted inner tube on a trestle / pallet provided. (Fig. A1.01)

Rough adjustment of the extension length

1. Press safety hook. (1.3). The adjusting collar (1.4) is disconnected. (Fig. A1.01a)
2. Extend inner tube (1.2) over the required prop length. (Fig. A1.01a + A1.01b)
3. Adjust to the exact prop length by means of the adjusting collar on the integrated measuring tape (1.6) (36 mm adjusting range per turn).
4. Push in the inner tube until the adjusting collar lies against the rubbing plate (1.7). (Fig. A1.02)
5. Lock the safety hook in place.

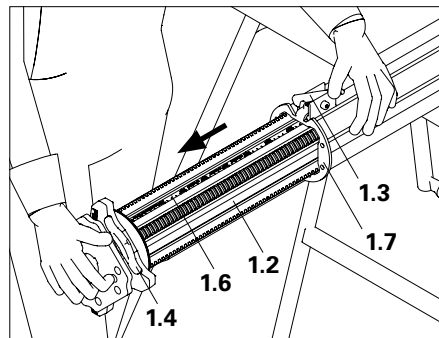


Fig. A1.01a

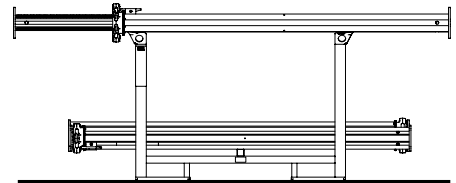


Fig. A1.01b

The prop has now been adjusted.



Is the safety hook locked in place?



Already pre-assemble Tilting Base MKF and Tilting Forkhead MKK now.

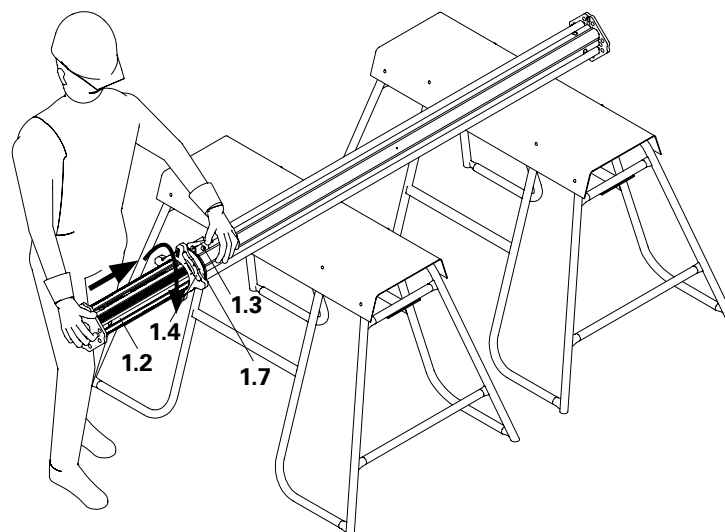


Fig. A1.02

Connecting the props



Extended props may only be used for towers!
Brace with Frame MRK!
Check connections to ensure fittings are tight!

Connector MPV-2

The Connector MPV-2 (7) connects two MULTIPROP Props with end plate thicknesses of 10 mm.

Assembly

1. Insert centering pins (7.3) into the drilled holes of the prop base (1.8) or head plate (1.9).
2. Insert second prop on the centering pin of the Connector MPV.
3. Turn clamping lever (7.1) to the right and firmly tighten.
4. Engage clamping jaws (7.2) in the centre drilled hole of the prop.

(Fig. A2.01)

The props are connected.

The tower height can be adjusted by means of the integrated measuring tape. For each Connector MPV, an extra 2.5 cm must be added.

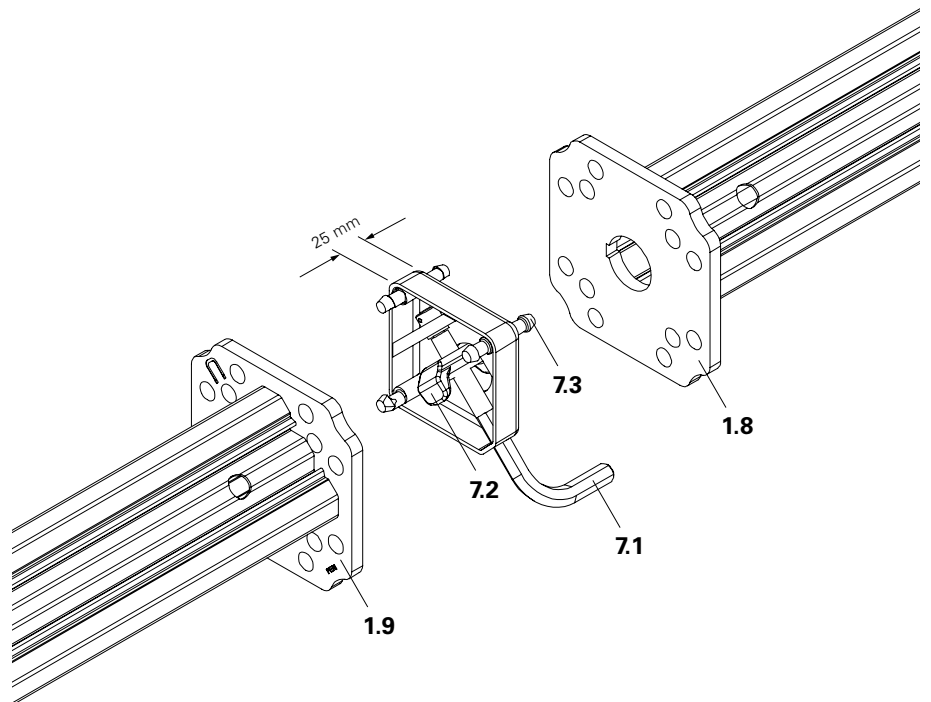


Fig. A2.01

MULTIPROP Bolt with Nut

As an alternative to the Connector MPV-2, the end plates of both props can be connected using two diagonally-arranged MULTIPROP Bolts with Nuts. (Fig. A2.02 + A2.02a)

Assembly

1. From the bottom, insert the bolt (8.1) through the drilled hole.
2. Open nut (8.2) with the collar to the head plate (1.9) and tighten, SW 19.

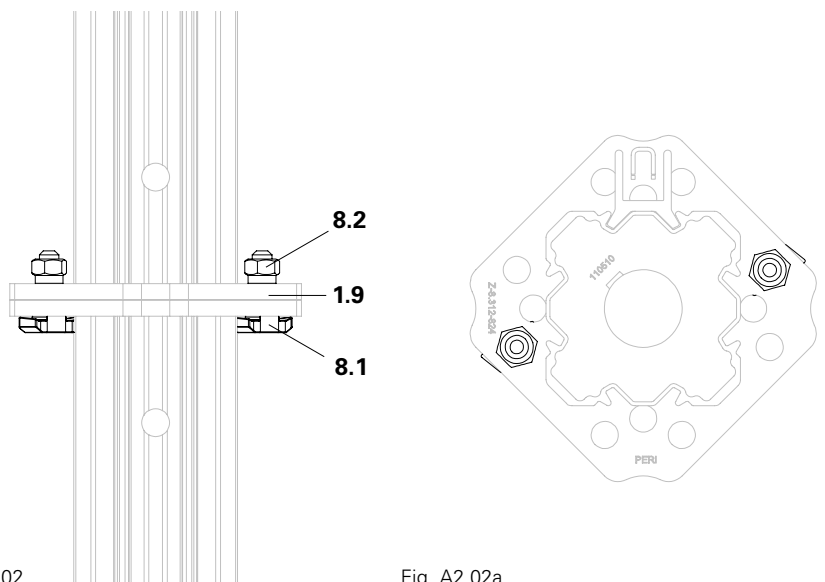


Fig. A2.02

Fig. A2.02a

Frame MRK



**Set down the MULTIPROP Frames MRK in a secure position so that they cannot tip over!
Do not damage the wedge connection!**

Assembly

Always mount the Frames MRK (2) to the Props (1) so that the wedge can be hit into position from top to bottom. (Fig. A2.03)

1. Open wedge connection C (silver) (2.1) or D (yellow) (2.2). The wedge (2.3) is at the top. (Fig. A2.04)
2. Engage wedge connection in the profile grooves of the MP Tubes. (Fig. A2.05)
3. Keep the wedge connection closed.
4. Firmly strike the wedge with the hammer.
5. Close the other wedge connections in the same way.

The frame is mounted to the prop. (Fig. A2.05)

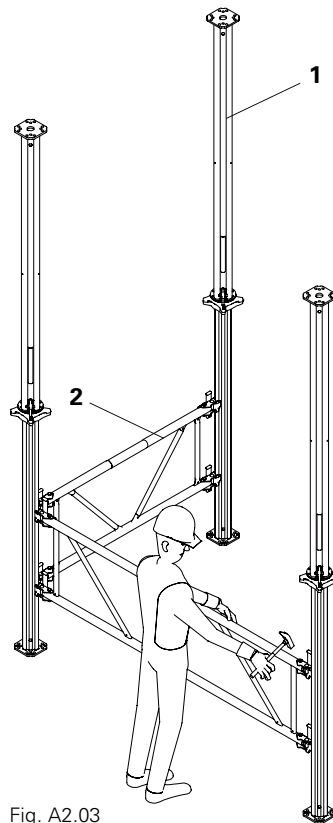


Fig. A2.03

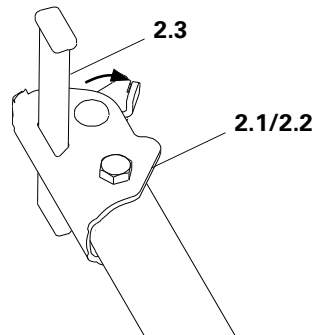
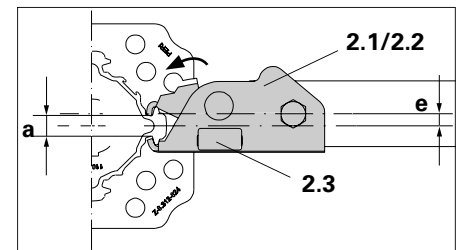


Fig. A2.04

Inner tube



Outer tube

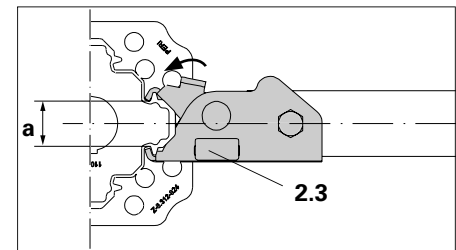


Fig. A2.05



If the wedge slips through, there is no clamping effect!

- In that case, release the wedge and reconnect.
- For a tight connection to the outer or inner tube with different jaw opening "a" two wedge courses are provided in the wedge itself (2.3). (Fig. A2.05 jaw opening "a")
- In the clamping area, the prop profile must be clean, e.g. free of concrete residues. (Fig. A2.06)

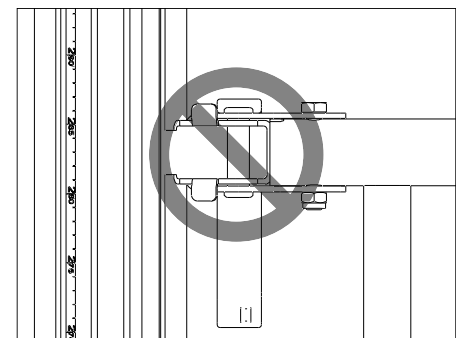
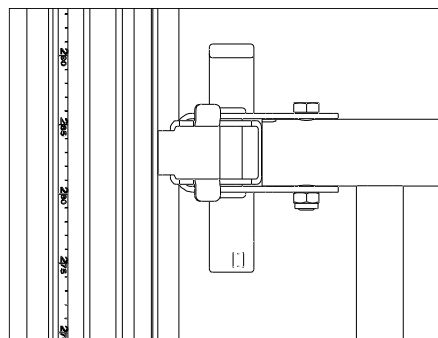


Fig. A2.06

Arrangement of the Frames MRK

Universally valid

The arrangement of the Frames MRK is shown in the relevant diagram contained in the type test.

Markings on the outer tube

Arrange the Frames MRK at the circular-shaped recesses (1.10) of the outer tube. This results in a distance of 40 cm to the base plate.

(Fig. B2.07a + B2.07b)

Outer tube top

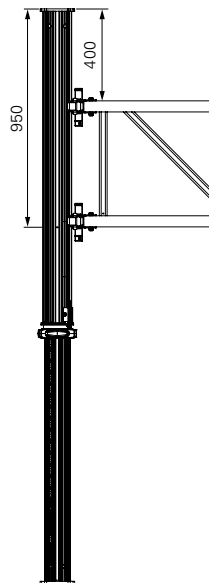


Fig. A2.07a

Outer tube bottom

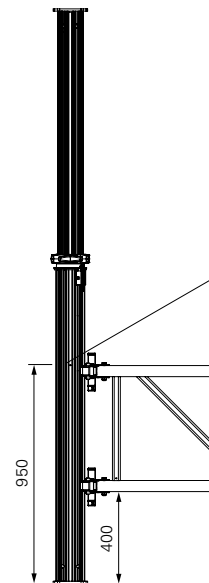
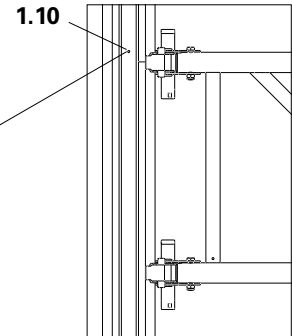


Fig. A2.07b



Outer tube + inner tube

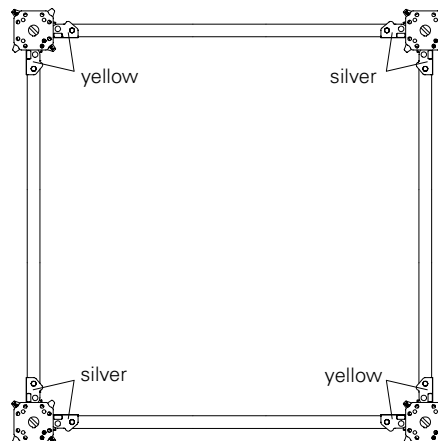


Fig. A2.08



Only wedge connections of the same colour are permissible at a connection point!

(Fig. A2.08)

When inserted, the wedges (2.3) of the wedge connections must always be pointed downwards so that any self-actuating loosening is not possible!

Application of Frames \leq MRK 90

The Frames \leq MRK 90 must be in a counter position on the inner tube as mounted on the outer tube. Thus the colour of the wedge connections on the tube changes over the height of the tower.

(Fig. A2.09a + A2.09b)

Outer Tube \leq MRK 90

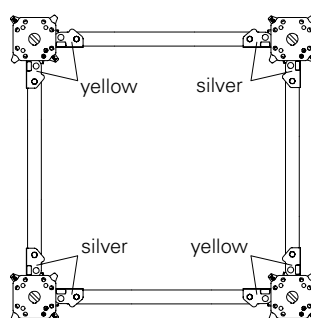


Fig. A2.09a

Inner Tube \leq MRK 90

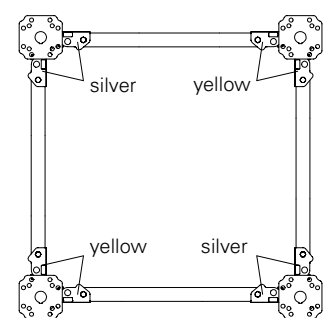


Fig. A2.09b

Compression Brace Head MP/SRU

The Compression Brace Head MP/SRU is used for supporting the inclined-positioned Main Beam SRU. (Fig. A2.10)

The Compression Brace Head can also be used on inclined surfaces. (Fig. A2.11)

Technical data

For the permissible load-bearing capacity see type test Compression Brace Head MP/SRU with MULTIPROP.



- Always position screw head on the prop!
- Check nuts for tightness!

Assembly

1. Secure Compression Brace Head MP/SRU (9) diagonally on the end plate of the MULTIPROP Prop by means of 2 x MULTIPROP Bolts with Nuts (8). (Fig. A2.10 + A2.11)
2. Spindle out MULTIPROP Slab Prop to required length.
3. Secure Compression Brace Head MP/SRU on Steel Waler SRU using Bolts and Cotter Pins (9.1).

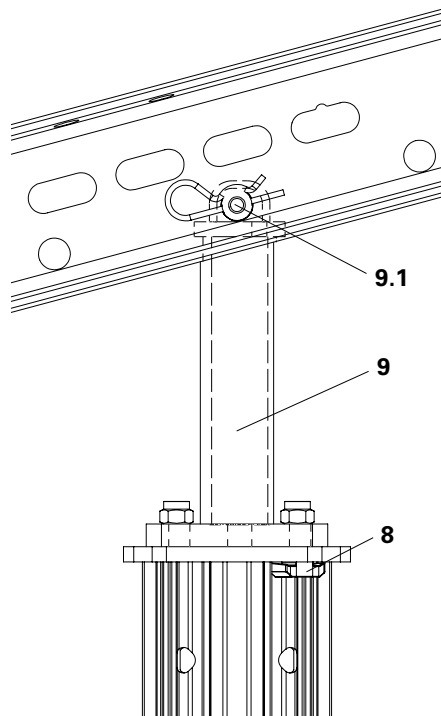
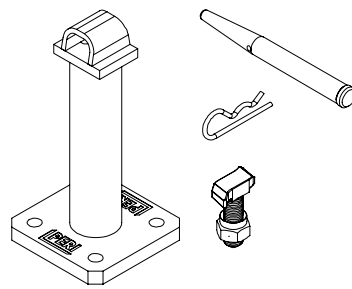


Fig. A2.10

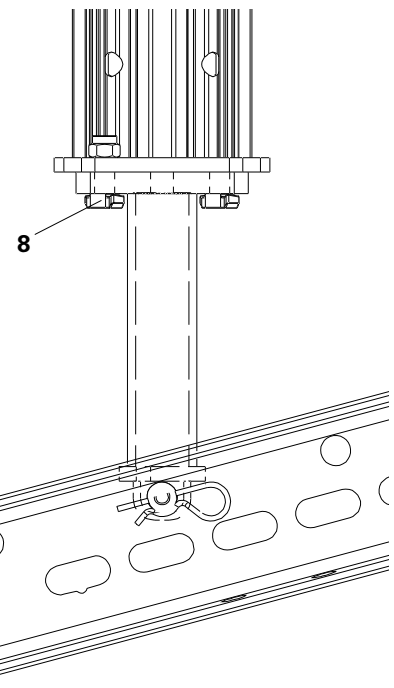


Fig. A2.11

Tilting Base MKF

The Tilting Base MKF (4) with the quick-action clamp coupling can be pivoted 3° on all sides. This means that MULTIPROP props can be positioned on inclined surfaces. (Fig. A2.12)

Technical data

Max. permissible load-bearing capacity 60 kN.



Use Tilting Base MKF only with braced props!
The first Frame MRK must be mounted no more than 40 cm above the upper edge of the base plate!

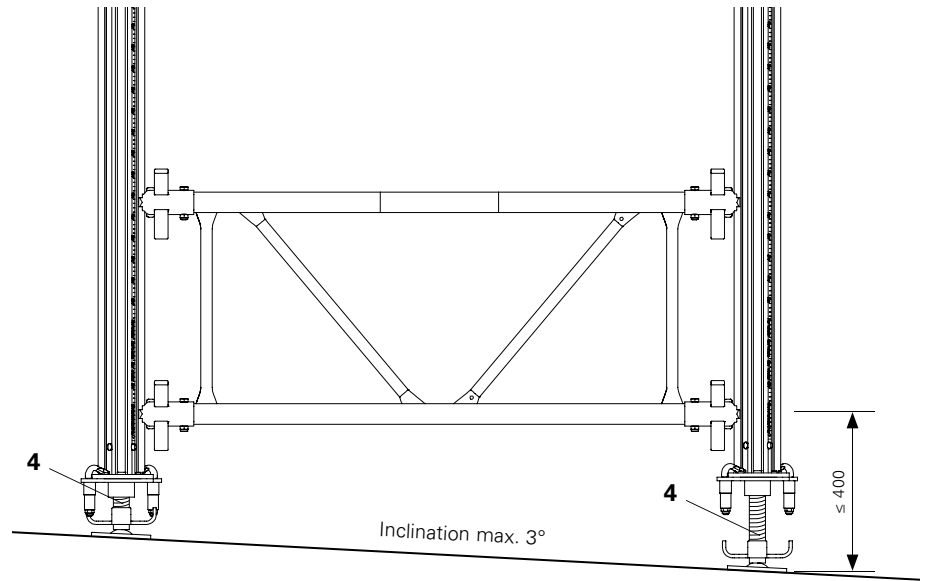


Fig. A2.12

Assembly

1. Insert centering pins (4.3) of the base plate (4.1) into the drilled holes of the prop base plate (1.8) or head plate (1.9).
2. Hit clamping claws (4.2) with a hammer over the prop base or head plate. Tilting Base MKF is connected to the prop. (Fig. A2.13)
3. Spindle Tilting Base MKF with rotary wings (4.4) to size. Max. spindle extension: 100 mm.



- When under load, the rotary wing can be turned by means of a nail puller. (Fig. A2.14)
- Never loosen the rotary wings with force e.g. hammer blow. Risk of breakage! (Fig. A2.14a)

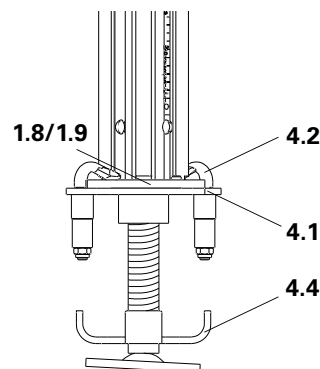


Fig. A2.13

Releasing



Spindle props without load!

1. Open clamping claws (4.2) using a hammer.
2. Remove Tilting Base MKF.

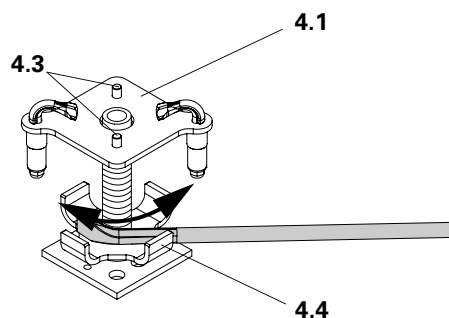


Fig. A2.14

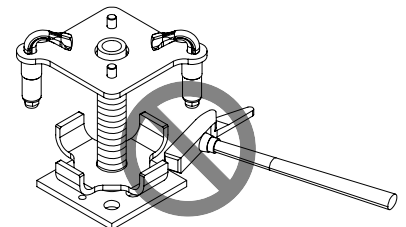


Fig. A2.14a

Tilting Forkhead MKK

Technical data

Permissible load-bearing capacity:
see MULTIPROP System type test.

The Tilting Forkhead MKK (5) with quick-action clamp coupling can be pivoted by 3° on all sides. It serves to securely accommodate one or two GT 24 or VT 20 Girders for non-horizontal slab formwork.

(Fig. A2.15)

Alternatively
Alu Beam MPB 24

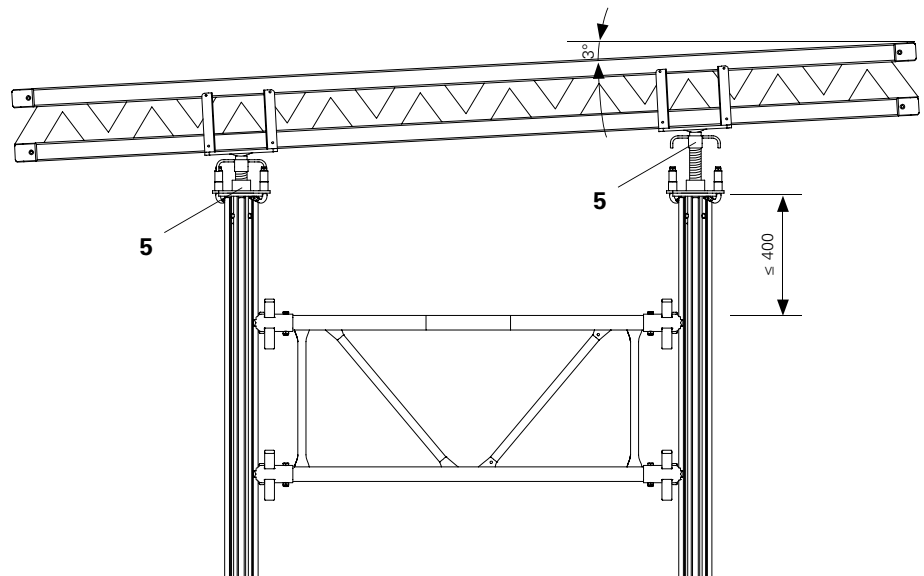


Fig. A2.15

Assembly

1. Insert centring pins (5.3) of the base plate (5.1) into the drilled holes of the prop base plate (1.8) or head plate (1.9).
2. Hit clamping claws (5.2) with a hammer over the prop base plate or head plate.
3. Spindle Tilting Forkhead MKK with rotary wings (5.4) to size. Max. spindle extension: 100 mm. (Fig. A2.16)

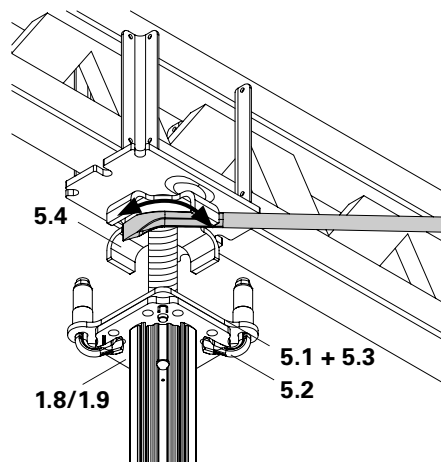


Fig. A2.16



- Horizontal forces are to be safely transferred.
- When under load, the rotary wing can be turned by means of a nail puller.
- Never loosen the rotary wings with force e.g. hammer blow. Risk of breakage! (Fig. A2.16a)

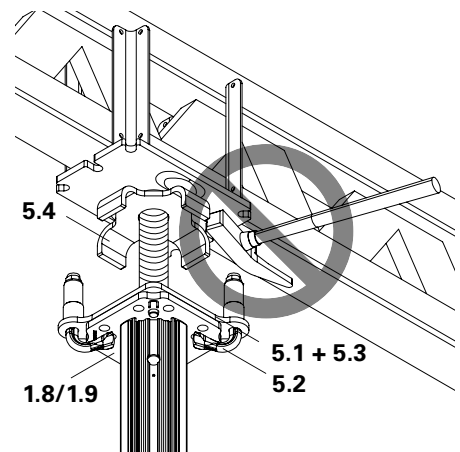


Fig. A2.16a

Releasing



Spindle props without load!

1. Open clamping claws (5.2) using a hammer.
2. Remove Tilting Forkhead MKK.

Base MP 50

Technical data

For the permissible load-bearing capacity, see type test:

- MULTIPROP System with Base MP 50.
- MULTIPROP Slab Props with Base MP 50.



- Used to extend the slab prop by 50 cm.
- Automatic centering of the slab prop by means of centering pins.
- Two clamping claws connect the Base MP 50 with the slab prop.
- The MULTIPROP Slab Prop can be mounted on the Base MP 50 with the inner or outer tube.

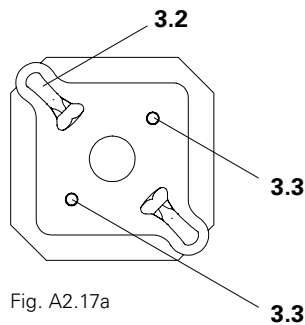


Fig. A2.17a

Assembly

1. Place Slab Prop (1) on the Base MP 50 (3).
2. Centering pins (3.3) of the base engage in the drilled holes of the base plate (1.8) or head plate (1.9) of the slab prop. (Fig. A2.17a)
3. Secure clamping claws (3.2) with a hammer over the base plate or head plate. (Fig. A2.17b) Base MP 50 is connected to the slab prop.



Are both clamping claws securely positioned on the head plate and base plate?

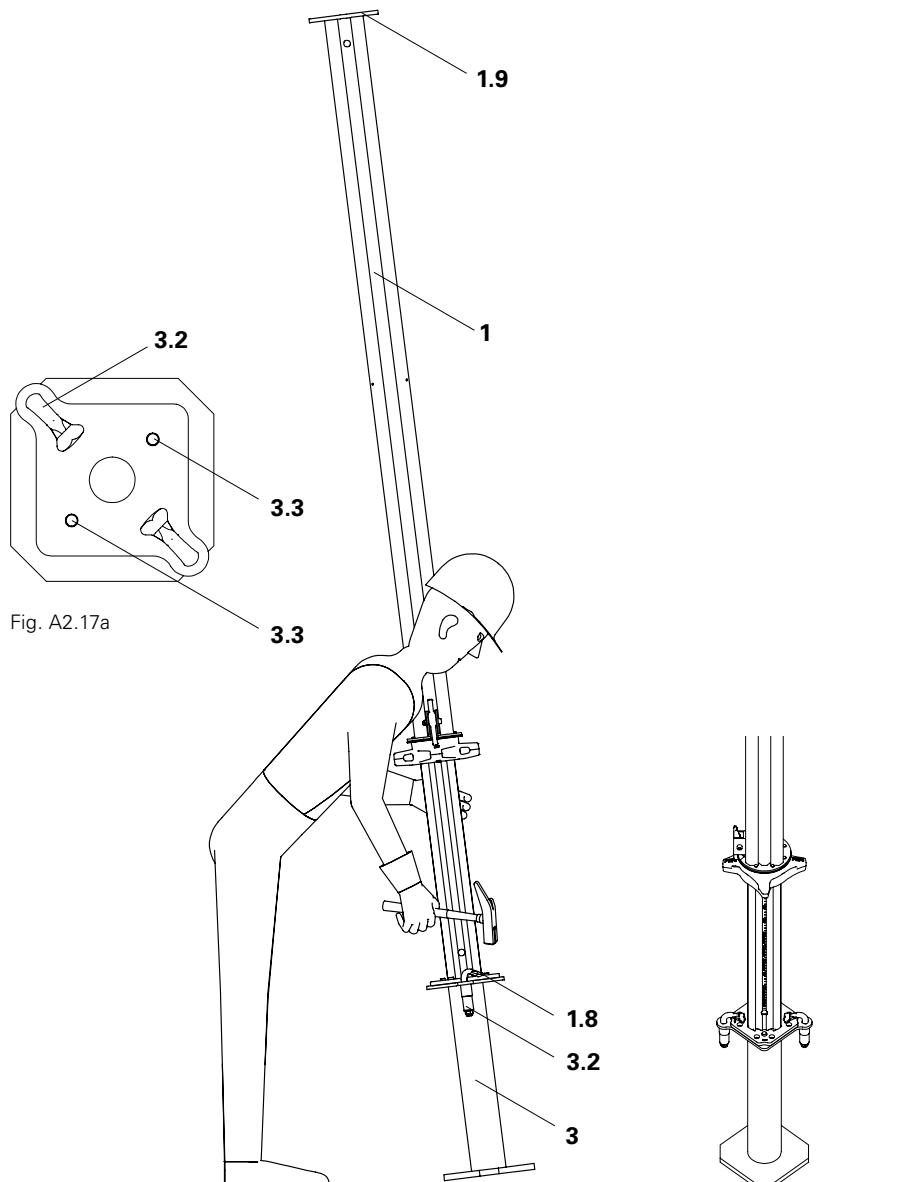


Fig. A2.17b

Releasing



Spindle props without load!

1. Open clamping claws using a hammer.
2. Remove the Base MP 50.

Assembly with 4 legs

For horizontal assembly, a flat and even assembly area is required.

Preparation

1. Adjust length of props as described in A1.
2. Pre-position Props (1) and Frame MRK (2) on the ground:
 - The inner tubes (1.2) of the top and bottom props are pointing outwards. This means any ground unevenness can be more easily compensated as well as allowing the formwork to be levelled.
 - The base plates (1.8) must rest on the ground with one edge surface. (Fig. A3.01a)



- The prop splices are positioned on one level. The alignment of the prop axes is to be constantly monitored in order to avoid time-consuming corrections.
- With rectangular-shaped shoring towers, the wider frame is positioned on the ground. (Fig. A3.01)
- The number and position of the Props MP and the Frames MRK must correspond to the respective assembly variant of the type test.



Checking assembly is easier with the measuring tape (1.6) facing towards the centre of the tower. (Fig. A3.01b)

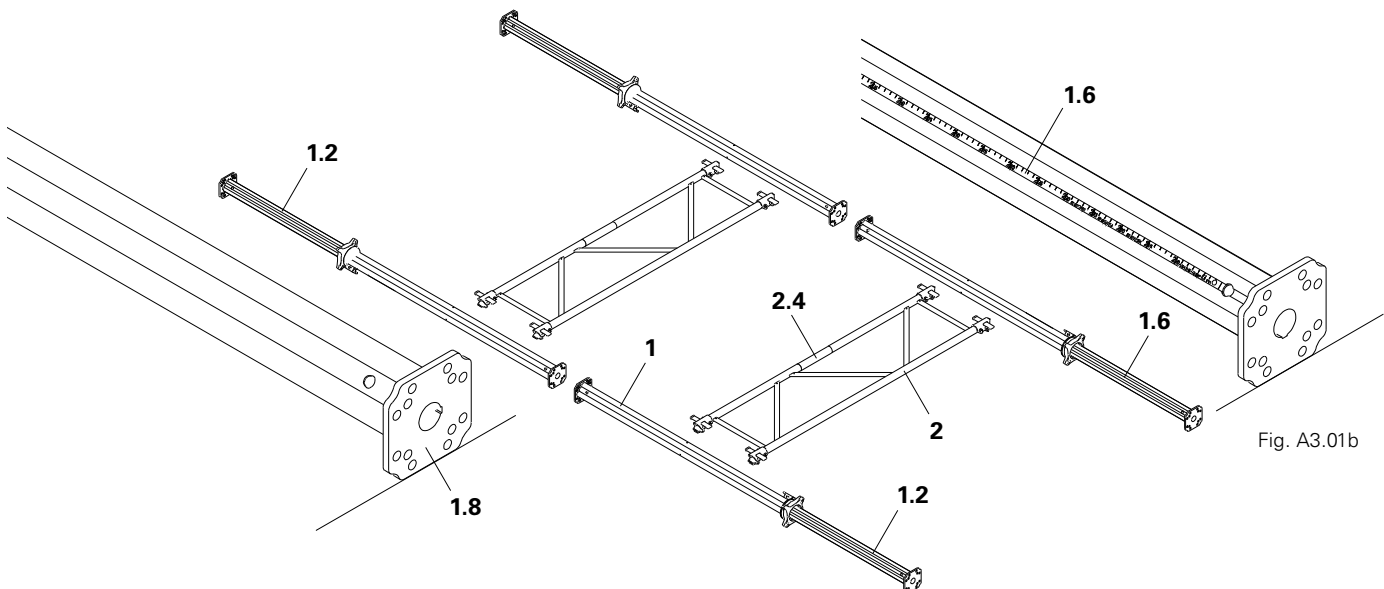


Fig. A3.01a

Fig. A3.01

Fig. A3.01b

Assembly with 4 legs

Assembling the tower

1. Connect the props to each other.
2. Mount the frames. The wider frame is positioned on the ground. (Fig. A3.02)

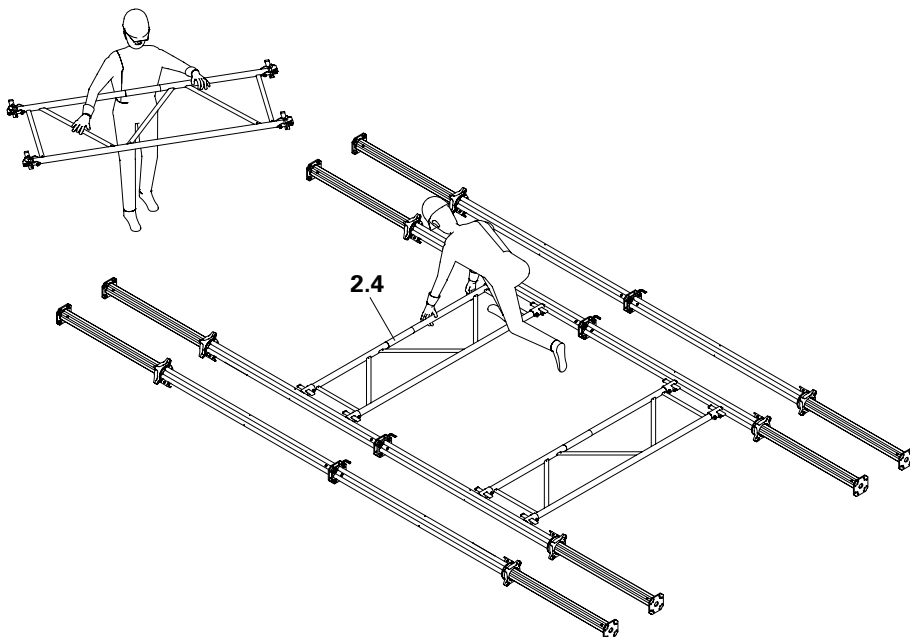


Fig. A3.02

3. Mount lateral frames. (Fig. A3.03)

- Yellow to yellow and silver to silver.
- Close the wedges in the direction of the assembly area.



Check the colour of the wedge connections as well as the wedge direction.



The text on the adhesive labels (2.4) is legible from the later assembly area!

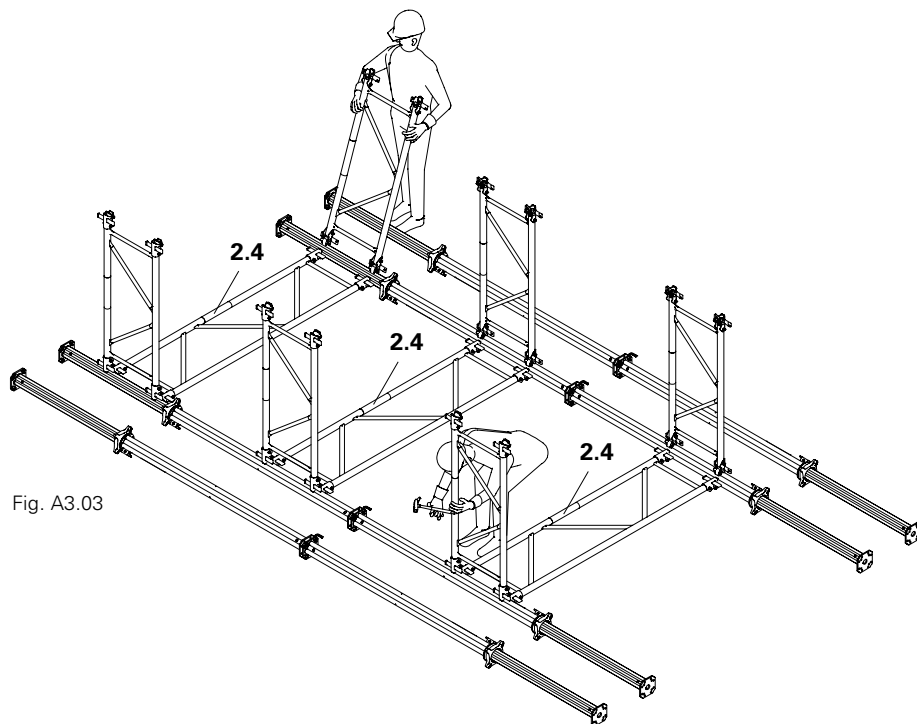


Fig. A3.03

Assembly with 4 legs

Assembling the tower

4. Insert second pair of props into the opened wedge connections of the frames.
5. Close wedge connections and hammer in wedges.
6. Install top frames. (Fig. A3.04)
The tower has now been assembled.



Before erecting, ensure that all adjusting collars are resting against their respective rubbing plates. Are the safety hooks closed?



- With larger units, the upper props can be inserted separately. Connect the props to each other before connecting them to the frames.
- For towers with heights > 7.0 m, a scaffold tube with a diameter of 48.3 x 3.2 as horizontal diagonal (10) is to be attached to the Frames MRK by means of swivel couplings at about half the tower height to ensure the cross-section shape. (Fig. A3.05)

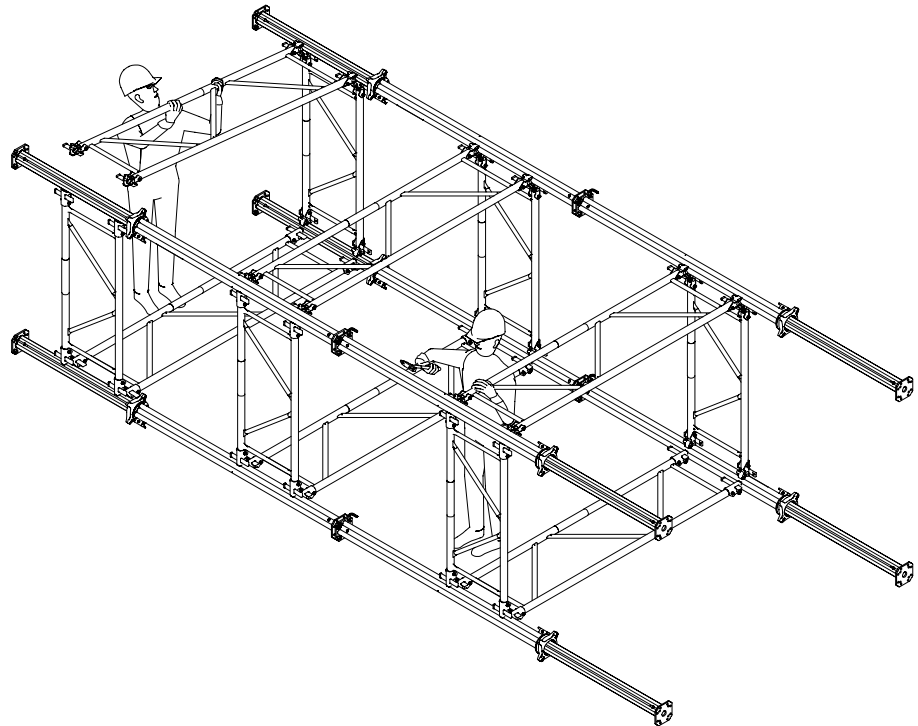


Fig. A3.04

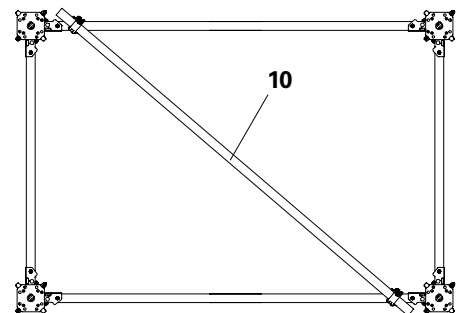


Fig. A3.05

Assembly with multiple number of legs, example

The instructions provided on page 16 apply.



In addition, the following is to be taken into consideration:

- The Frames MRK (2) must be consistently installed in a "windmill" design.
- The assemblies are to be braced diagonally using scaffold tubes with a diameter of 48.3 (10) at about half the tower height. (Fig. A3.06)
- All adjusting collars (1.4) are to be turned until they touch the rubbing plates (1.7).
- For crane suspension, scaffold tubes (10.1) are to be mounted under the frame tubes of the topmost frame. (Fig. A3.07)

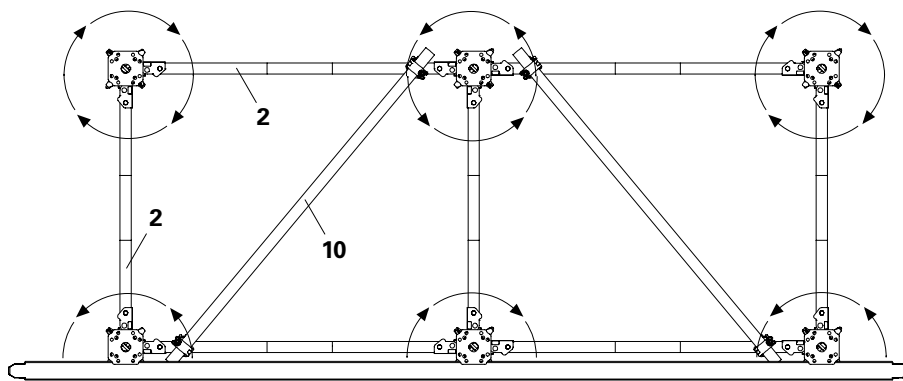


Fig. A3.06

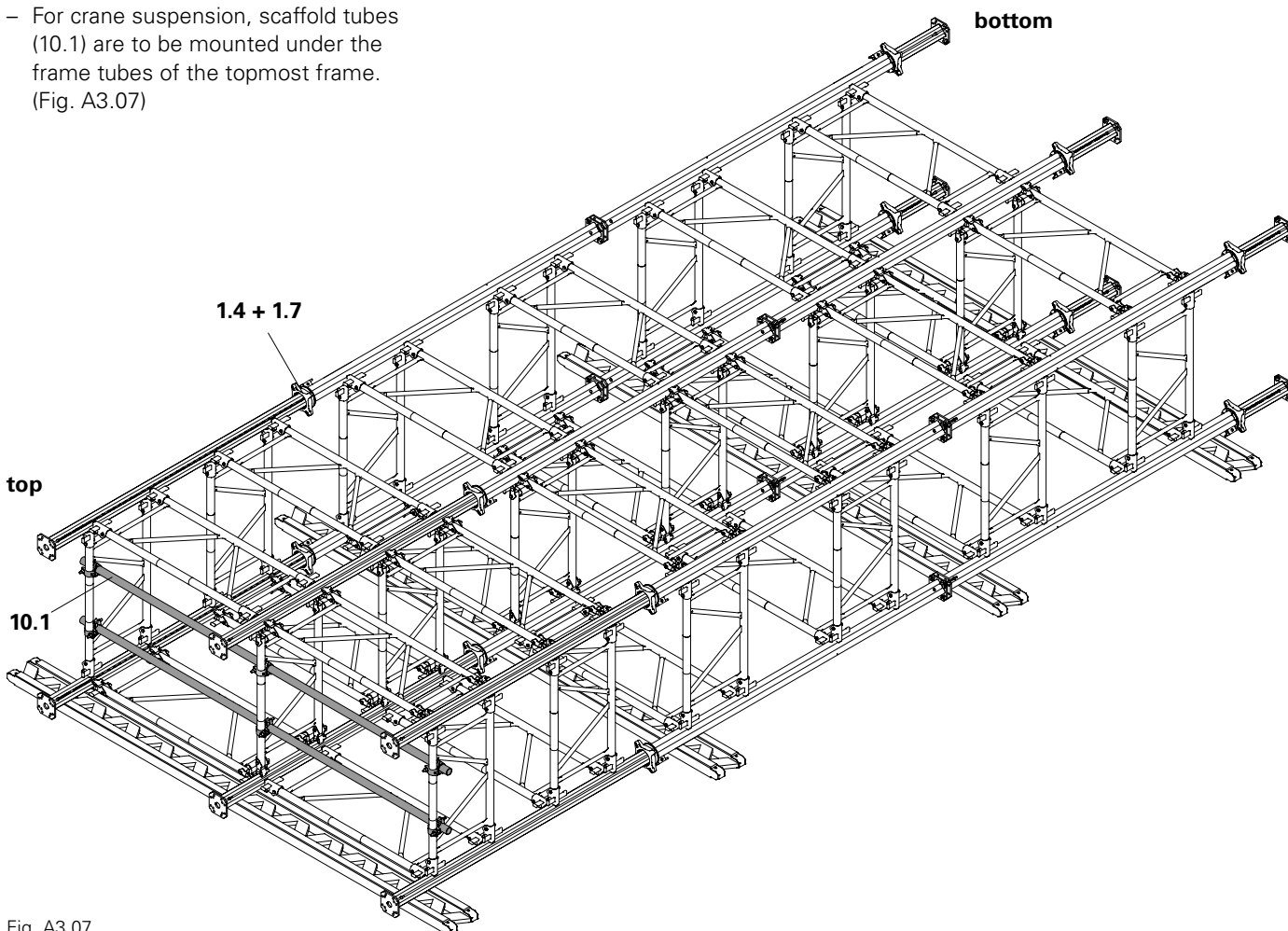


Fig. A3.07

Erecting the tower

Rectangular towers are erected via the shorter side of the frame and rotated around the longitudinal axis.

Rotate the tower around the longitudinal axis

1. Brace the tower in the centre with horizontal diagonal, see fig. A3.05.
2. With a 2-sling lifting gear, attach the tower on one side and symmetrically to the tower height. (Fig. A3.08)
3. Lift tower slightly.
4. Turn tower by 90° and place down on timber base.

The shorter frame lies at the top/bottom. (Fig. A3.09)

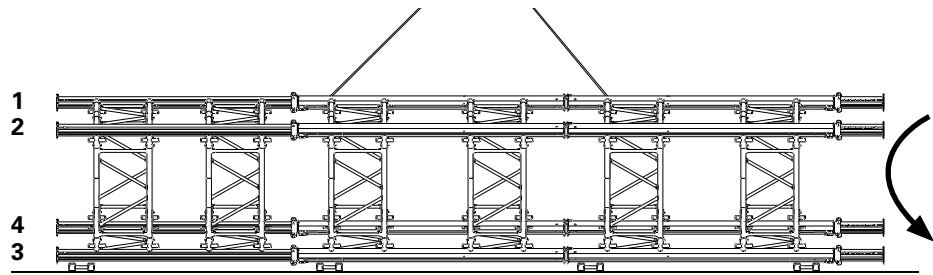


Fig. A3.08

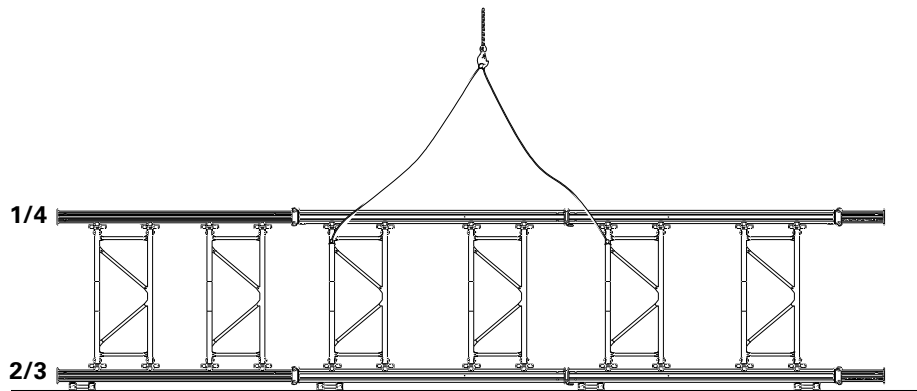


Fig. A3.09

Erecting the tower



Risk of falling!
Check wedges for tightness!



- Before erecting, ensure that all adjusting collars are resting against their respective rubbing plates. Safety hooks are closed.
- If necessary, secure tower with temporary mounting aids against tipping over, e.g. push-pull props, see A5.

Tower with 4 legs, with multiple number of legs

1. Mount push-pull prop connectors for the temporary mounting aid.
2. Completely insert the inner tubes (1.2) of the bottom props.
3. Extend inner tubes (1.2) of the top props. This prevents any large bending moments developing which impact on the base plate with full force.
4. Attach slings: hook in 4-sling lifting gear (11) into two opposite frames of the topmost frame row or scaffold tubes. (Fig. A3.10 + A3.10a)
5. Erect tower and align.
6. Extend inner tubes (1.2) up to the required length and align so that the tower stands upright.
7. Install missing frames.
8. Secure tower against tipping over.
9. Detach lifting gear. (Fig. A3.11 – A3.11b)

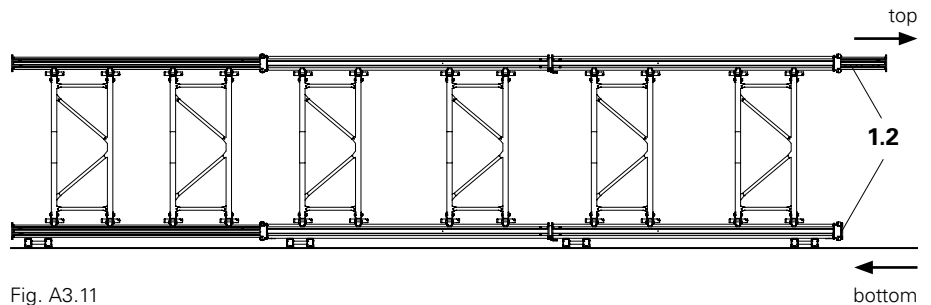


Fig. A3.11

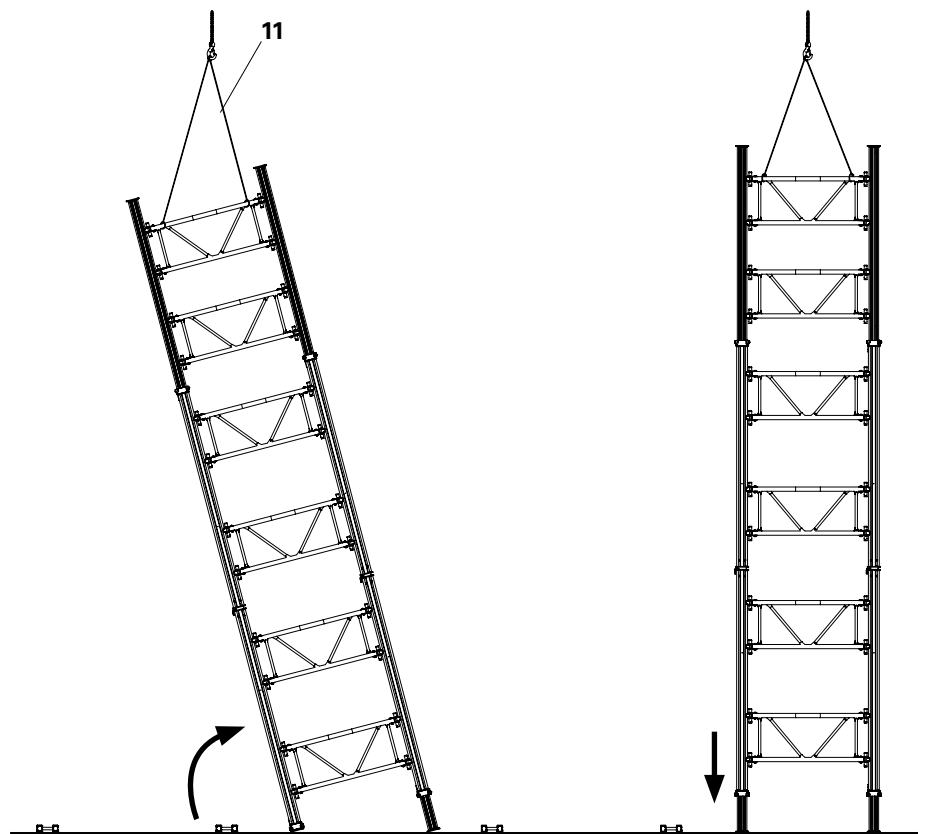


Fig. A3.11a

Fig. A3.11b

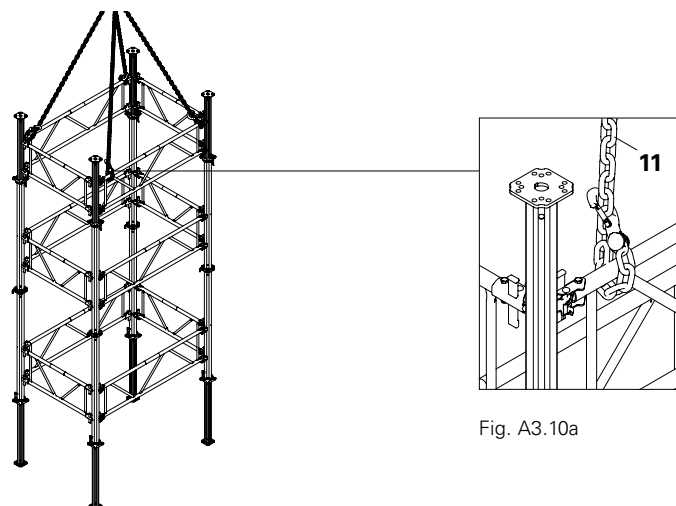


Fig. A3.10

Fig. A3.10a

First level

If horizontal assembly is not possible due to reasons of space or other circumstances, erection can take place vertically.



Secure props against tipping!

Preparation

1. Adjust lengths of MULTIPROP Props, see A1.
2. Ensure the required number of frames are available.

Assembly

1. Position MULTIPROP Props (1):
 - Use the Universal Tripod (12) as an erection aid.
 - Position props in the dimension between axes of the frames to be assembled.
 - Inner tubes (1.2) are at the bottom.
 - The measuring tape (1.6) is pointing inwards. (Fig. A4.01)
2. Install Frame MRK, see A3:
 - Use trestles, work scaffolds.
 - Place frame (2) on the designated positions, see plan or type test.
 - Securely fix the wedges (2.3) with a hammer blow in a downwards direction. (Fig. A4.02)

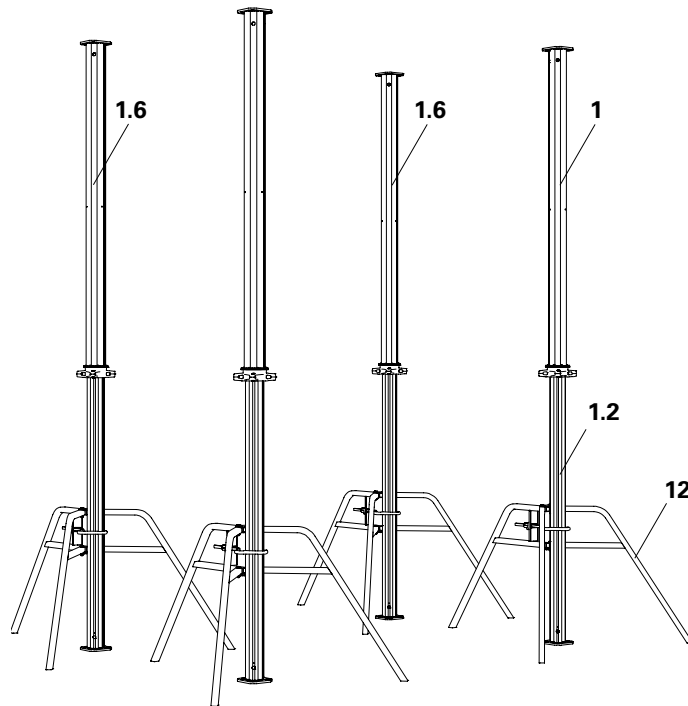


Fig. A4.01



The text on the adhesive label (2.4) is legible from the ground!

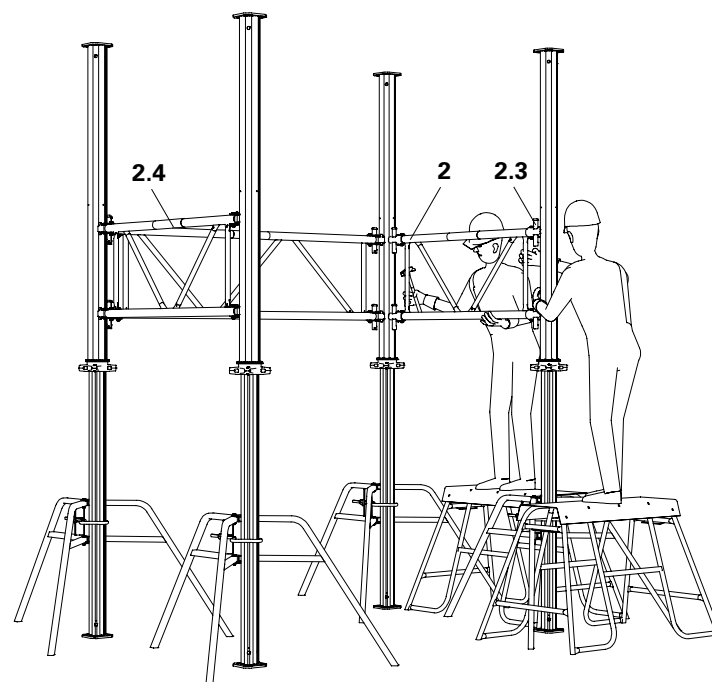


Fig. A4.02

Next level



Take the stability into consideration!
Use decking with anti-slip protection
and sufficient load-bearing capacity
as assembly platforms!



- Guardrail spacing for the assembly levels $e \leq 1.0$ m.
- Access, e.g. with PERI Telescopic Ladder Alu.

Assembly

- In order to mount the next prop and frame level, an assembly level (16) must be installed, e.g. MULTIPROP Decking. (Fig. A4.03)
- If necessary, temporarily secure tower against tipping over, see A5.

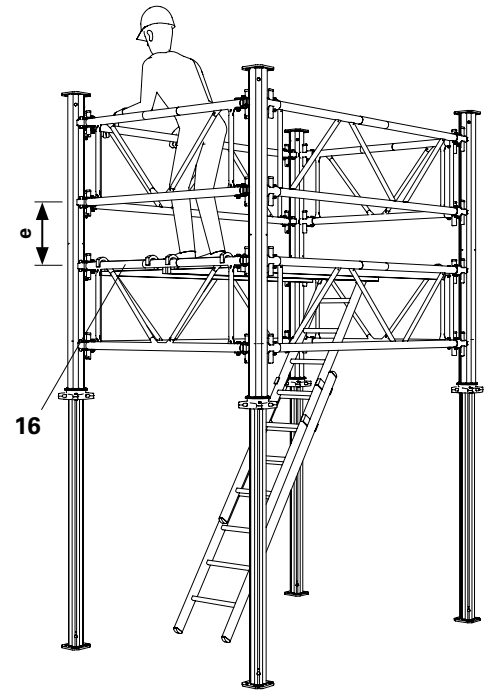


Fig. A4.03

Additional levels

Alleblmle additional levels in the same way.

Assembly

- Distance between the individual assembly levels in accordance with the risk assessment. Mount guardrails.
- Mount props with retracted inner tubes. Spindle out to the required length only after bracing has taken place with the frames. (Fig. A4.04)
- Connect props: with Connector MPV-2 or MULTIPROP Bolt with Nut, see A2.
- The frames can also be used as lateral guardrails and are to be mounted additionally if required.



Scaffold tubes with a diameter of 48 can also be used as temporary lateral guardrails; see B1. (Fig. A4.04a)

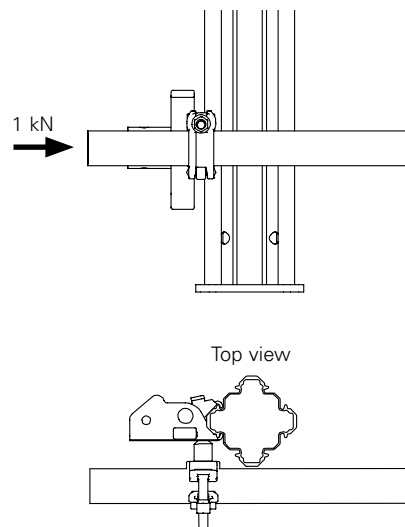


Fig. A4.04a

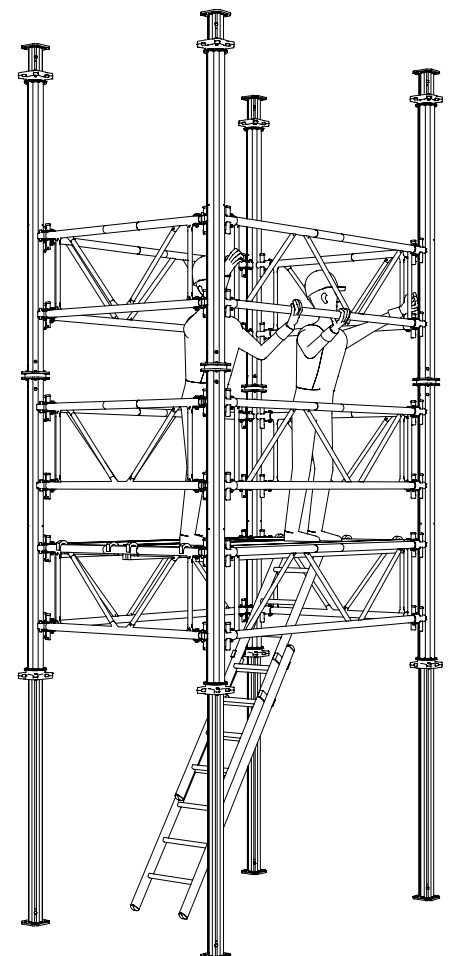


Fig. A4.04

Installing the Brace Connector MPR

The Brace Connector MPR can be assembled or disassembled temporarily. The Brace Connector MPR is assembled at the joints of the MULTIPROP Props. This similarly applies to all prop arrangements (inner tube – inner tube, inner tube – outer tube, outer tube – outer tube).

The Brace Connector MPR can be used both on the direct connection with end plates and on the connection with Connector MPV.

Direct connection of the end plates



The end plate connection must be secured with 2 MULTIPROP Bolts (8)!

Assembly

1. Remove both Bolts (14) from the Brace Connector MPR (13).
2. Push Brace Connector MPR over both end plates.
3. Fasten with both Bolts and secure with Cotter Pins (14).
(Fig. A5.01a)



If the Brace Connector MPR is to remain on the prop connection permanently, 1 MULTIPROP Bolt (8) on the side opposite the connection is sufficient.
(Fig. A5.01b)

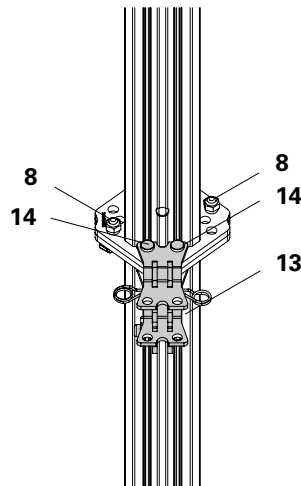


Fig. A5.01a

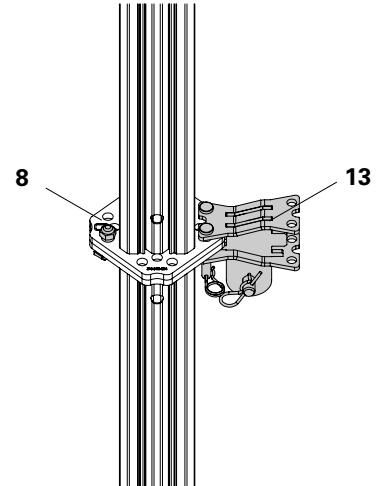


Fig. A5.01b

Connecting the end plates with Connector MPV-2

Assembly

1. Remove both Bolts (14) on the Brace Connector MPR (13).
2. Push the broader opening of the Brace Connector MPR over both end plates.
Not possible on the clamping lever (7.1).
3. Fasten with both Bolts and secure with Cotter Pins (14).
(Fig. A5.01c)

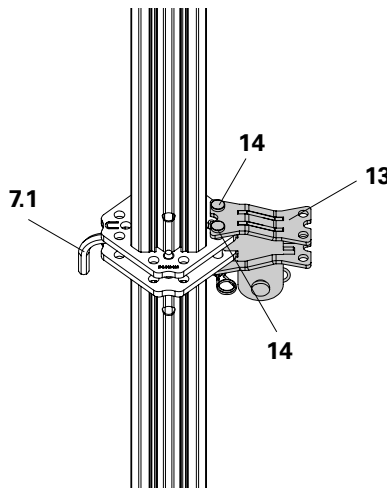
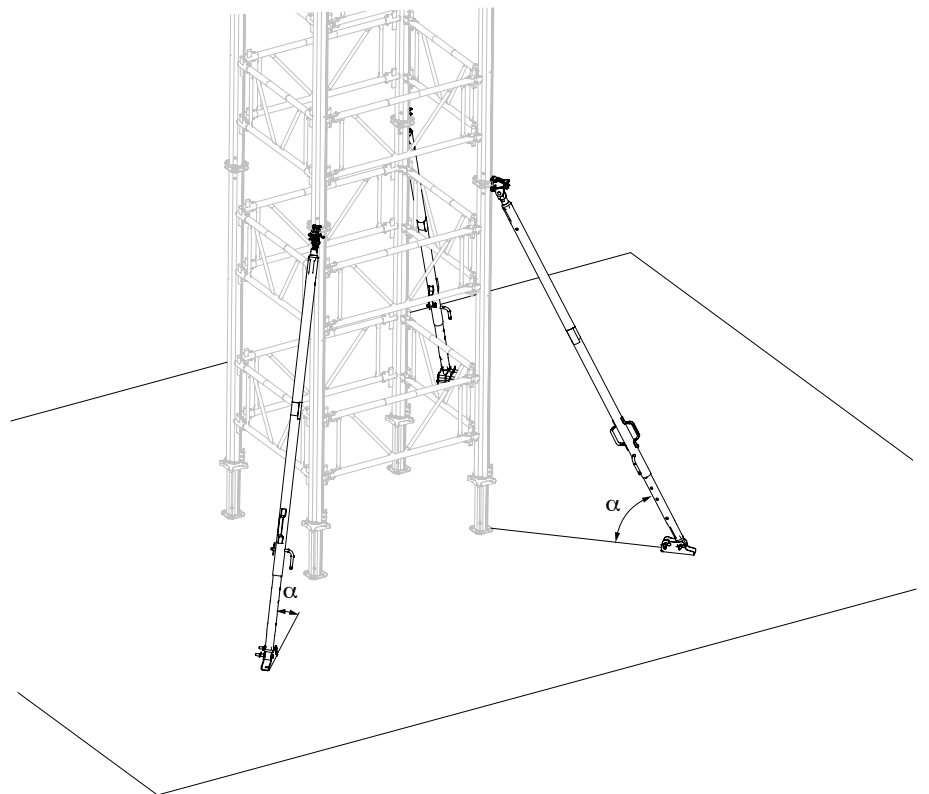


Fig. A5.01c

Permissible load of the Brace Connector MPR

Connecting the end plates	Angle α [°]	Perm. pressure [kN]	Perm. tensile force [kN]
direct	45	4.4	9.7
direct	60	9.1	9.9
with MPV-2	45	8.0	9.1
with MPV-2	60	11.9	12.1



Support with Push-Pull Props

During assembly and disassembly, the MULTIPROP Towers or units must be secured against tipping over using temporary assembly aids, if necessary.



Risk of tipping!
Units have to support one another.
For providing stability, mount 3 push-pull props as assembly aids.

Assembly

1. Fix Brace Connector MPR (13) to prop joint. (Fig. A5.02a)
2. Fix push-pull prop with bolts and cotter pins.
3. Fix Base Plate to the foundation by means of Anchor Bolt.
4. Fix push-pull prop to the base plate with bolts and cotter pins. (Fig. A5.02b)
5. Mount additional push-pull props and detach tower from the crane. (Fig. A5.02)

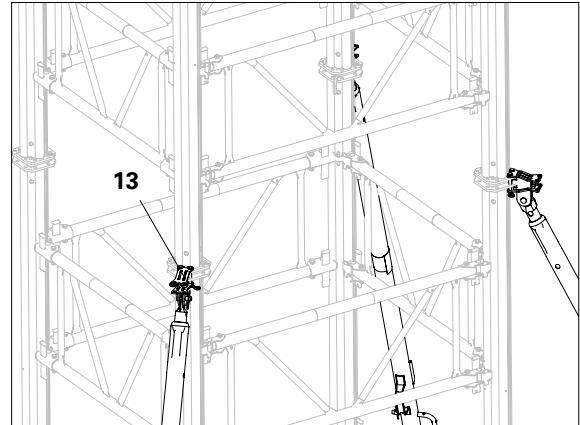


Fig. A5.02a

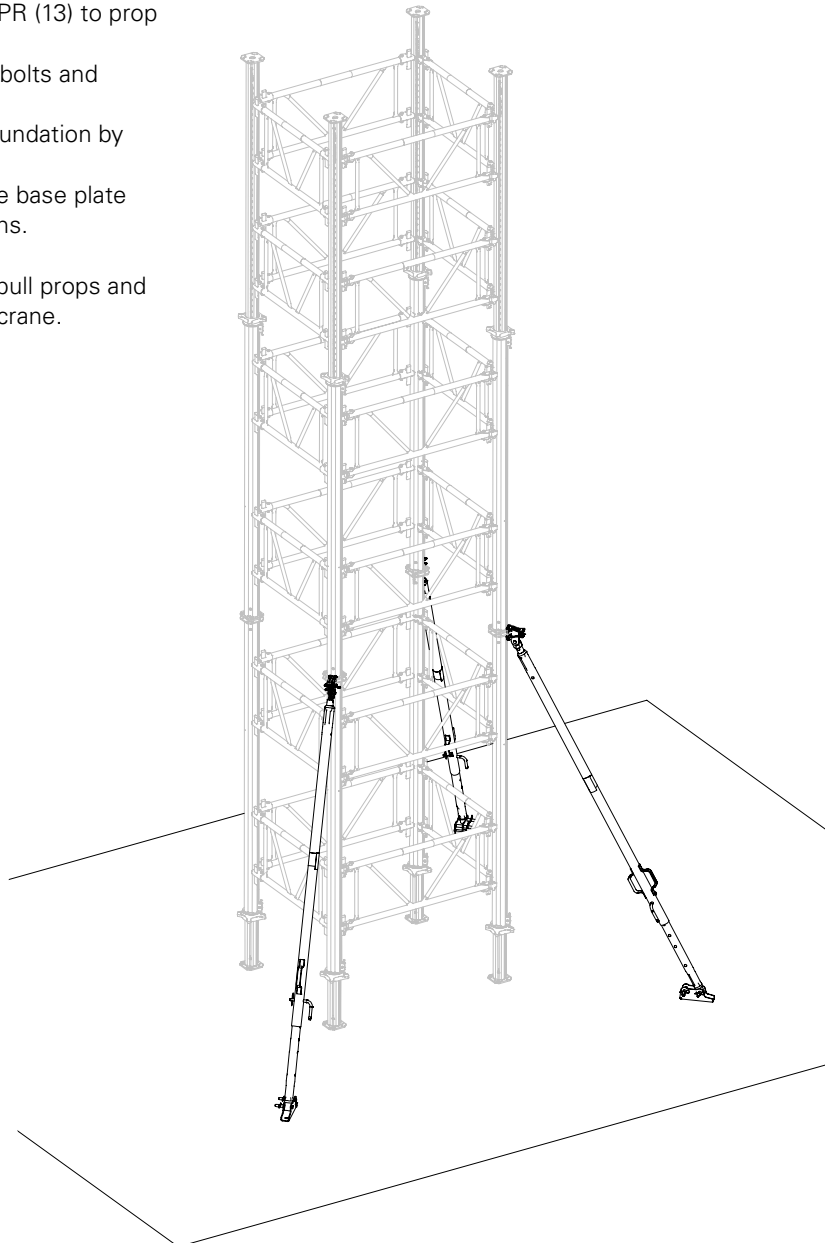


Fig. A5.02

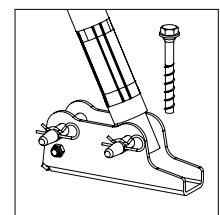


Fig. A5.02b

Support in units

Assembly

1. Arrange MULTIPROP Towers in the grid of the Frames MRK.
2. Install Frame MRK between the towers. (Fig. A5.03)
3. Hammer in wedges.
4. Install push-pull props at the prop joints. (Fig. A5.03a)

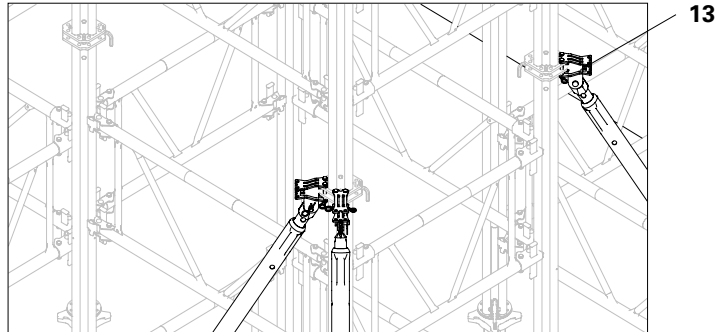


Fig. A5.03a

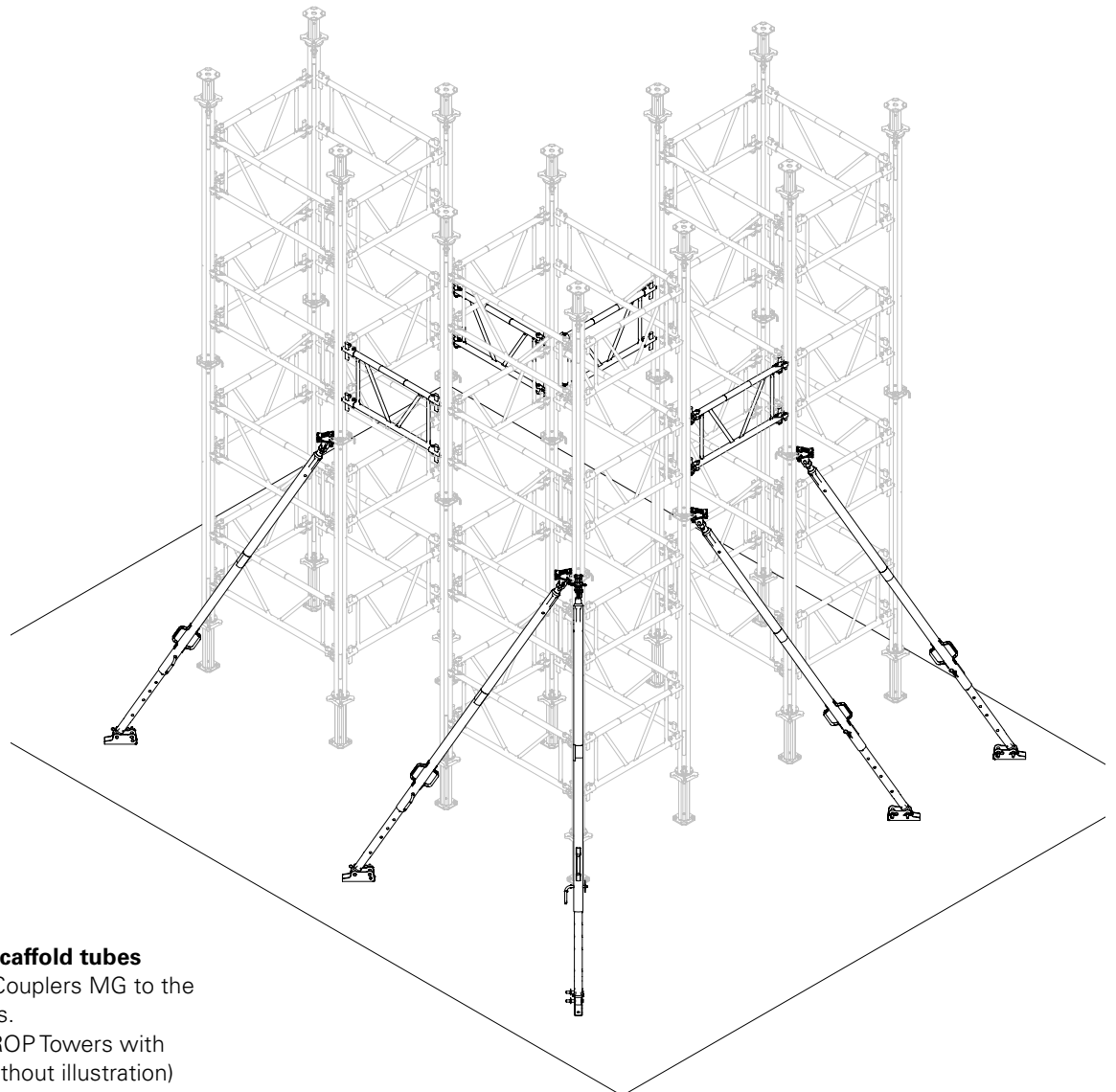


Fig. A5.03

Alternatively:

Connections with scaffold tubes

1. Fix Scaffold Tube Couplers MG to the MULTIPROP Props.
2. Connect MULTIPROP Towers with scaffold tubes. (without illustration)

MULTIPROP Strap U100 – U140

For transferring high loads, steel walers as the main beam can be connected to the props during the assembly of a slab table instead of twin main beams consisting of GT 24 Girders. One MULTIPROP Strap U100 – U140 is assembled to each prop.

Assembly

1. Release Hex. Nut M16 (6.4).
2. Swivel suspension fastenings (6.1) outward.
3. Guide the strap over the steel waler from the top. (Fig. A6.01a)
4. Align the tappet of the plate (6.2) between the webs of the steel walers.
5. Swivel back in the suspension fastenings (6.1) and hook them into the bores of the base or head plate (1.8 or 1.9).
6. Tighten Hex. Nuts M16. (Fig. A6.01b)

The strap holds the steel waler in position on the prop.

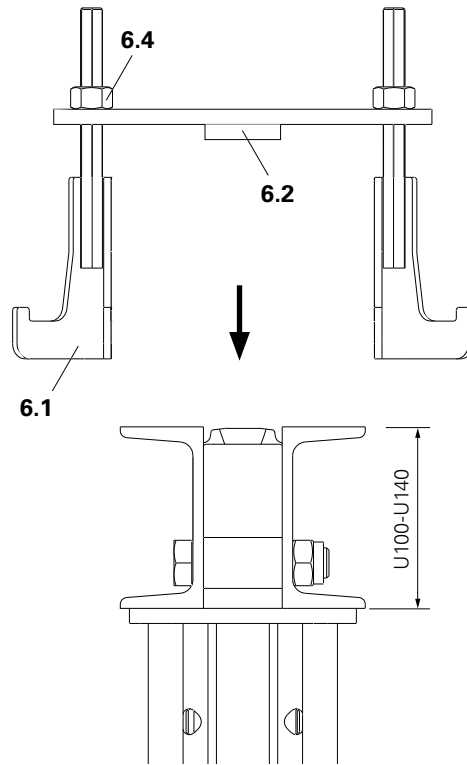


Fig. A6.01a

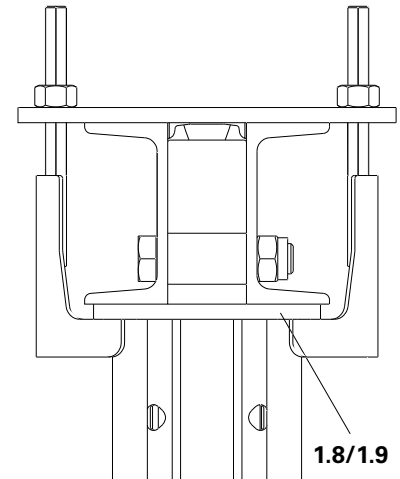


Fig. A6.01b

Releasing

1. Release Hex. Nut M16 (6.4).
2. Pull out suspension fastenings from the drilled holes of the base or head plate and remove strap.

Connecting MULTIPROP with MPB 24

For transferring high loads, the MULTIPROP Aluminium Beam MPB 24 can be used as the main beam.

Assembly

Assembly takes place with two diagonally-arranged MULTIPROP Straps MPB 24 (6.5) and MP Bolts with Nuts (8). (Fig. A6.02)

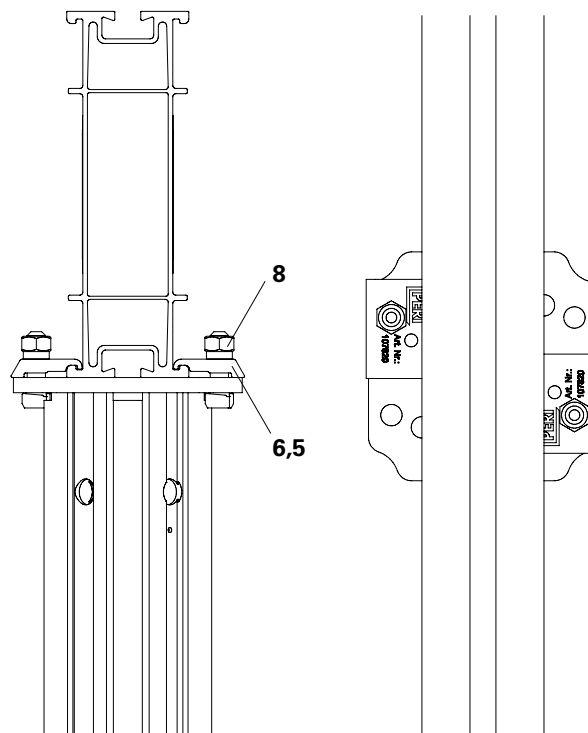


Fig. A6.02

Compression Brace Head MP/SRU with Connector MP/SRU

- The Compression Brace Head MP/SRU (9) with Connector MP/SRU (17) is used to brace inclined Beams SRU on shoring towers. (Fig. A6.03)
- The Compression Brace Head can also be used for the erection of towers on inclined surfaces. (Fig. A6.04)
- The Compression Brace Head MP/SRU can usually be bolted directly on the Beam SRU.
- The Connector MP/SRU serves as compensatory element between the Compression Brace Head and the inclined beams independently of the prop grid.
- Any desired inclination and frame size is possible by plugging holes "A or B" for the Compression Brace Head and holes 1, 2, 3 or 4 in the beam for Connector MP/SRU. (Fig. A6.03a + A6.03b)

Assembly of Compression Brace Head, see A2.

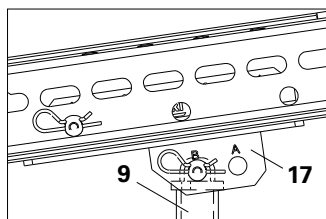


Fig. A6.03a

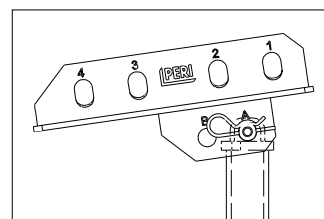


Fig. A6.03b

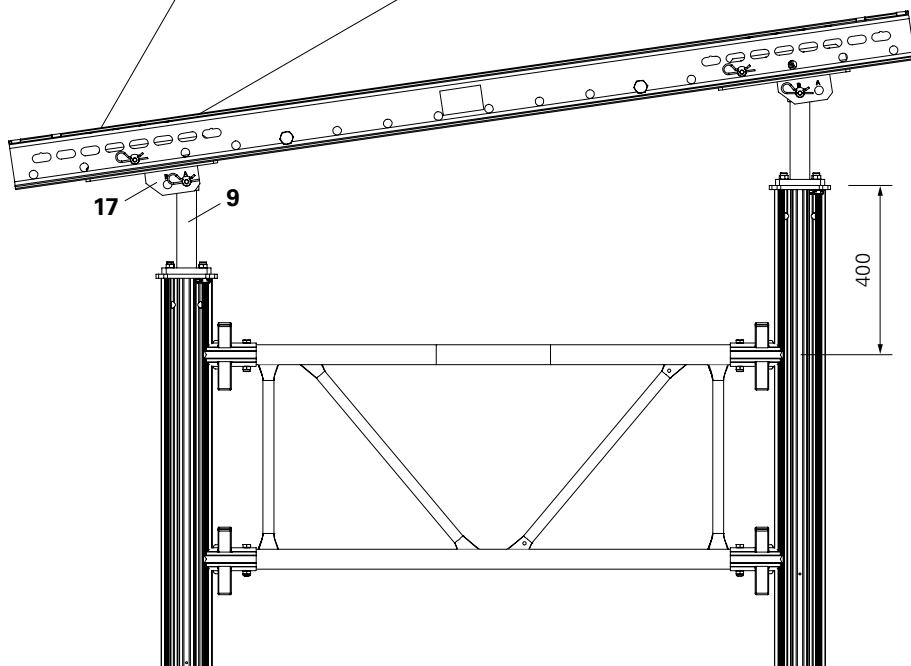


Fig. A6.03

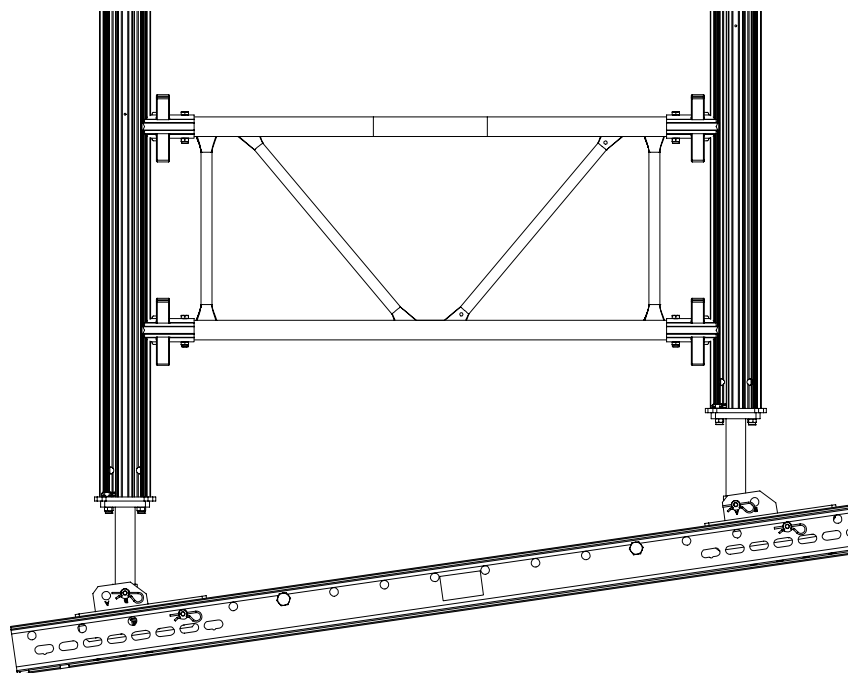


Fig. A6.04

Dismantling

Horizontal dismantling is preferred. Vertical dismantling, however, is possible.



- **Ensure stability during dismantling!**
- **Avoid load concentrations by lowering the props evenly!**
- **Use Spanner HD to release loads > 60 kN!**

Vertical dismantling

1. Temporarily secure the tower against tipping over, see A5.
2. Release adjusting nuts using the Wing Nut Spanner HD.
3. Lower the MULTIPROP Tower.
4. Remove formwork structure.
5. Dismantle tower from top to bottom. Remove horizontal mounting security only when the stability has been ensured.

(Fig. A7.01)

Horizontal dismantling

1. Move out the lowered MULTIPROP Tower from underneath the concreted slab.
2. Attach crane lifting gear.
3. Slide in inner tubes on one side, see A3 with multiple number of legs.
4. Set down MULTIPROP Tower on level ground. (Fig. A7.02)
5. Dismantle the MULTIPROP Tower.



- If structural bracing has been installed, it is sensible to lower the MP Towers on the uppermost props.
- The Wing Nut Spanner HD allows an effortless and silent release of the adjusting nuts – even if the props are fully loaded.

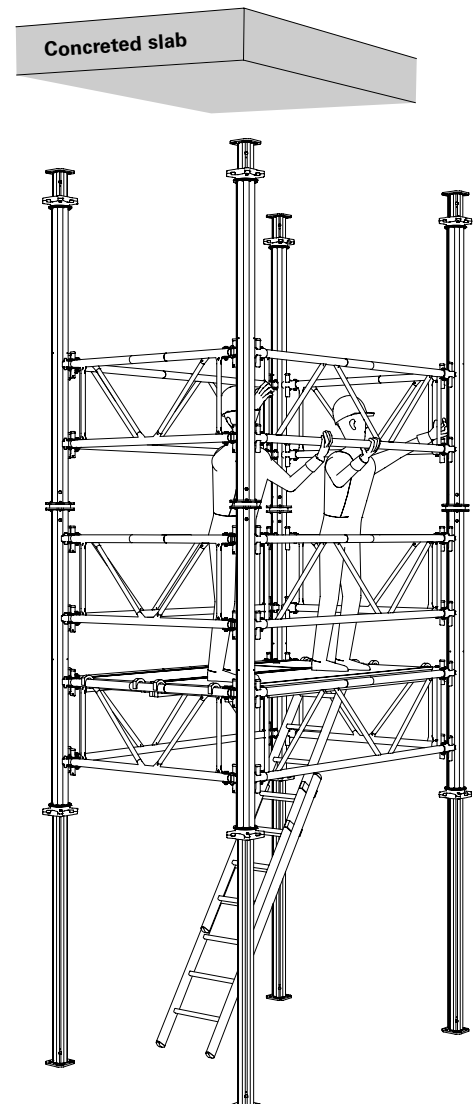


Fig. A7.01

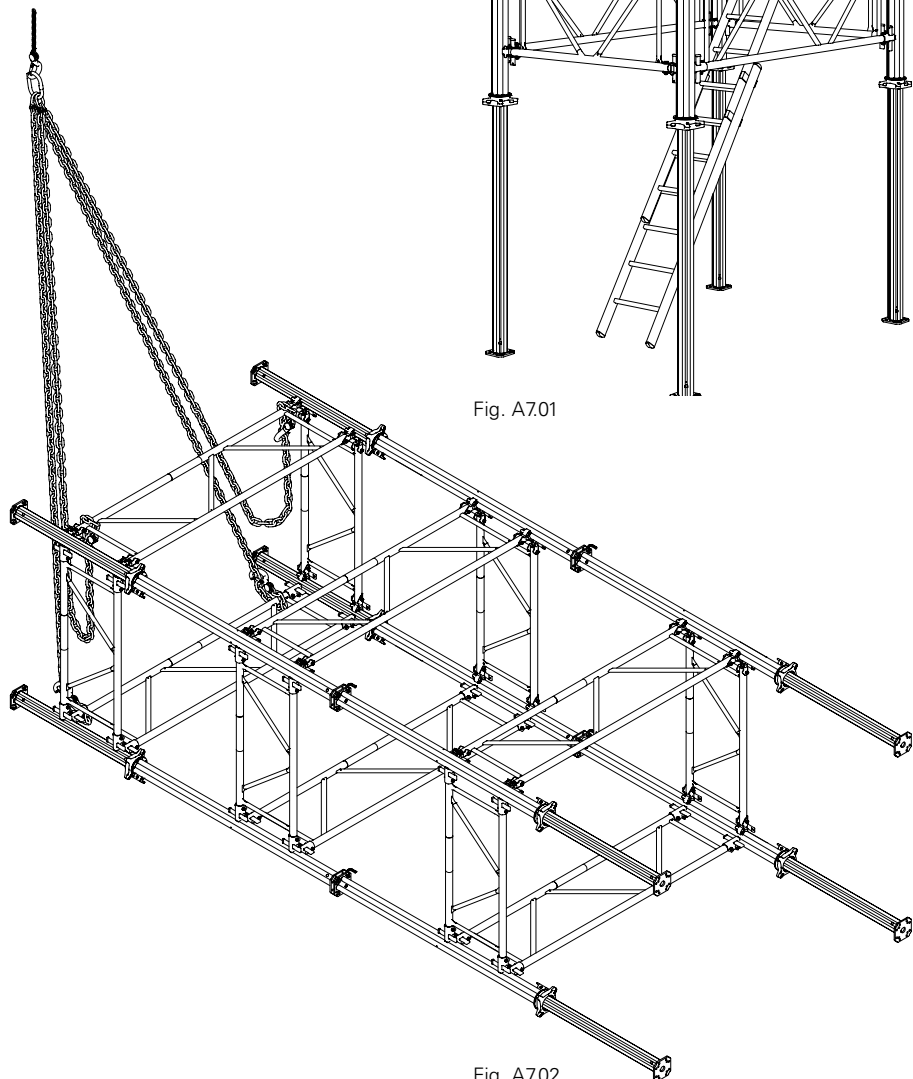


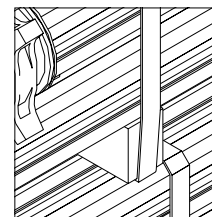
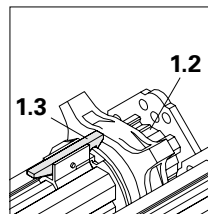
Fig. A7.02



- Follow Instructions for Use for PERI pallets and stacking devices!
- Transportation units must be correctly stacked and secured!



The safety hook (1.3) prevents the inner tube (1.2) from slipping out and must be engaged.



Transport

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 both from the longitudinal and front sides.

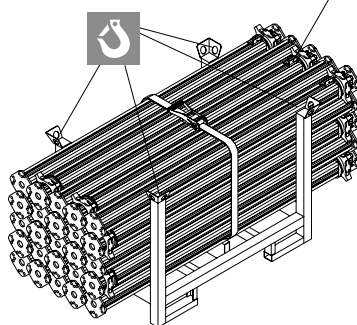


Fig. A8.01

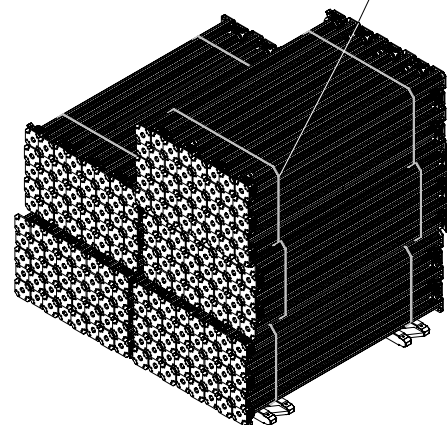


Fig. A8.02

The following are just some examples. MULTIPROP Slab Props with timber and steel strapping. (Fig. A8.02) MULTIPROP Frame MRK with steel strapping. (Fig. A8.04)

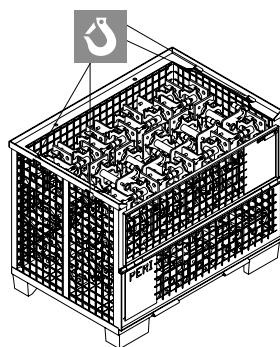


Fig. A8.03

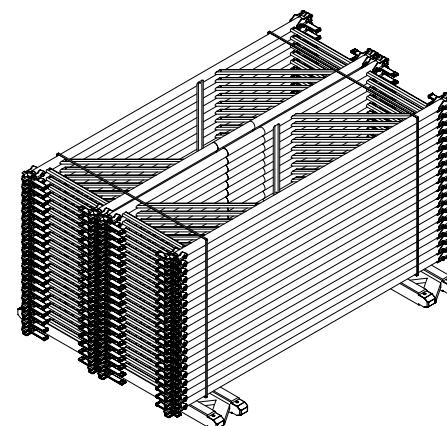


Fig. A8.04

Scaffold Tube Coupler MG



Check stability against tipping over!

Horizontal scaffold tube bracings may be used as assembly aids. They consist of Scaffold Tubes \varnothing 48 mm (10) and MULTIPROP Scaffold Tube Couplers MG-A / C or MG-B / D (15).

The bracing is installed in segments and towers and serves to stabilize the MP Props.

(Fig. B1.01)

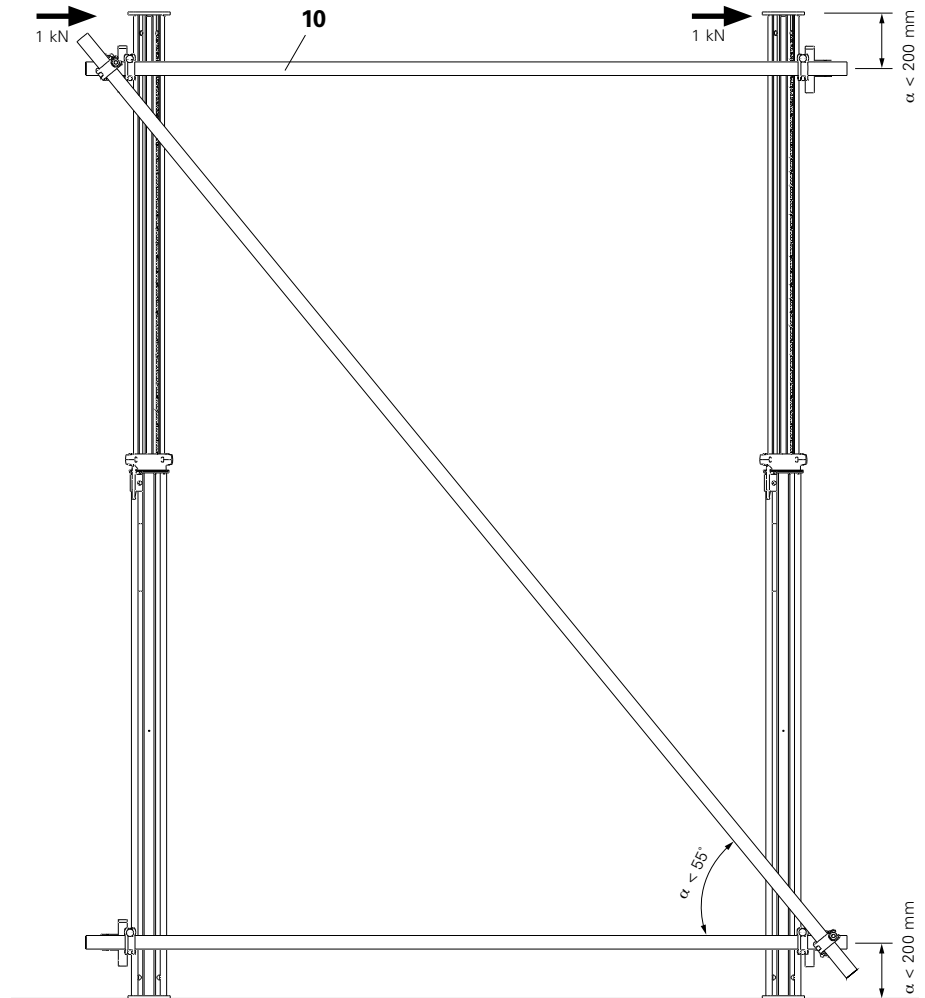


Fig. B1.01

Application 1:

Scaffold Tube Coupler MG to connect MULTIPROP Props with Scaffold Tubes.

Requirements:

1. $\alpha < 200$ mm
2. $\alpha < 55^\circ$
3. Arrangement of the couplers, see Fig. B1.02a.

The bracing can transfer a horizontal force of $F_H = 1 \text{ kN} + 1 \text{ kN} = 2 \text{ kN}$.

Application 2:

Scaffold Tube Coupler MG for transferring small horizontal forces.

A force F_H of 1 kN can be transferred along a horizontal scaffold tube. (Fig. B1.02b)

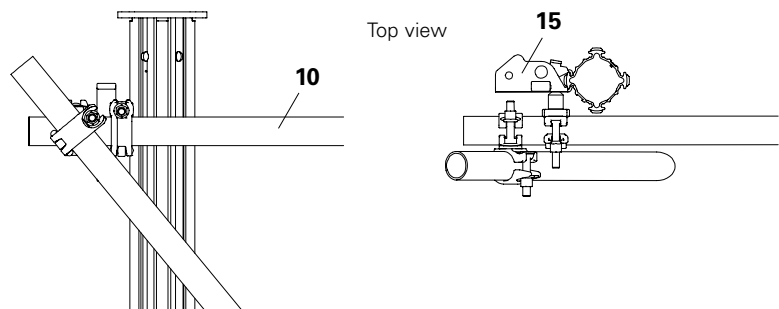


Fig. B1.02a

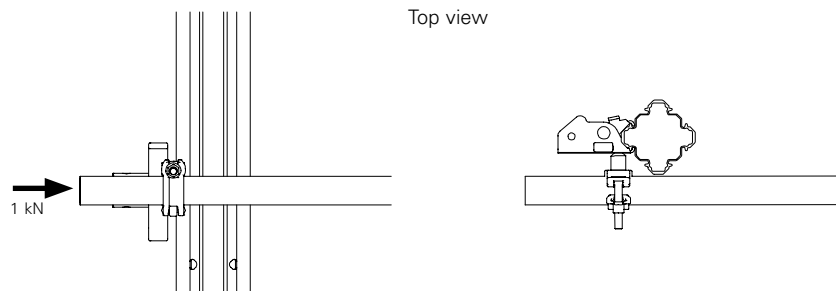


Fig. B1.02b

Use as scaffold girder



- **Fall hazard! Check wedges for tightness!**
- **Do not use frames smaller than MRK 120 as deck-supporting girder!**

As assembly or working platform decks can be inserted on one frame level. (Fig. B2.01)

The use of MULTIPROP Platforms with / without hatch is recommended as well as Telescopic Ladder Alu 220 / 350.

The assembly of the frames is carried out as described in A1.

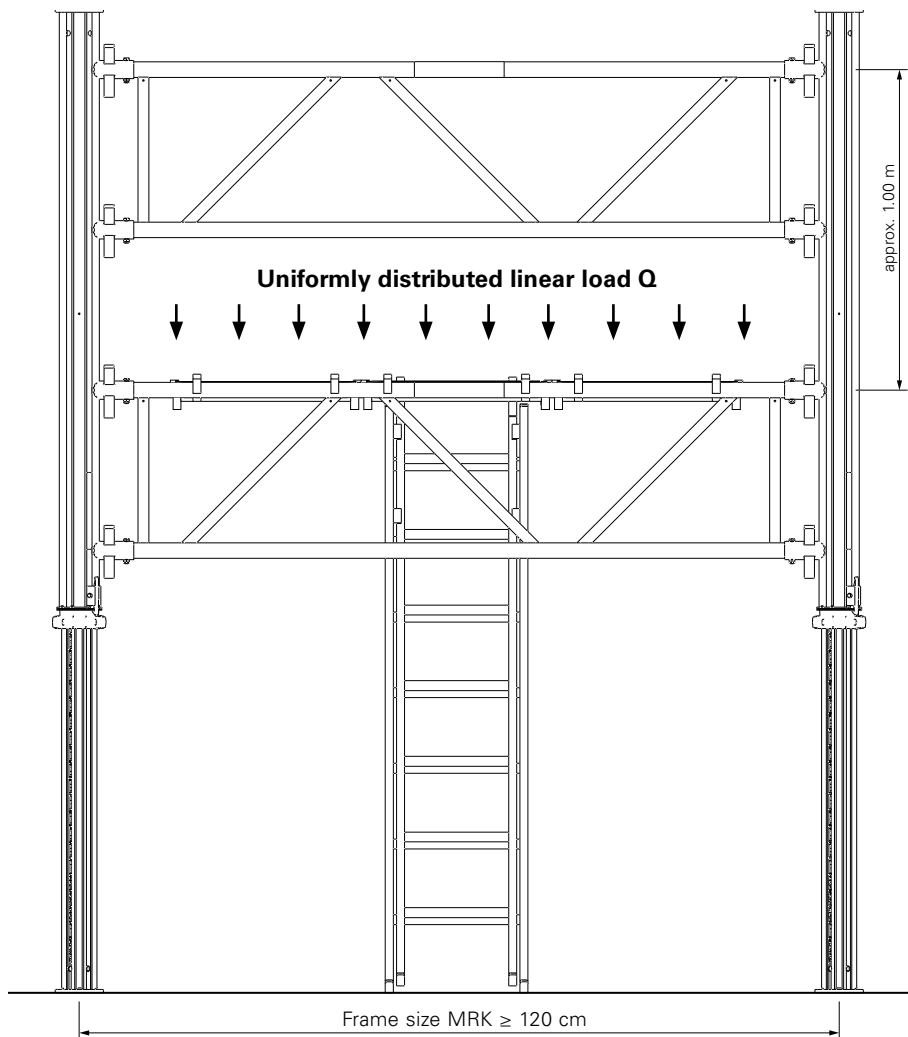


Fig. B2.01

Table
Permissible loads for the Frames MRK as scaffold girder.

Frame size	Perm. uniformly distributed linear load Q [kN/m]
MRK 296	1.1
MRK 266	1.4
MRK 237	1.8
MRK 230	1.9
MRK 225	2.0
MRK 201.5	2.6
MRK 150	4.0
MRK 137.5	4.4
MRK 120	5.0

Lowering



Check stability!

The lowering procedure must take place gradually.

1. Turn the adjusting collar (1.4) of the MULTIPROP Prop and retract the inner tube (1.2).
2. Repeat the procedure for all props.



Frame at inner tube: release wedges at two diagonally-positioned places.



In order to make the lowering procedure easier, the table or tower can be held in position by the Trolley with Winch or the Table Trolley. The props can be spindled in without being subject to any load. (Fig. B3.01)

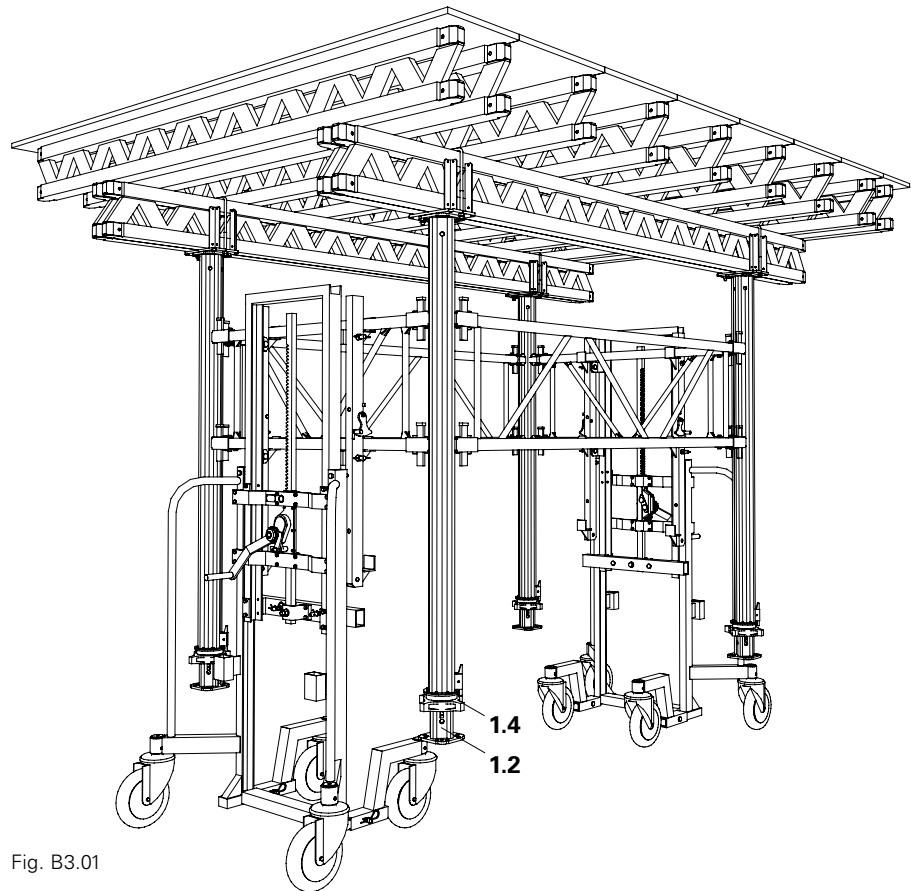


Fig. B3.01

Trolley with Winch



Follow the Instructions for Use for the PERI trolley with Winch. Moving unit can tip over!

Moving

1. Position two trolley with winch units in the centre of the narrow frame sides of the falsework for each table or tower.
2. Support the frames using the MULTIPROP adapters.
3. Uniformly raise the table or tower with the winches.
4. Move the table or tower.

Permissible Weights and Heights

Requirements for moving in longitudinal direction

MULTIPROP ≥ MRK 120

Total weight Tower / Table	Longitudinal direction of travel	Transverse direction of travel
	Table height up to	Table height up to
0 – 300 kg	600 cm	600 cm
301 – 400 kg	700 cm	650 cm
401 – 500 kg	800 cm	700 cm
501 – 600 kg	800 cm	700 cm
601 – 800 kg	800 cm	650 cm
801 – 1000 kg	750 cm	600 cm
1001 – 1200 kg	700 cm	550 cm
1201 – 1400 kg	650 cm	550 cm
1401 – 1600 kg	650 cm	500 cm
1601 – 2000 kg	600 cm	500 cm

MULTIPROP

Permissible MRK Frames for tables and towers

Aluminium frame	Perm. lifting capacity [kg]	Steel frame	Perm. lifting capacity [kg]
MRK 296	350	MRK 150	880
MRK 266 – 225	440	MRK 137.5	920
MRK 201.5	560	MRK 120	1000

Moving along with pole

In order to bring the slab table into the exact position, the PERI MULTIPROP Table can be moved by means of an reinforcing bar and a pole.

Moving

1. Insert reinforcing bar (16) into the bottom bores of the MULTIPROP Props.
 2. Move the slab table with the reinforcing bar or poles (17).
- (Fig. B3.02)

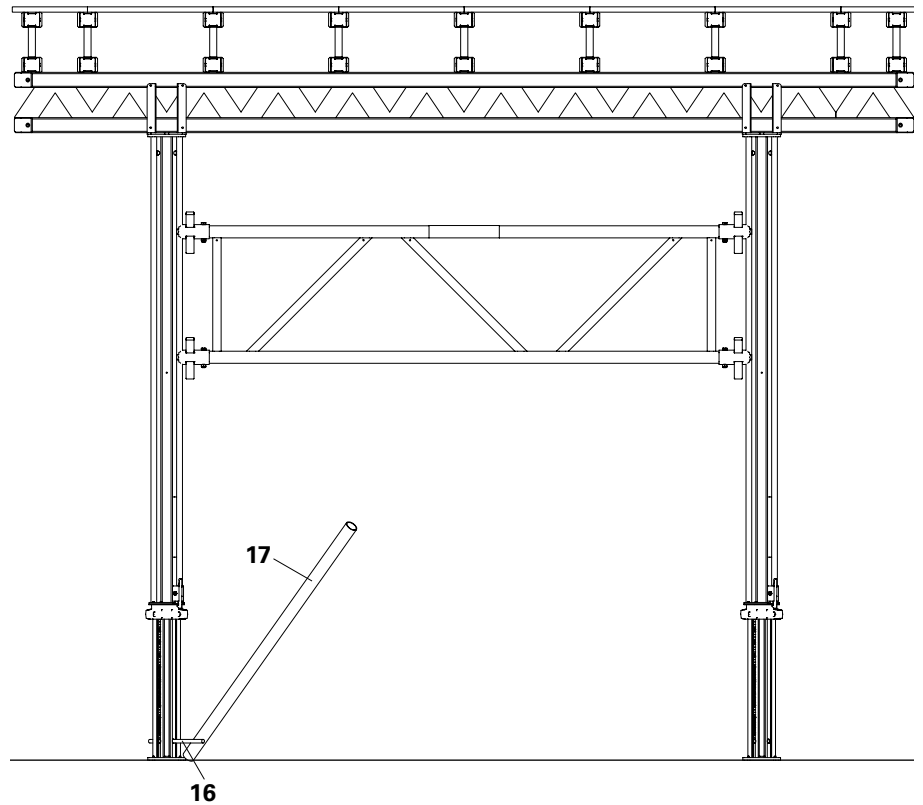
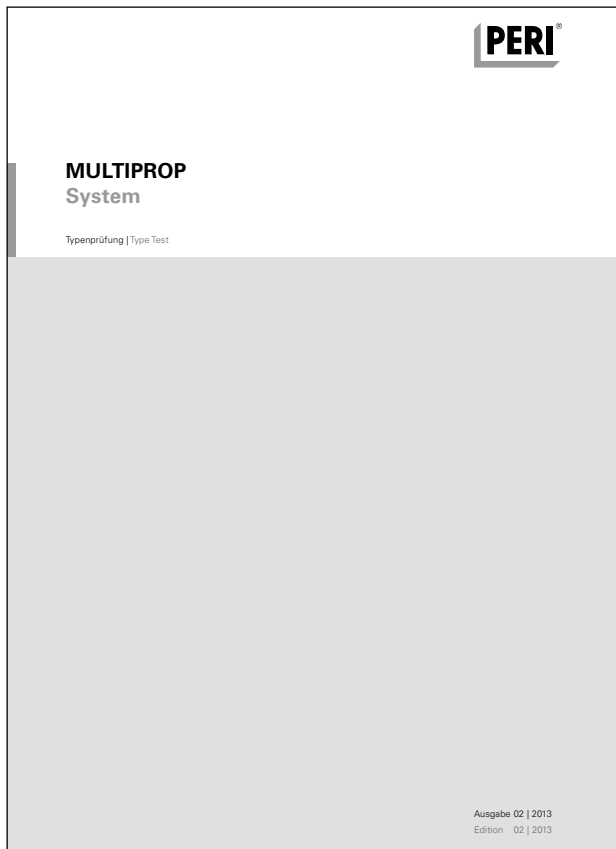


Fig. B3.02

Tables

The load-bearing capacity of the shoring towers in the MULTIPROP System is dependent on the position of the MULTIPROP Frame MRK.

The capacities are only stated in the relevant current versions of the type test.



MULTIPROP Single Props and System



Item no.	Weight kg
027288	10,200
027289	15,400
027290	19,500
027291	24,900
027305	34,700

MULTIPROP MP
MULTIPROP MP 120
MULTIPROP MP 250
MULTIPROP MP 350
MULTIPROP MP 480
MULTIPROP MP 625

Slab prop made of aluminium. Used as individual prop as well as in combination with MULTIPROP Frames MRK to form towers.

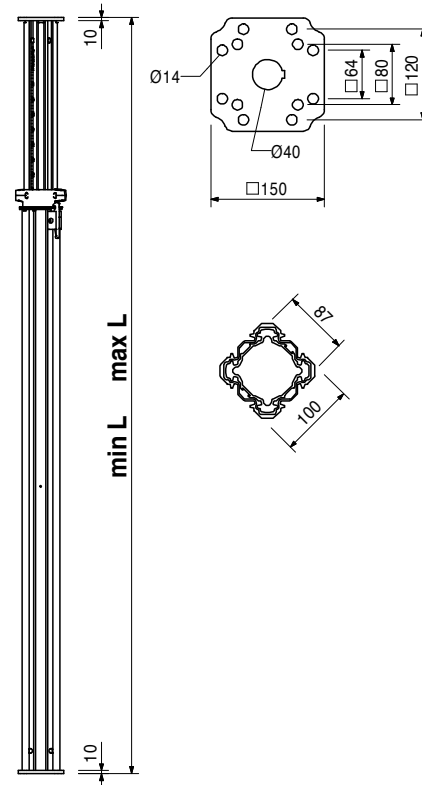
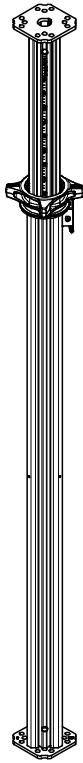
min. L	max. L
800	1200
1450	2500
1950	3500
2600	4800
4300	6250

Note

Approved by the German Building Authorities No. Z-8.312-824.

Technical Data

Permissible load: see PERI Design Tables.



MULTIPROP Single Props and System

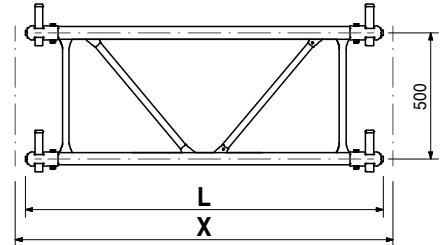
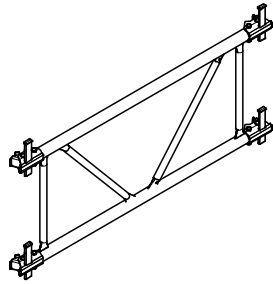
Item no. Weight kg

Item no.	Weight kg	MULTIPROP Frames MRK, Steel
028390	9,840	Frame MRK 62.5
028400	10,100	Frame MRK 75
028330	11,300	Frame MRK 90
028340	14,000	Frame MRK 120
028380	15,400	Frame MRK 137.5
028350	16,300	Frame MRK 150

Bracing frame for MULTIPROP. For connecting to outer and inner tube.
With captive wedge coupling.

L	X
545	625
670	750
820	900
1120	1200
1295	1375
1420	1500

Note
L = Loading Length
X = Axis Length

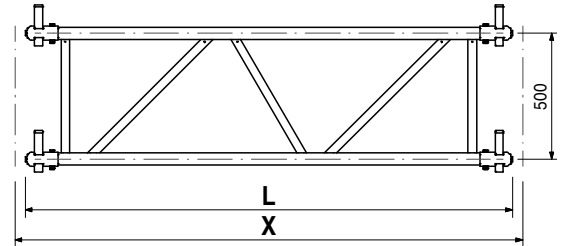
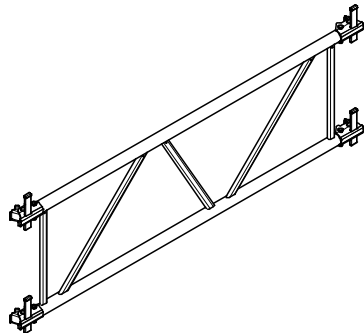


Item no.	Weight kg	MULTIPROP Frames MRK, Alu
028460	11,600	Frame MRK 201.5
028360	12,300	Frame MRK 225
028470	12,500	Frame MRK 230
028480	12,700	Frame MRK 237
028490	13,900	Frame MRK 266
028370	14,900	Frame MRK 296

Bracing frame for MULTIPROP. For connecting to outer and inner tube.
With captive wedge coupling.

L	X
1935	2015
2170	2250
2220	2300
2290	2370
2580	2660
2880	2960

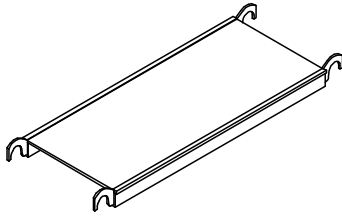
Note
L = Loading Length
X = Axis Length



Item no. Weight kg

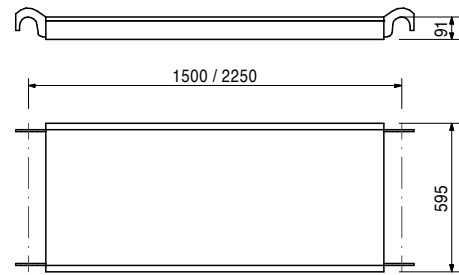
107169 12,000
107170 18,000

MULTIPROP Platforms
MULTIPROP Platform 150 x 60
MULTIPROP Platform 225 x 60
For assembly of a working scaffold.



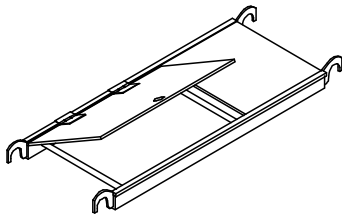
Technical Data

Permissible load up to 2.0 kN/m².



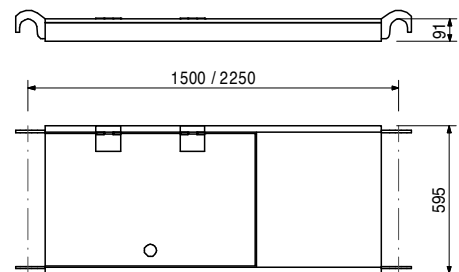
107171 12,500
107172 18,500

MULTIPROP Platforms with Hatch
MULTIPROP Platform 150 x 60 with Hatch
MULTIPROP Platform 225 x 60 with Hatch
For assembly of a working scaffold. Self-locking hatch for access ladder.



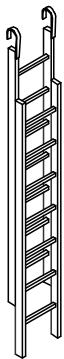
Technical Data

Permissible load up to 2.0 kN/m².



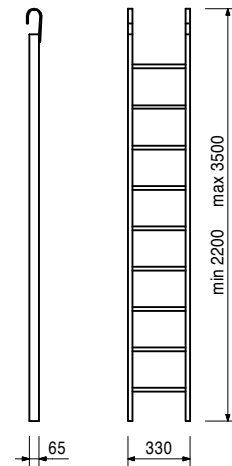
107173 9,000

Ladder 220 x 350, telescopic
As access for MULTIPROP towers. Mounted to platform with hatch.



Technical Data

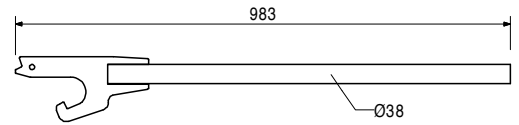
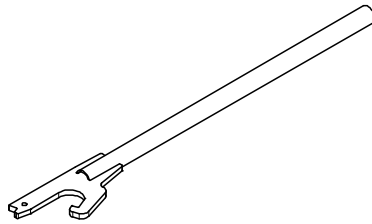
Extension length 2.20 – 3.50 m.



Item no.	Weight kg
022027	3,600

Wing Nut Spanner HD

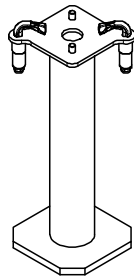
For easy release of the Head Spindle HDK 45, the Head Spindle TR 110-80/55 and the MULTIPROP slab prop.



027310	8,900
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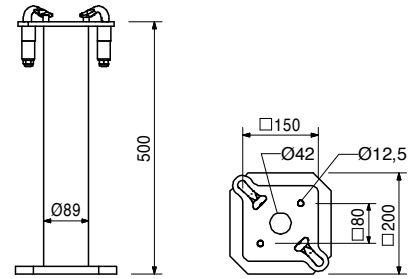
Base MP 50

For use with slab props with an end plate thickness of 6 – 10 mm. With clamped quick-release fastener.



Note

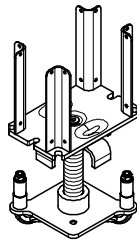
Permissible load: see PERI Design Tables.



027297	8,730
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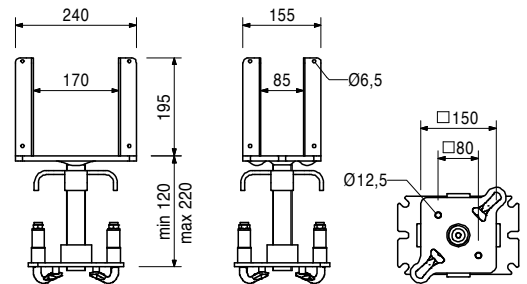
Tilting Forkhead MKK

For tilt-resistant support of one or two GT 24 or VT 20 Girders. Can be pivoted by 3° in all directions. With clamped quick-release fastener.



Technical Data

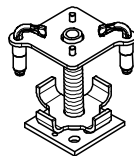
Separate design information on request.



027296	6,220
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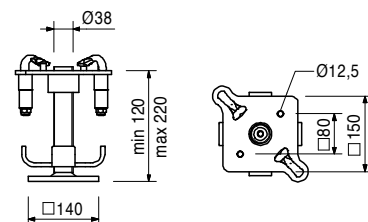
Tilting Base MKF

For use on inclined assembly areas. Can be pivoted by 3° in all directions. With clamped quick-release fastener.



Technical Data

Maximum permissible load 60 kN.



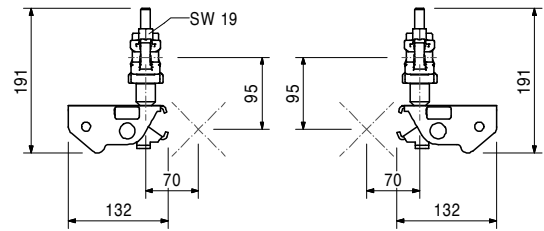
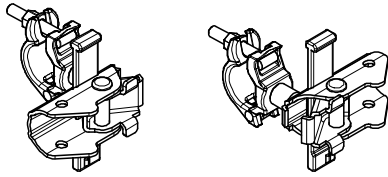
Item no. Weight kg

027298 1,930
027299 1,930

Scaffold Tube Couplers
Scaffold Tube Coupler MG-A/C
Scaffold Tube Coupler MG-B/D

For connecting Scaffold Tubes \varnothing 48 mm to the MULTIPROP MP slab props.

Note
Coupler not swivelling.

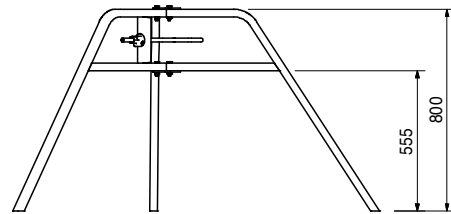
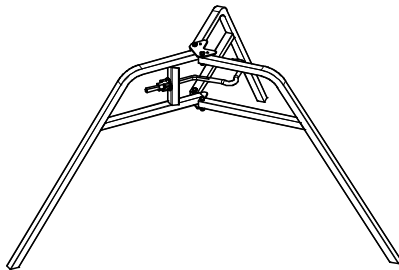


028000 9,170

Universal Tripod, galv.

Erection aid for slab props with \varnothing 48 – 120 mm and 120 x 120 mm. Can also be used in combination with MULTIPROP MP slab props and all slab props with Base MP 50.

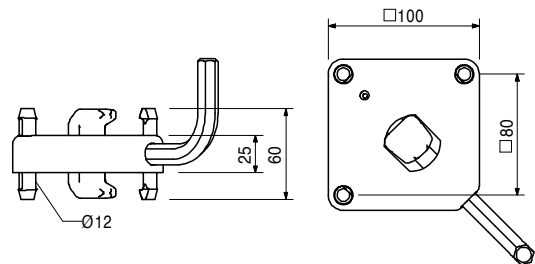
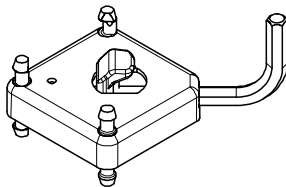
Note
Only use as erection aid!



027301 1,020

Connector MPV-2

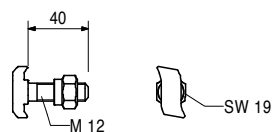
For connecting 2 MULTIPROP slab props.



111142 0,082

MULTIPROP Bolt with Nut

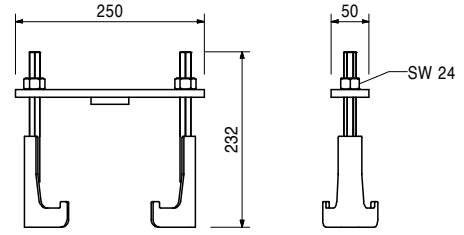
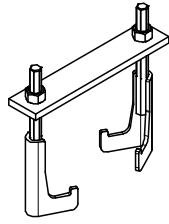
For connecting 2 MULTIPROP slab props, for connecting compression Brace Head MP/SRU and for the assembly of accessories on the Alu Beam MPB 24.



MULTIPROP Single Props and System

Item no.	Weight kg
027302	2,100

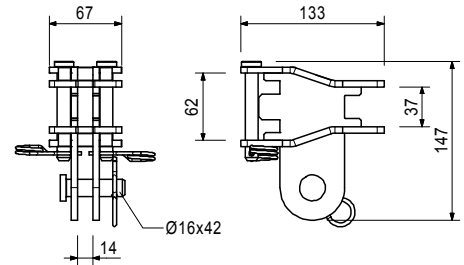
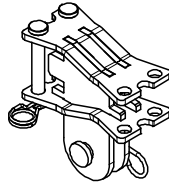
MULTIPROP Strap SRZ U100 – U140
 For fixing Steel Walers SRZ and SRU, Profile U100 to U140 on MULTIPROP slab props.



129565	1,680
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Brace Connector MPR
 For connecting push-pull props to the MP-System.

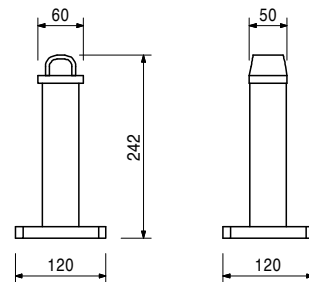
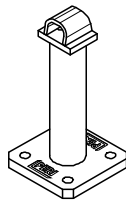
Complete with
 1 pc. 027170 Pin \varnothing 16 x 42, galv.
 1 pc. 018060 Cotter Pin 4/1, galv.
 2 pc. 129560 Collar Pin \varnothing 12
 2 pc. 127322 Cotter Pin 3, 2/2, galv.



107161	3,050
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Compression Brace Head MP/SRU
 As connecting element between MULTIPROP slab props and Steel Waler SRU/SRZ.

Note
 Separate design information on request.
Technical Data
 Permissible load-bearing capacity 70 kN.



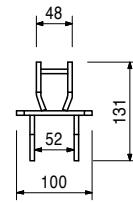
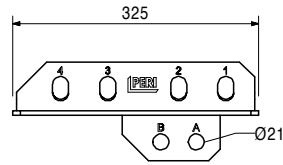
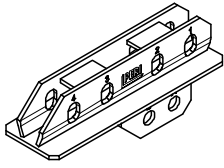
104031	0,462
018060	0,030
111142	0,082

Accessories
Fitting Pin \varnothing 21 x 120
Cotter Pin 4/1, galv.
MULTIPROP Bolt with Nut

Item no.	Weight kg
107160	3,960

Connector MP-SRU

As compensation element between the Prop Head MP/SRU and inclined positioned Steel Waler SRU.



104031	0,462
018060	0,030

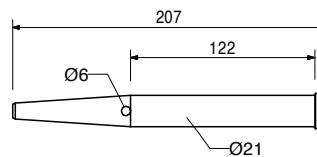
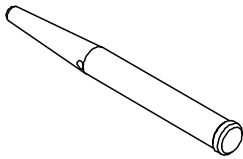
Accessories

Fitting Pin Ø 21 x 120 Cotter Pin 4/1, galv.

104031	0,462
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Fitting Pin Ø 21 x 120

For different connections.



018060	0,030
--------	-------

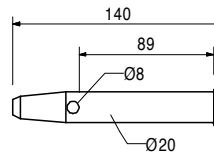
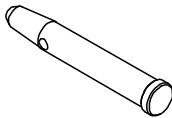
Accessories

Cotter Pin 4/1, galv.

105400	0,330
--------	-------

Pin Ø 20 x 140, galv.

For different connections.



018060	0,030
--------	-------

Accessories

Cotter Pin 4/1, galv.

018060	0,030
--------	-------

Cotter Pin 4/1, galv.



MULTIPROP Single Props and System



Item no.	Weight kg
019200	162,000

Trolley with Winch

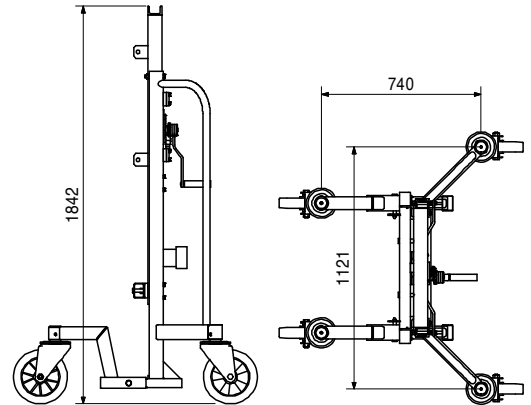
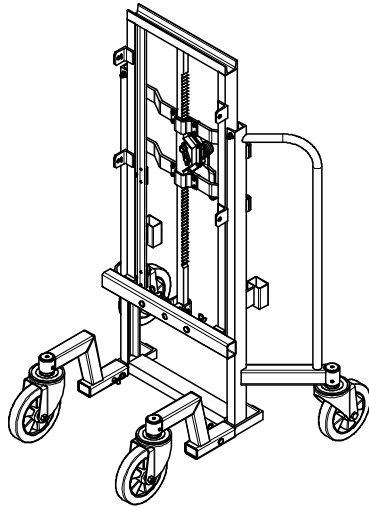
For moving towers and tables with MULTIPROP, Flex, Flex Plus and PD 8 with appropriate support for the system.

Note

Follow Instructions for Use!

Technical Data

Permissible load-bearing capacity 1.0 t.



Accessories

118114	14,200
118605	21,500
117954	21,200
118115	11,000

Connector MP – Trolley

Connector Rosett – Trolley

Connector Rosett Plus – Trolley

Connector PD 8 – Trolley

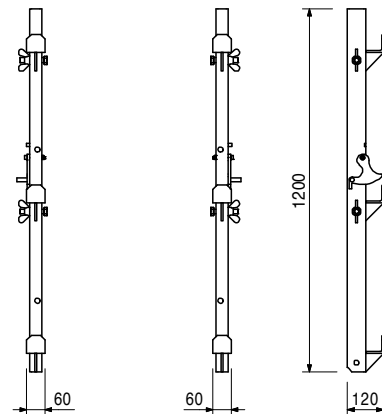
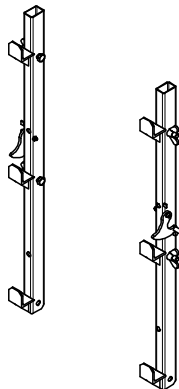
118114	14,200
--------	--------

Connector MP – Trolley

For moving MULTIPROP towers with Trolley with Winch.

Note

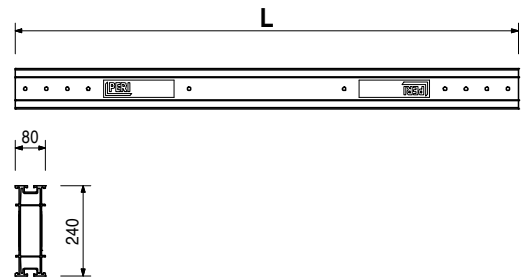
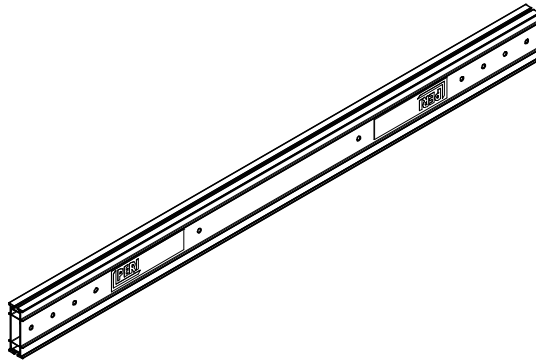
Consisting of 2 parts:
Support left and right.



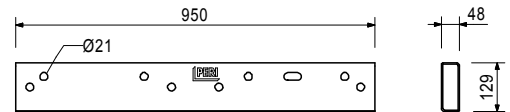
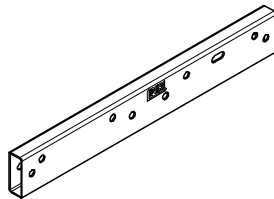
Item no.	Weight kg		L
079300	24,000	Alu Beams MPB 24	2998
079360	28,800	Alu Beam MPB 24 L = 3.00 m	3598
079420	33,700	Alu Beam MPB 24 L = 3.60 m	4198
079480	38,500	Alu Beam MPB 24 L = 4.20 m	4798
079540	43,300	Alu Beam MPB 24 L = 4.80 m	5398
079600	48,100	Alu Beam MPB 24 L = 5.40 m	5998

Aluminium main beam for the MULTIPROP system.

Technical Data
 perm. Q = 50 kN
 perm. A = 80 kN
 perm. M = 15 kNm

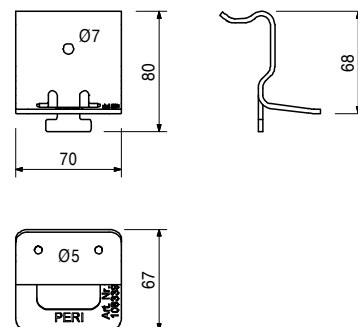
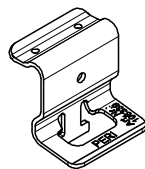


107348	9,590	Coupling MPB 24 For connecting the Alu Beam MPB 24.
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		Accessories
105400	0,330	Pin Ø 20 x 140, galv.
104031	0,462	Fitting Pin Ø 21 x 120
018060	0,030	Cotter Pin 4/1, galv.

108339	0,203	Quick Strap MPB 24/GT 24 For assembly of GT 24 Girders on the Alu Beam MPB 24.
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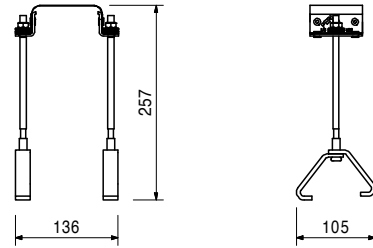
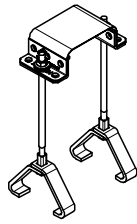
		Accessories
018280	1,000	Double Head Nail, L = 65 mm

Item no. Weight kg

111000 0,815

Tension Strap MPB 24/GT 24

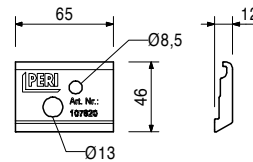
For fixing of GT 24 Girders on the Alu Beam MPB 24.



107820 0,057

Strap MPB 24

For fixing Alu Beam MPB 24 to the MULTIPROP prop or mounting the GT 24 Girders on the Alu Beam MPB 24.



Accessories

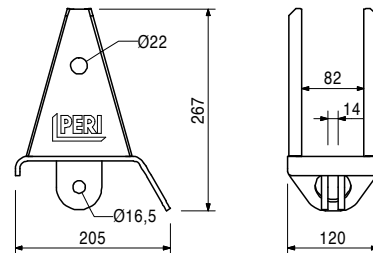
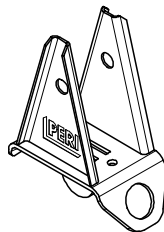
111142 0,082

MULTIPROP Bolt with Nut

108213 2,590

Brace Connector MPB 24

For connecting push-pull props or bracings to Aluminium Beam MPB 24.



Accessories

104031 0,462

Fitting Pin Ø 21 x 120

018060 0,030

Cotter Pin 4/1, galv.

MULTIPROP Single Props and System



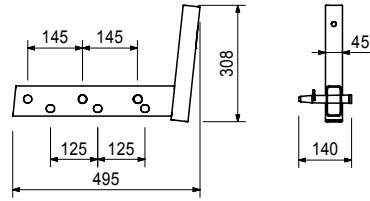
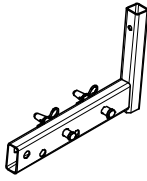
Item no.	Weight kg
104131	3,940

Guardrail Holder SRU/SRZ

For assembling a guardrail to the Steel Walers SRU and SRZ, Profile U100 to U140.

Complete with

2 pc. 105400 Pin Ø 20 x 140, galv.
2 pc. 018060 Cotter Pin 4/1, galv.



Accessories

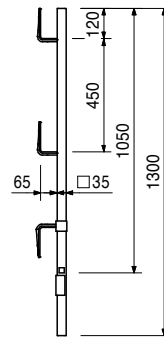
116292	4,730
061260	6,150

Guardrail Post HSGP-2 Guardrail Post SGP

116292	4,730
--------	-------

Guardrail Post HSGP-2

As guardrail for different systems.





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