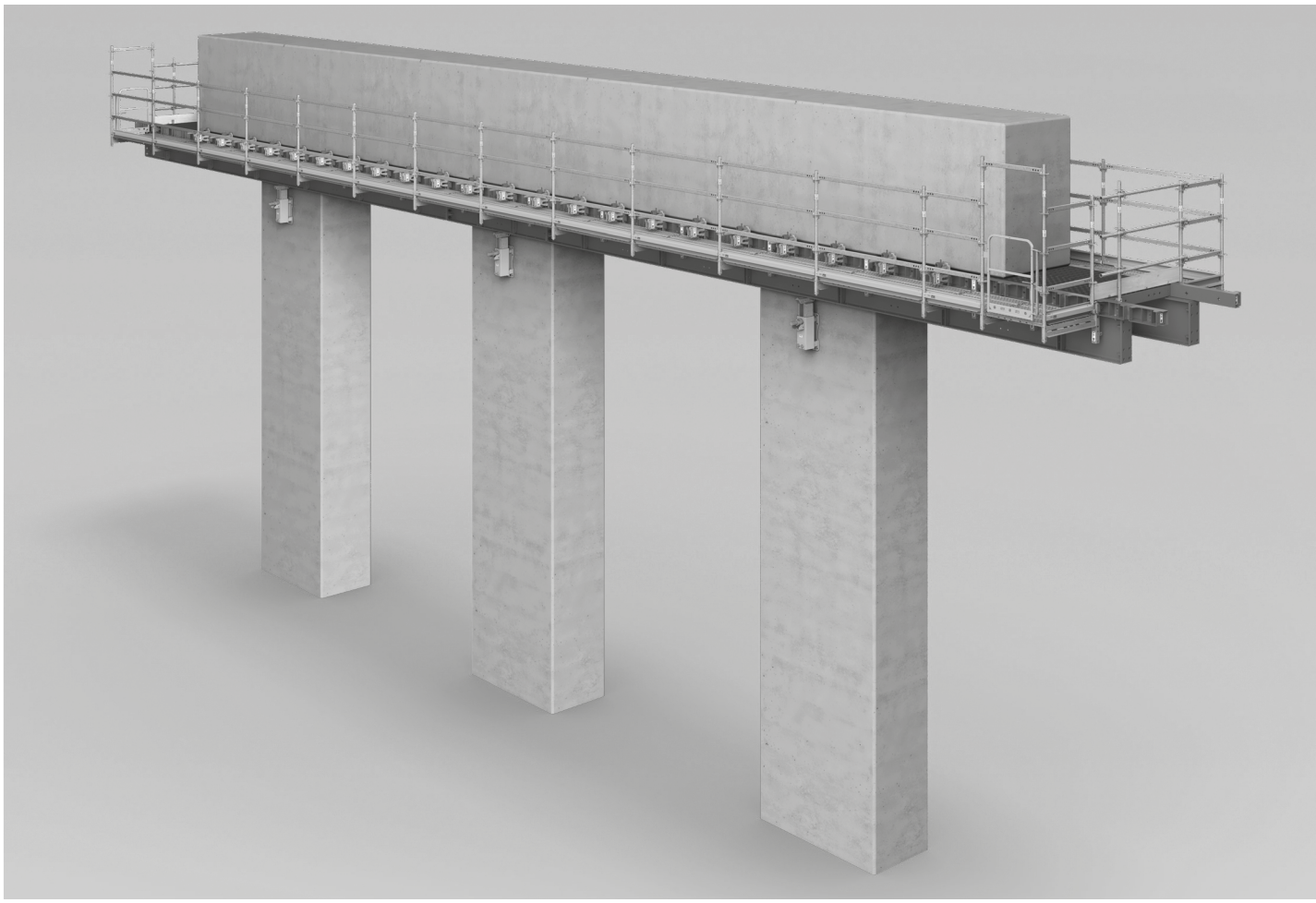
VPS
Pier formwork

Instructions for Assembly and Use – standard configuration – Version 2.4



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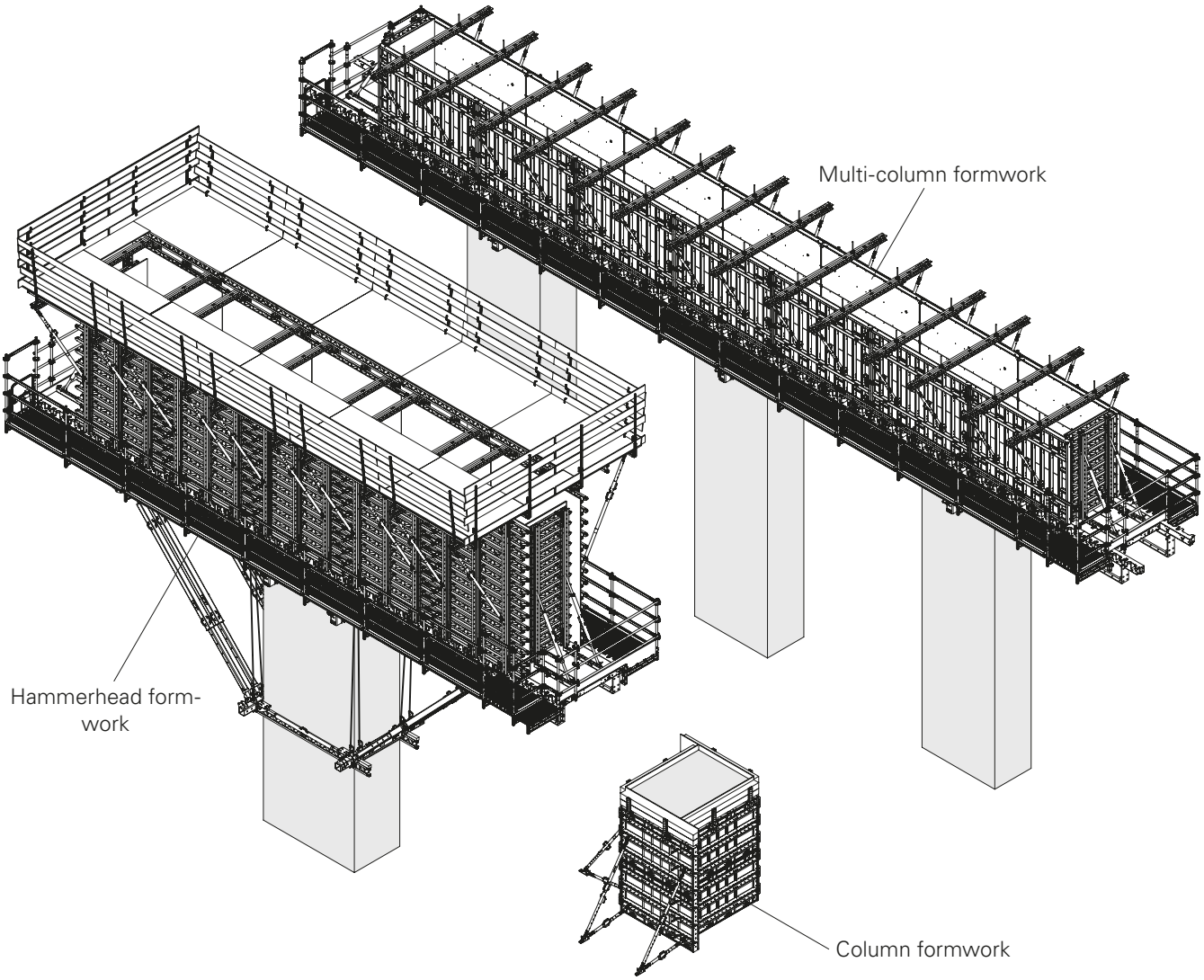
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Overview



Multi-column formwork – section A
See section "Overview of multi-column formwork" on page 14.

Hammerhead formwork – section B
See section "Overview of hammerhead formwork" on page 72.

Column formwork – section D
See section "Overview of column formwork" on page 112.

Key

Pictogram | Definition


Danger/Warning/Caution


Note


To be complied with


Load-bearing point


Visual inspection


Tip


Incorrect use


Safety helmet


Safety shoes


Safety gloves


Safety goggles


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

Arrows

Arrow representing an action

Arrow representing a reaction of an action*

Arrow representing forces

* If not identical to the action arrow.

Safety instruction categories
The safety instructions alert site personnel to the risks involved and provide information on how to avoid these risks. Safety instructions can be found at the beginning of the section or before instructions for action and are highlighted as follows:

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

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

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

Note
This sign indicates situations in which failure to observe the information can result in material damage.

Format of the safety instructions

Signal word
Type and source of hazard!
Consequences of non-compliance.
⇒ Preventative measures.

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

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

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

To facilitate understanding, detailed illustrations are sometimes incomplete. The safety equipment that might not be shown in these detailed illustrations must nevertheless be available.

Terminology
Components are not always named in full so that they are easier to read.
All components deemed valid according to the program overview may be used.
Exceptions are specified.

Example:
– Horizontal ledger
corresponds to:
– Horizontal Ledger UH Plus
– Horizontal Ledger UH–2.

Target groups

Contractors
These Instructions for Assembly and Use are designed for contractors who either
- assemble, modify and dismantle formwork systems, or
- use them, e.g. for pouring concrete, or
- allow them to be used for other operations, e.g. carpentry or electrical work.

Competent person
(Construction site coordinator)
The Safety and Health Protection Coordinator*
- is appointed by the client,
- must identify potential hazards during the planning phase,
- determines measures that provide protection against risks,
- creates a safety and health protection plan,
- coordinates the protective measures for the contractor and site personnel so that they do not endanger each other,
- monitors compliance with the protective measures.

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

Qualified personnel
Formwork systems may only be assembled, modified or dismantled by personnel who are suitably qualified to do so. Qualified personnel must have completed a course of training** in the work to be performed, covering the following points at least:
- Explanation of the plan for the assembly, modification or dismantling of the formwork in an understandable form and language.
- Description of the measures for assembling, modifying or dismantling the formwork.
- Designation of the preventive measures to be taken to avoid the risk of persons and objects falling.
- Naming of the safety precautions in the event of changing weather conditions which could adversely affect the safety of the formwork system as well as the persons concerned.
- Details regarding permissible loads.
- Description of all other risks and dangers associated with assembly, modification or dismantling operations.

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

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

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

Additional technical documentation

- Structural design information VPS
- Instructions for Assembly and Use:
  - PERI UP FLEX
  - Instructions for Assembly and Use of the formwork systems (MAXIMO, TRIO etc.)
- Instructions for Use:
  - Gallows VPS
  - Lifting Eye VPS
  - Traverse Extension VPS
  - Lifting Hook MAXIMO
  - Climbing beam RCS 9 t
  - Pallets and stacking devices
  - PERI Bio Clean
- Data sheet for PERI Anchor Bolt 14/20 x 130
- PERI Design Tables – Formwork and shoring

Intended use

Product description
PERI products have been designed to be used exclusively in industrial and commercial sectors by suitably trained personnel only.

Use as a supporting structure for the manufacturing of parapet beams made of in-situ concrete in the field of civil engineering and traffic route engineering.

Main functions:
- Load-bearing system for supporting the wall formwork.
- Work areas on several levels for concreting, operating the formwork, binding reinforcements and for carrying out finishing work on the parapet beam.
- The system prevents workers from falling and, if an enclosure is used, also protects them from atmospheric influences.
- The system protects workers from falling objects.

Standard configuration/standard assembly
Main Beams IPE 600 with a length of 3.0 m and 12.0 m are depicted in these Instructions for Assembly and Use.

Technical data
- Parapets
  - Parapet width: min. 2'-0"/61 cm | max. 8'-0"/244 cm
  - Parapet height: min. 2'-0"/61 cm | max. 10'-0"/304 cm
  - Cap offset: max. 10 ¼"/26 cm
  - With additional Support Adapters VPS, the cap offset can be increased by 50 mm.

- Support Bracket
  - Permissible load for Support Bracket VPS = 85 kip/380 kN

- Girders
  - Maximum permissible inclination of the main beams IPE 600 VARIOKIT in longitudinal direction = 6 % (3.43°).

- Platform Bracket VPS:
Alternatively, if the Platform Bracket VPS 1.00 m or 1.50 m is used with an RS Adapter Plate VPS, an influence width of 2.0 m can be used in combination with a wind load of q = 0.20 kN/m² and a live load in load class 2 (q_1 = 1.5 kN/m²).

Instructions for Use

Use in a way not intended, deviating from the standard configuration or the intended use according to the Instructions for Assembly and Use, represents 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 and represents a misapplication with associated safety risks.

Changes to PERI components are not permitted.

The system described in these Instructions for Assembly and Use may contain patent-protected components.

Foreseeable misuse/non-intended use

Foreseeable misuse

Incorrect assembly of
X-Bolt VPS M24 x 70 and
T-Bolt DW20 x 362 VPS (not turned 45° and engaged).

Exceeding the permissible load-bearing capacity and load limits.

Deviations from the specified assembly sequence.

Improper use

Transport or lifting of persons.

Transport of other loads.

Welding work and carrying out flame-cutting work (fire hazard).

Working with a naked flame (fire hazard).

Carrying out work in impermissible wind conditions.

Cleaning and maintenance instructions

In order to maintain the value and operational readiness of the formwork materials over the long term, clean the elements after each use. Some repair work may also be inevitable due to the tough working conditions.

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

Spray the formwork on both sides with concrete release agent before each use; this makes the formwork easier and faster to clean.
Spray the concrete release agent very thinly and evenly.
Do not spray work platforms and access routes with concrete release agent.
Slip hazard.

Spray the rear side of the formwork with water immediately after concreting; this avoids any time-consuming and costly cleaning operations.

Fix recesses and built-in parts with double-headed nails; as a result, the nails can easily be removed later, and damage to the formlining is largely avoided.

Close all unused tie holes with plugs; this eliminates any subsequent cleaning or repair work.

Tie holes accidentally blocked with concrete are cleared by means of a steel pin from the formlining side.

Never clean powder-coated components, e.g. elements and accessories, with a steel brush or hard metal scraper; this ensures that the powder-coating remains intact.

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

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

Do not clean components suspended on crane lifting gear.

Cross-system



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

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

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

Observe and comply with the safety instructions and permissible loads.

For the application and inspection of PERI products, observe the current laws and regulations in force in the respective countries.

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

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

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

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

Components provided by the contractor must comply with the characteristics stipulated in these Instructions for Assembly and Use and all applicable laws and standards. Unless otherwise indicated, the following applies in particular:
- Timber components: strength class C24 for solid wood according to EN 338.
- Scaffolding tubes: galvanised steel tubing with minimum dimensions of Ø 48.3 x 3.2 mm according to EN 12811-1:2003 4.2.1.2.
- Scaffolding tube couplings according to EN 74-1 and EN 74-2.

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

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

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

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

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

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

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



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

is available and used as intended.



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

The contractor must
- provide safe working areas for site personnel, which are to be reached through the provision of safe access ways. cordon off and clearly mark danger zones.
- guarantee stability during all stages of construction, in particular during assembly, modification and dismantling operations.
- ensure and demonstrate that all loads that occur are safely transferred.

Use
Every contractor who uses or allows the formwork systems to be used, is responsible 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 all work must be then coordinated.

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

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

System-specific



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

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

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

The load-distributing support used, e.g. planking, must match the respective substrate. If several layers are required, planks are to be arranged crosswise.

During deshuttering, do not tear off the formwork units with the crane.
The VPS brackets
- are classified as Heavy Duty 3.6 kN/m² (C3) according to the US standard and 6.0 kN/m² (LK6) according to the EN standard.
- are available as working scaffolds.

When storing heavy items on the formwork, the load-bearing capacity must be taken into consideration.
Cantilevers may only be accessed after bracing has been mounted.

The horizontal fixed position of the system must be guaranteed. This is ensured by way of a form-fit connection to the parapet supports. Otherwise, transfer of the horizontal loads has to be guaranteed by means of other measures provided by the contractor, e.g. bracing.

Load assumptions for horizontal loads in accordance with DIN EN 12812.

Moving
Open building edges appear when the platform is separated, lowered or moved, meaning that there is a risk of materials or people falling between the work platforms and the structure.

Loose material must be removed before moving the platform.

If there are personnel in this area, they must be prevented from falling (e.g. with PPE).

Components at risk of structural collapse
Secure components that are likely to become unstable with suitable means, e.g. using push-pull props, or leave them attached to the crane until the tipping hazard has been eliminated.

Draw attention to and clearly mark any danger zones.

If necessary, cordon off the danger zones with suitable means. Check that safety signs and barriers are in place before commencing work

Protection against falling components
Work activities may not be carried out simultaneously on areas positioned on top of each other if the lower working areas are not protected against falling objects.

Avoid installing working areas and access routes in danger zones.

If this is not possible due to work procedures, suitable protective measures must be available to provide protection against falling objects. This also applies to work that only takes a short period of time.

Safety nets (mesh size ≤ 2 cm) and platform planking are considered to be suitable means and are to be installed very close to the structure (distance ≤ 5 cm).

Secure all bolts with cotter pins and all screws with nuts.

Secure tools and material to prevent them from falling down. Remove concrete residue and other dirt as soon as possible, at the latest before the next climbing cycle. The platforms are to be kept clean at all times.

Operational working areas at great heights are to be secured by means of appropriate structural measures to prevent objects from falling down

Access
Safe access to all working areas must be guaranteed at all times.

Hatches and openings to accessible working areas must be kept closed during working operations.

Use walkways, stairs, stair towers or site lifts.

Ladders are suitable for use as passageways in exceptional cases only.

Ladders must not be connected to each other for more than two levels and should be offset against one another.

Ladders must be secured on the outer side by means of appropriate anti-fall equipment such as ladder cages or safety nets.

Building edges at passages and openings in accessible areas must be secured.

In case of danger, it must be ensured that working areas can be vacated via emergency escape routes or rescue equipment.

It must also be ensured that at least one emergency escape route or piece of rescue equipment can still be used if the power supply fails.
Determine and apply all appropriate measures.

Throughout the entire striking procedure, ensure that site personnel can still use the emergency escape route.

Anchoring

- Anchoring is to take place only if the anchorage has sufficient concrete strength (if necessary).
- Exceptional events
  – When wind speeds reach 64 km/h and more, the wall or side formwork must be suitably supported immediately after shuttering, e.g. in addition to the external support, including to the inside,
  – In the event of a storm warning, take additional measures, e.g. use additional bracing on the formwork and/or dismantle formwork.

Inspecting the anchoring

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

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

The test load must be 1.2 times higher than the required anchoring force $F_{\perp}$.

The scope of testing must, however, include a minimum of five load tests for all dowels used for concrete anchoring bases (at least 10 %) and for other building materials (at least 30 %).

Storage and transportation

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

Do not drop the components.

Use PERI load-lifting accessories and lifting gear and only those load-bearing points provided on the component.

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

Pre-assembled system units should always be guided with ropes when moving them by crane.

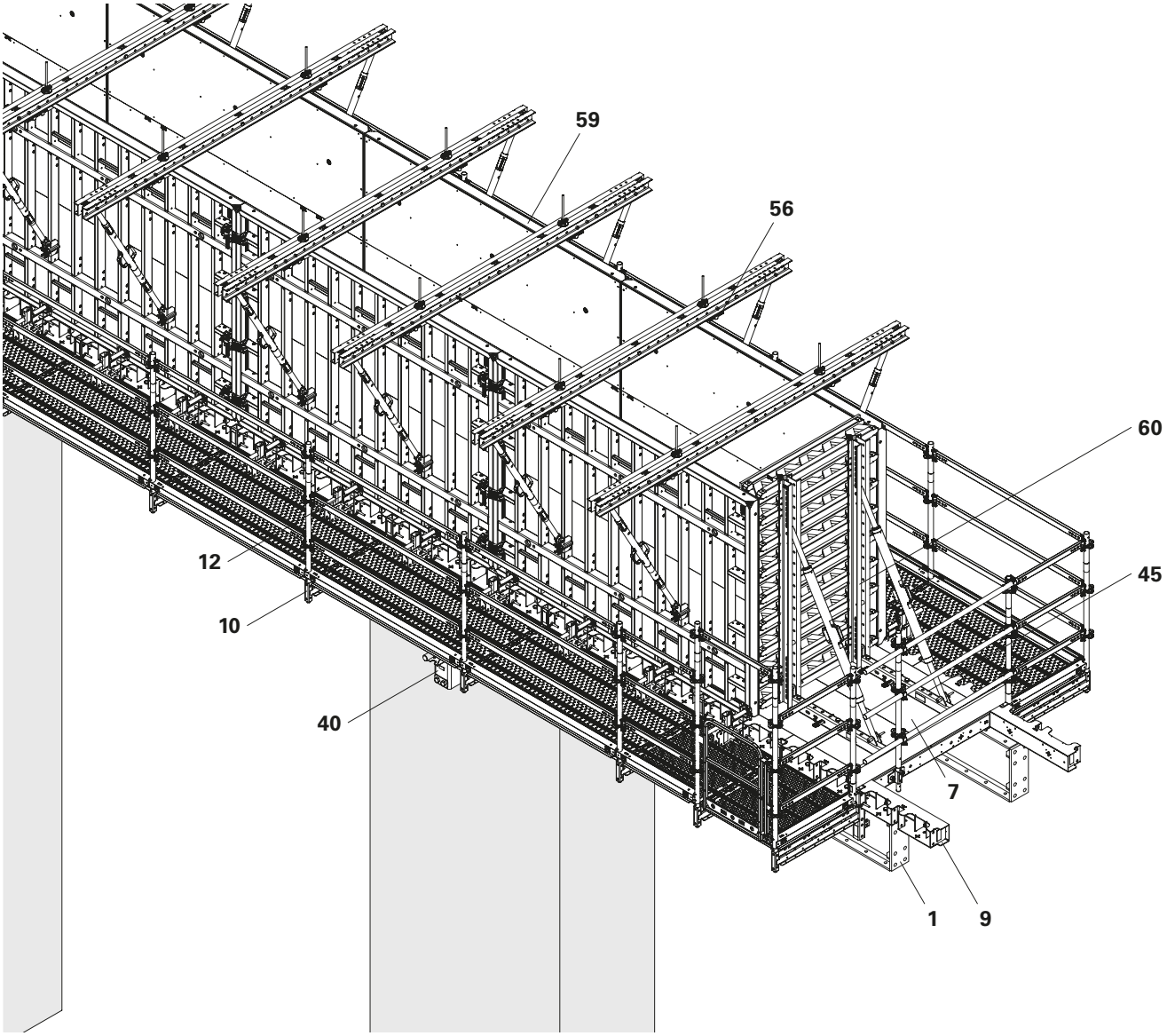
The access areas on the construction site must be free of obstacles and tripping hazards, as well as being slip-resistant.

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

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

Overview of multi-column formwork

Main components



1 IPE 600 3.00 m VARIOKIT
7 Panel VPS
9 Speed Beam VPS 2.00 m
10 Platform Bracket VPS 1.00 m
12 Sideform Holder VPS
40 Support Bracket VPS
45 Stopend Connector VPS
56 Top Tie Adaptor MX-SRU
59 Formwork package
60 Front formwork
129 Multi Panel VPS

A Multi Panel VPS can also be used instead of a Panel VPS.

Note

If a Multi Panel VPS is used, the lower load-bearing capacity must be taken into account!

Overview of multi-column formwork

List of components

Pos. no.	Component name	Article no.
1	IPE 600 VARIOKIT	–
2	Bolt ISO 4017 M30 x 100-10.9	131792
3	Nut ISO 4032 M30-10	710336
4	Y-Brace VPS	137330
5	Fitting Pin Ø 21 x 120	104031
6	Cotter Pin 4/1 ga	018060
7	Panel VPS (red)	–
8	Y-Brace Adaptor 7-8 ft VPS	137332
9	Speed Beam VPS 2.00 m	136806
10	Platform Bracket VPS 1.00 m	137149
11	Platform Bracket VPS 1.50 m	137153
12	Sideform Holder VPS	137141
13	Striking Adaptor VPS-RCS	137254
14	Bolt ISO 4017 M24 x 60-8.8	125462
15	Hex-Nut ISO 4032-M24-8-ga	022250
16	X-Bolt VPS M24 x 70	137179
17	Base Spindle UJB 38-50/30	100411
18	Longitudinal Beam VARIOKIT	–
19	Bolt ISO 4017 M20 x 60-8.8	057139
20	Hex-Nut ISO 4032-M20-8-ga	710334
21	Steel Deck UDG-2	–
22	Decking boards	–
23	Spax screw TX 30 6 x 40	–
24	Pin w. Spacer Tube URE 4/42	105372
25	Bolt ISO 4017 M20 x 160-8.8	125979
26	Guardrail Post HSGP-2	116292
27	Connector VPS-Flex	137481
28	Top Standard UVH-2 150	132198
29	Top Standard UVH-2 200	132200
30	Horizontal Ledger UH-2	–
31	Guardrail boards	–
32	Safety Entry Gate UPS 100	126675
33	Steel Toe Board UPY	–
34	End Rail Post Holder VPS	137264
35	Angle bracket 90°reinforced	123478
36	Toe board	–
37	Steel scaffolding tube Ø 48.3 x 3.2	–
38	Standard Coupler RA 48/48	017020
39	Spax screw TX 30 6 x 20	129711

Tab. 01

Pos. no.	Component name	Article no.
40	Support Bracket VPS	137423
41	Anchor Bolt SW21 Ø14 x 150	132889
42	Threaded Rod M56	–
43	Nut M56	–
44	Washer M56	–
45	Stopend Connector VPS	137357
46	Round sling	–
47	Filler Support VPS	137272
48	Squared timber 6 ½" x 4"	–
49	Formlining 18 mm	–
50	Panel MX 330 x 240	114426
51	Brace Connector-2	023660
52	Push-Pull Prop RS	–
53	Alignment Coupler BFD	023500
54	Steel Waler Universal SRU U120	–
55	Base Plate-3 f. RS 210 – 1400	126666
56	Top Tie Adaptor SRU-MX	137476
57	Tie Rod DW15 spec. Length	030030
58	Wingnut Counterplate DW 15	030110
59	Formwork package	–
60	Front formwork	–
61	StageStriker VPS 6,600 lb-3,000 kg	137445
70	Gallows VPS	137273
76	Climbing Rail RCS	–
77	Spacer M20-82	110022
78	Spacer M24-82	110023
80	Fitting Pin Ø26 x 120	111567
81	Cotter Pin 5/1 ga	022230
97	Wedge KZ	024240
111	Lifting Eye VPS	137365
116	Lifting Hook MAXIMO 1.5 t	115168
117	Washer Ø 60/26 x 8	138235
118	Spacer tube Ø 63 x 0.45	–
119	Imbed Tube Holder VPS Ø 63	137882
120	Plastic cap Ø 63	137930
121	Cone Ring VPS Ø 63 108/55	137886
122	SWLK Concrete Cone M36-105/52	136576
123	Spax screw TX 30 8 x 20	024550
124	Torque multiplier 3,200 Nm	137916
125	Waler Fixation SRU	137644
129	Multi Panel VPS (yellow)	–

Standard work flow

1. Carry out concreting of the concrete columns using the tie point for Support Bracket VPS.
2. Fit the Support Bracket VPS onto the concrete columns.
3. Place the platform on the concrete columns – with a crane.
4. Reinforcement work.
5. Close formwork.
6. Concrete the cap.
7. Remove formwork.
8. Lower platform.
9. Separate platform.
10. Set the platform halves down on the ground – with a crane.
11. Connect platform halves.
12. Place the entire platform on the concrete columns – with a crane.

Tightening torques

Unless otherwise indicated, PERI recommends the following guide values for screw connections as "hand-tightened" tightening torques $M_{A,hand\text{-}tightened}$.
These guide values are based on EN 15048 with minimum Safety Factor 3 against breakage.

Quality class	**Quality 4.6**		**Quality 8.8 and 10.9**
Lubrication	**Lightly oiled**	**MoS2**	**Undefined**
Screw M8	8 Nm	6.6 Nm	8 Nm
Screw M10	16 Nm	13.0 Nm	16 Nm
Screw M12	30 Nm	23.0 Nm	30 Nm
Screw M16	65 Nm	54.0 Nm	65 Nm
Screw M20	100 Nm		100 Nm
Screw M24	150 Nm		150 Nm
Screw M30	260 Nm		260 Nm
Screw M36	350 Nm		350 Nm

Tightening torques have been determined for the following components:

Scaffolding tube coupling	50 Nm

Tab. 02

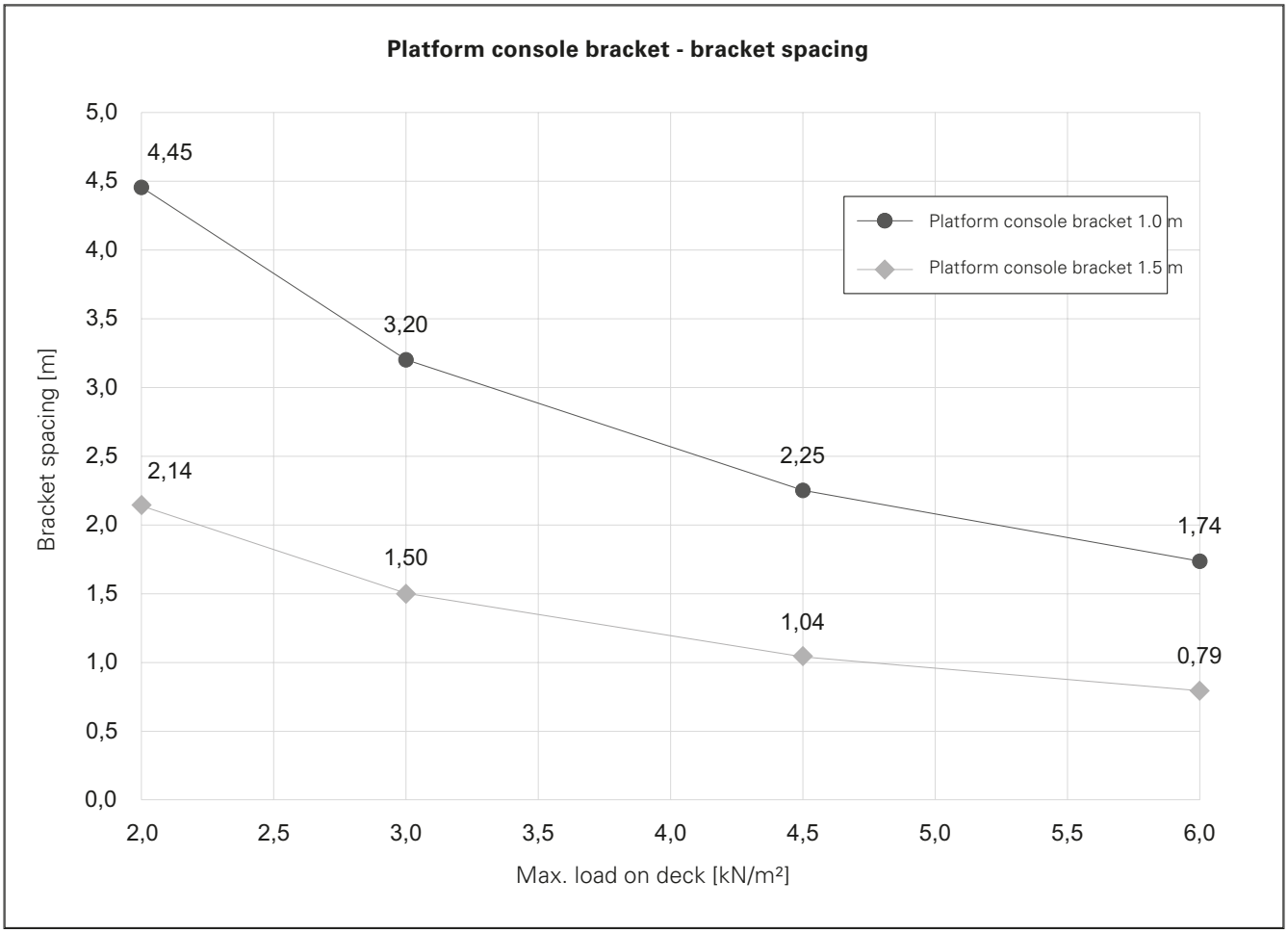
Overview of multi-column formwork

Bolts and nuts used

		ISO bolts						US bolts					
		ISO		Length	Grade	Coat	Quantity	Standard		Length	Grade	Coat	Quantity
IPE 600 3.00 m VARIOKIT	Bolt	4017	M30	100	10.9	VZ	8	UNC	1 1/4"	4"	A325	zinc	8
	Nut	4032	M30	–	10	VZ	8	UNC	1 1/4"	–	A325	zinc	8
Longitudinal Beam VARIOKIT	Bolt	4017	M20	60	8.8	VZ	4	UNC	3/4"	2 1/2"	A325	zinc	4
	Nut	4032	M20	–	8	VZ	4	UNC	3/4"	–	A325	zinc	4
Speed Beam VPS 2.00 m + IPE 600 3.00 m VARIOKIT	Bolt	4017	M24	60	8.8	VZ	4	UNC	1"	2 1/2"	A325	zinc	4
	Nut	4032	M24	–	8	VZ	4	UNC	1"	–	A325	zinc	4
Speed Beam VPS 2.00 m + Longitudinal Beam VARIOKIT	Bolt	4017	M20	60	8.8	VZ	4	UNC	3/4"	2 1/2"	A325	zinc	4
	Nut	4032	M20	–	8	VZ	4	UNC	3/4"	–	A325	zinc	4
End Rail Post Holder VPS	Bolt	4017	M24	50	8.8	VZ	2	UNC	1"	2"	A325	zinc	2
	Nut	4032	M24	–	8	VZ	2	UNC	1"	–	A325	zinc	2
Platform Bracket VPS 1.00 m + Platform Bracket VPS 1.50 m	Bolt	4017	M20	120	8.8	VZ	2	UNC	3/4"	5"	A325	zinc	2
	Nut	4032	M20	–	8	VZ	2	UNC	3/4"	–	A325	zinc	2

Tab.03

Maximum load on the working platform depending on the spacing of the platform console brackets



Diag. 01

European			
Console brackets without side formwork support			
	Max. load on deck [kN/m²]	Load class	Max. bracket spacing [m]
Console brackets 1.0 m	6.0	LK6	1.5
	4.5	LK5	2.0
	3.0	LK4	3.0
	2.0	LK3	4.0
Console brackets 1.5 m	6.0	LK6	0.5
	4.5	LK5	1.0
	3.0	LK4	1.5
	2.0	LK3	2.0
Console brackets with formwork support Maximum formwork height: 3.6 m			
	Max. load on deck [kN/m²]	Load class	Max. bracket spacing [m]
Console brackets 1.0 m	2.0	LK3	2,0
Console brackets 1.5 m	2.0	LK3	2,0

Tab. 04

A1 Assembling system components

Warning

- During assembly, components could fall out, strike personnel and seriously injure them as a result of carelessness or maloperation!
  - ⇒ Do not remain in the danger zone for no good reason.
  - ⇒ Wear a safety helmet.
  - ⇒ Wear safety shoes.
  - ⇒ Wear safety gloves.
- Hands are at risk of being crushed when screws and bolts are inserted.
  - ⇒ Wear suitable protective gloves.
  - ⇒ Use appropriate tools.

- PERI recommends using a level substrate.
- To simplify the assembly process, make sure the beams are completely parallel and aligned precisely in the longitudinal direction.
- Use spacing aids.

Preparing the assembly site

1. Lay out support profiles such as GT 24/VT 20 or squared timbers at regular intervals on a level substrate.
2. Place squared timber on the support profile as a spacer and secure it with screws or nails.
   For the length of the spacer aids, see Tab. A1.01.

Panel	Length L	
	[Foot]	[mm]
4'	3'-3 3/16"	996
5'	4'-3 3/16"	1301
6'	5'-3 3/16"	1606
7'	6'-3 3/16"	1910
8'	7'-3 3/16"	2215

Tab. A1.01

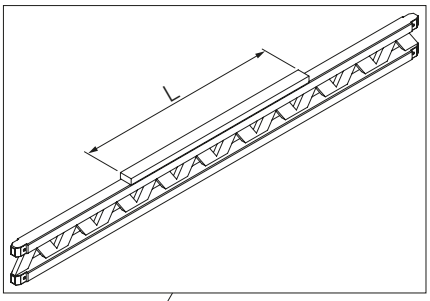


Fig. A1.01a

Fig. A1.01

IPE 600 VARIOKIT

Components

1 IPE 600 VARIOKIT
2 Bolt ISO 4017 M30 x 100-10.9
3 Nut ISO 4032 M30-10

Assembly

1. Place and position the IPE 600 VARIOKIT (**1**) on the installation aids using a suitable lifting tool.
2. Connect IPE 600 VARIOKIT (**1**) using 8x bolts ISO 4017 M30 x 100-10.9 (**2**) and nuts ISO 4032 M30-10 (**3**).

(Fig. A1.02 + Fig. A1.02a)

Longitudinal Beam VARIOKIT

Components

18 IPE 600 VARIOKIT
19 Bolt ISO 4017 M20 x 60-8.8
20 Hex-Nut ISO 4032-M20-8-ga

Assembly

1. Place and position the Longitudinal Beam VARIOKIT (**18**) on the installation aids using a suitable lifting tool.
2. Connect Longitudinal Beam VARIOKIT (**18**) using 4x bolts ISO 4017 M20 x 60-8.8 (**19**) and Hex-Nuts ISO 4032-M20-8-ga (**20**).

(not shown)

Lengths of the IPE 600 VPS [m]	3.0/4.0/6.0/12.0	
Bolt type and number of bolts per butt joint	8x Bolt ISO 4017 M30 x 100-10.9 (2) 8x Nut ISO 4032 M30-10 (3)	8x Bolt UNC 1 ¼" Grade A325 8x Nut UNC 1 ¼" Grade A325
Tightening torque	260 Nm	260 Nm
Lengths of the Longitudinal Beams VARIOKIT [m]	1.5 / 2.5 / 3.0 / 3.5 / 5.0 / 7.5 / 10.0	
Bolt type and number of bolts per butt joint	4x Bolt ISO 4017 M20 x 60-8.8 (19) 4x Hex-Nut ISO 4032-M20-8-ga (20)	4x Bolt UNC 3/4" Grade A325 4x Nut UNC 3/4" Grade A325
Tightening torque	100 Nm	100 Nm

Tab. A1.02

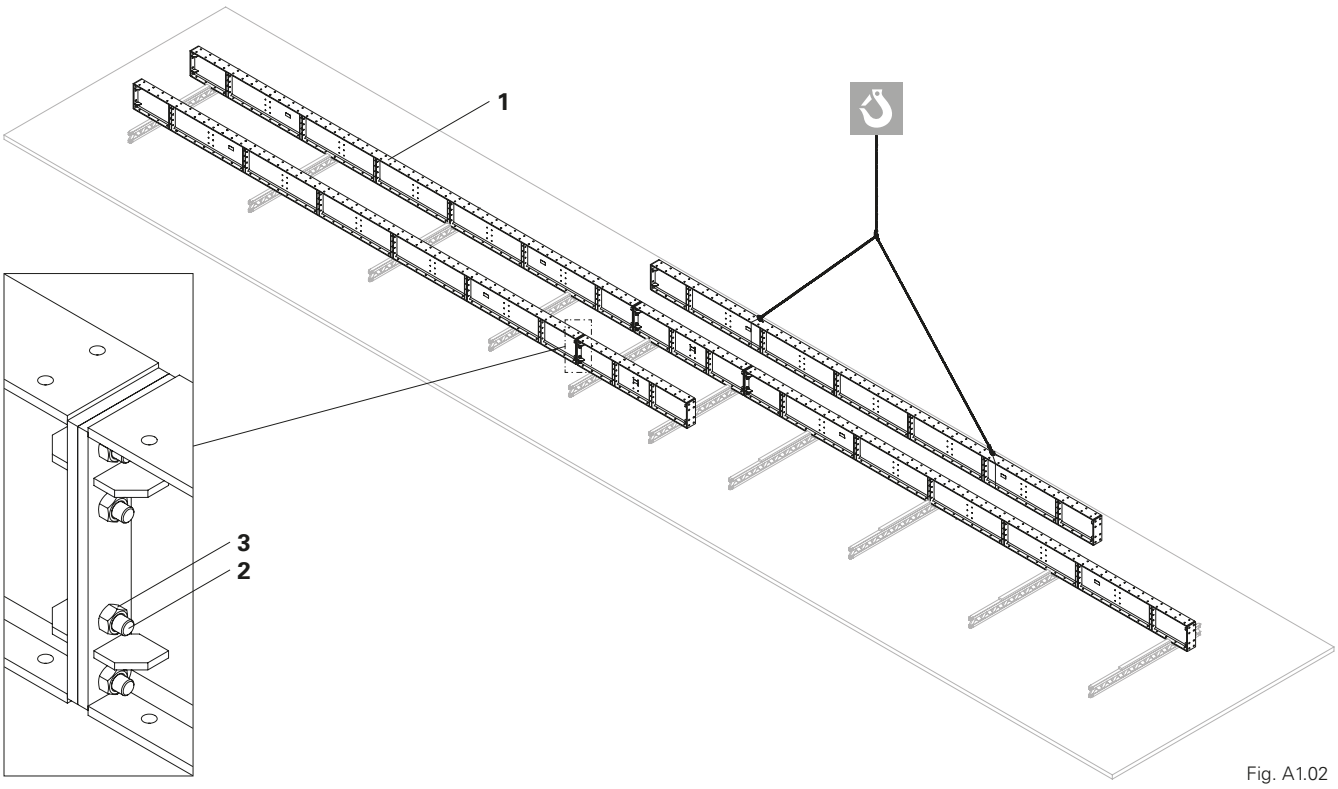


Fig. A1.02

Fig. A1.02a

Y-Brace VPS

The Y-Brace VPS (**4**)
- serves as a stiffening element between the IPE 600 VARIOKIT (**1**) and stabilises the bottom flanges.
- is installed between the two IPE 600 VARIOKIT (**1**) at their vertical stiffeners (**1.1**) in a project-specific manner and according to static specifications in terms of number and position.

- The telescopic leg (**4.2**) of the Y-Brace VPS (**4**) can be adjusted to the relevant distance for the corresponding widths of the Panels VPS (**7**).
- For 7 ft and 8 ft panels, the Y-Brace Adaptor 7-8 ft VPS (**8**) must be fitted onto the telescopic leg (**4.2**).

Components

4 Y-Brace VPS
4.1 Fixed leg
4.2 Telescopic leg
4.3 Fitting Pin Ø21 x 120
4.4 Cotter Pin 4/1 ga
5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga

Assembly

1. Insert the two fixed legs (**4.1**) of the Y-Brace VPS (**4**) between the vertical stiffeners (**1.1**) of the IPE 600 VARIOKIT (left) (**1a**).
2. Fit each of the fixed legs (**4.1**) with a Fitting Pin Ø21 x 120 (**5**) and secure them with a Cotter Pin 4/1 ga (**6**).
3. Pull out the telescopic leg (**4.2**) and insert it between the vertical stiffeners of the opposite IPE 600 VARIOKIT (right) (**1b**).
4. Fit telescopic leg (**4.2**) with a Fitting Pin Ø21 x 120 (**5**) and secure with a Cotter Pin 4/1 ga (**6**).
   → This prevents it from shifting.
5. Fit telescopic leg (**4.2**) with a Fitting Pin Ø21 x 120 (**4.3**) and secure with a Cotter Pin 4/1 ga (**4.4**).

(Fig. A1.03 – Fig. A1.03b)

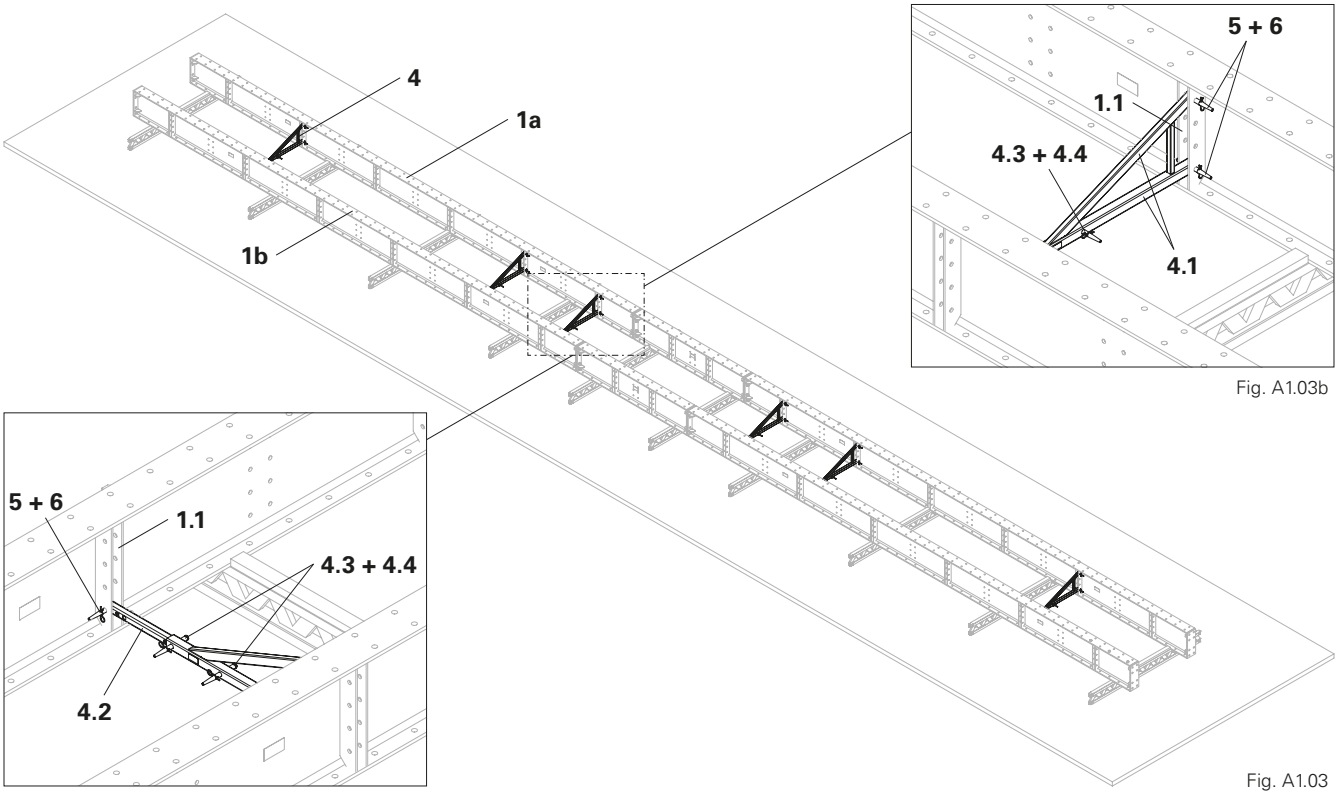


Fig. A1.03b

Fig. A1.03

Fig. A1.03a

Speed Beam VPS 2.00 m

The Speed Beam VPS 2.00 m (**9**) serves as a connecting component between the IPE 600 VARIOKIT (**1**) and the floor panels. The Platform Brackets VPS (**10/11**), the Sideform Holder VPS (**12**) and the Striking Adaptor VPS-RCS (**13**) are connected to the Speed Beam VPS 2.00 m (**9**).

Speed Beam VPS 2.00 m (**9**)
- assemble according to project-specific drawing specifications.
- place on the IPE 600 VARIOKIT (**1**) using suitable lifting gear.
- There are 2 ways to mount the Speed Beam VPS 2.00 m (**3**):
  – Variant 1: On the IPE 600 VARIOKIT (**2**). (Fig. A1.04)
  – Variant 2: On the Longitudinal Beam VARIOKIT (**18**). (not shown)

Version 1

Components

9	Speed Beam VPS 2.00 m
14	Bolt ISO 4017 M24 x 60-8.8
15	Hex-Nut ISO 4032-M24-8-ga
117	Washer Ø 60/26 x 8

Assembly

1. Fit the Speed Beam VPS 2.00 m (**9**) onto the IPE 600 VARIOKIT (**1**) with bolt ISO 4017 M24 x 60-8.8 (**14**), Hex-Nut ISO 4032-M24-8-ga (**15**) and washer Ø 60/26 x 8 (**117**) in the row of holes Ø 27 mm.

(Fig. A1.04 + Fig. A1.04a)

Alternatively, fix with:
Hex Bolt Full Thread UNC 1 x 2 ¼" Grade A235 Hex Nut UNC 1" in BZP Grade A235 and washer Ø 60/26 x 8 (**117**).

Version 2

Components

9	Speed Beam VPS 2.00 m
19	Bolt ISO 4017 M20 x 60-8.8
20	Hex-Nut ISO 4032-M20-8-ga
127	Washer DIN 6340-21-350 HV

Assembly

1. Fit the Speed Beam VPS 2.00 m (**9**) onto the longitudinal beam VARIOKIT (**18**) with bolt ISO 4017 M20 x 60-8.8 (**19**), Hex-Nut ISO 4032-M20-8-ga (**20**) and washer DIN 6340-21-350 HV (**127**) in the row of holes Ø 22 mm.

(not shown)

Alternatively, fix with:
Hex Bolt Full Thread UNC ¾ x 2 ½" Grade A235 with Hex Nut UNC ¾" in BZP Grade A235.

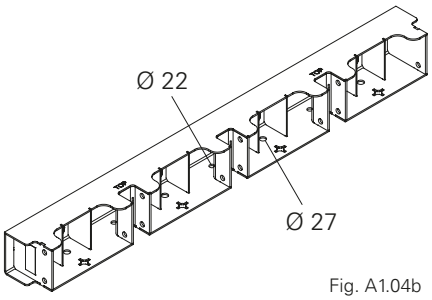


Fig. A1.04b

Fig. A1.04

Fig. A1.04a

Fitting the Panel VPS

Use suitable lifting gear, e.g. crane in conjunction with Lifting Eyes VPS (**111**).

Components

7 Panel VPS
7.1 X-bolt plate
16 X-Bolt VPS M24 x 70

Assembly

1. Place Panel VPS (**7**) on the side of the Speed Beam VPS 2.00 m (**9**). (Fig. A1.05e).
2. Place the X-Bolt VPS M24 x 70 (**16**) at the specified position, aligned at 90°.
   → "+ position".
   (Fig. A1.05a + Fig. A1.05c)
3. Insert the X-Bolt VPS M24 x 70 (**16**) and turn it 45° to the right until the X-Bolt VPS M24 x 70 (**16**) noticeably engages in the recesses of the X-bolt plate (**7.1**).
   → "X-position".
   (Fig. A1.05b + Fig. A1.05d)
4. Tighten Nut M24 (AF 36) by hand and then hand-tighten with tool according to table "Tightening torques" on page 16.

(Fig. A1.05)

"+ - position"

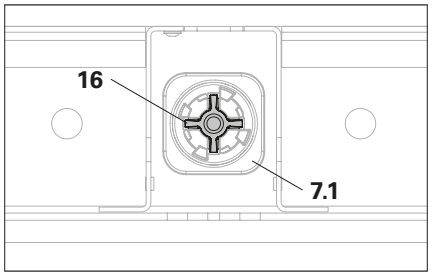


Fig. A1.05a

"x - position"

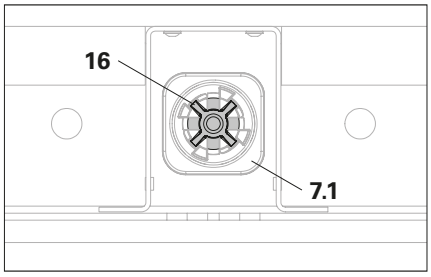


Fig. A1.05b

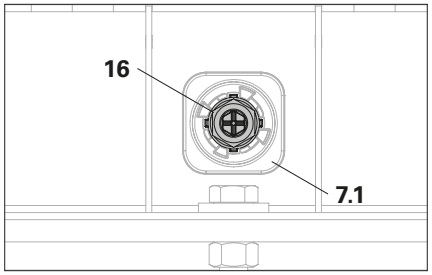


Fig. A1.05c

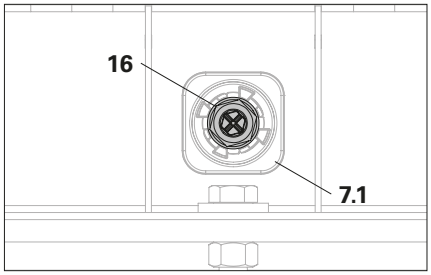


Fig. A1.05d

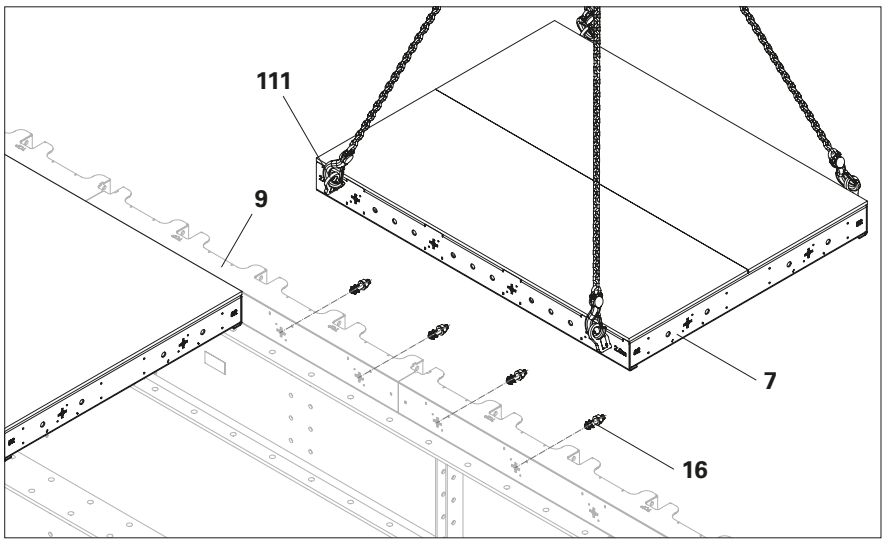


Fig. A1.05e

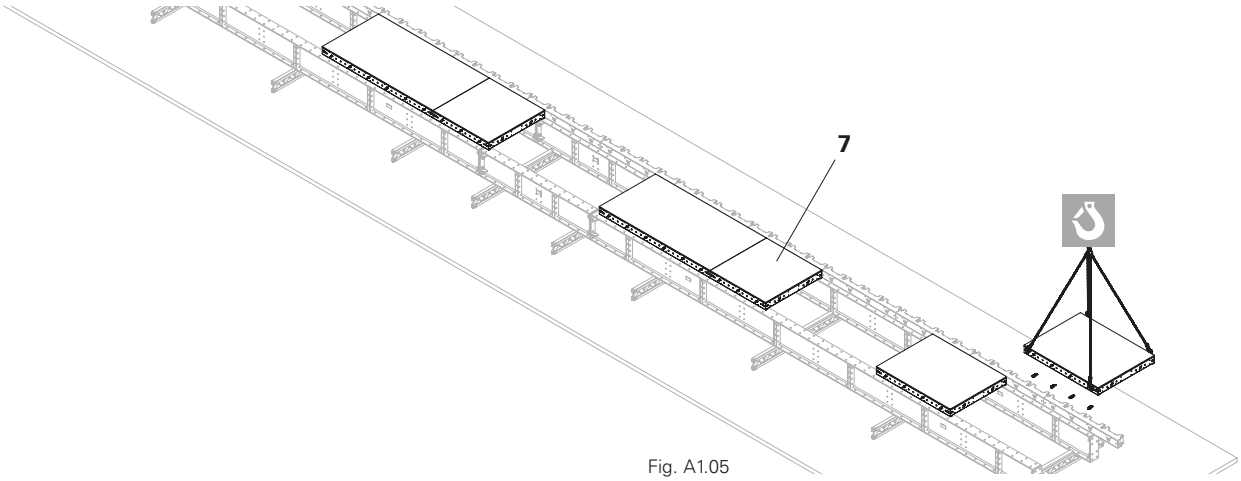


Fig. A1.05

Other
Speed Beams VPS 2.00 m

Speed Beam VPS 2.00 m (**9**)
- assemble according to project-specific drawing specifications.
- place on the IPE 600 VARIOKIT (**1**) using suitable lifting gear.

Components

9	Speed Beam VPS 2.00 m
14	Bolt ISO 4017 M24 x 60-8.8
15	Hex-Nut ISO 4032-M24-8-ga
16	X-Bolt VPS M24 x 70
117	Washer Ø 60/26 x 8

Assembly

1. Fit the Speed Beam VPS 2.00 m (**9**) onto the IPE 600 VARIOKIT (**1**) with bolt ISO 4017 M24 x 60-8.8 (**14**), Hex-Nut ISO 4032-M24-8-ga (**15**) and washer Ø 60/26 x 8 (**117**) in the row of holes Ø 27 mm.
2. Place the X-Bolt VPS M24 x 70 (**16**) at the specified position, aligned at 90°.
   → "+ - position"
3. Insert the X-Bolt VPS M24 x 70 (**16**) and turn it 45° to the right until the X-Bolt VPS M24 x 70 (**16**) noticeably engages in the recesses of the X-bolt plate (**7.1**).
   → "X-position".
4. Tighten Nut M24 (AF 36) by hand and then hand-tighten with tool according to table "Tightening torques" on page 16.

(Fig. A1.06)

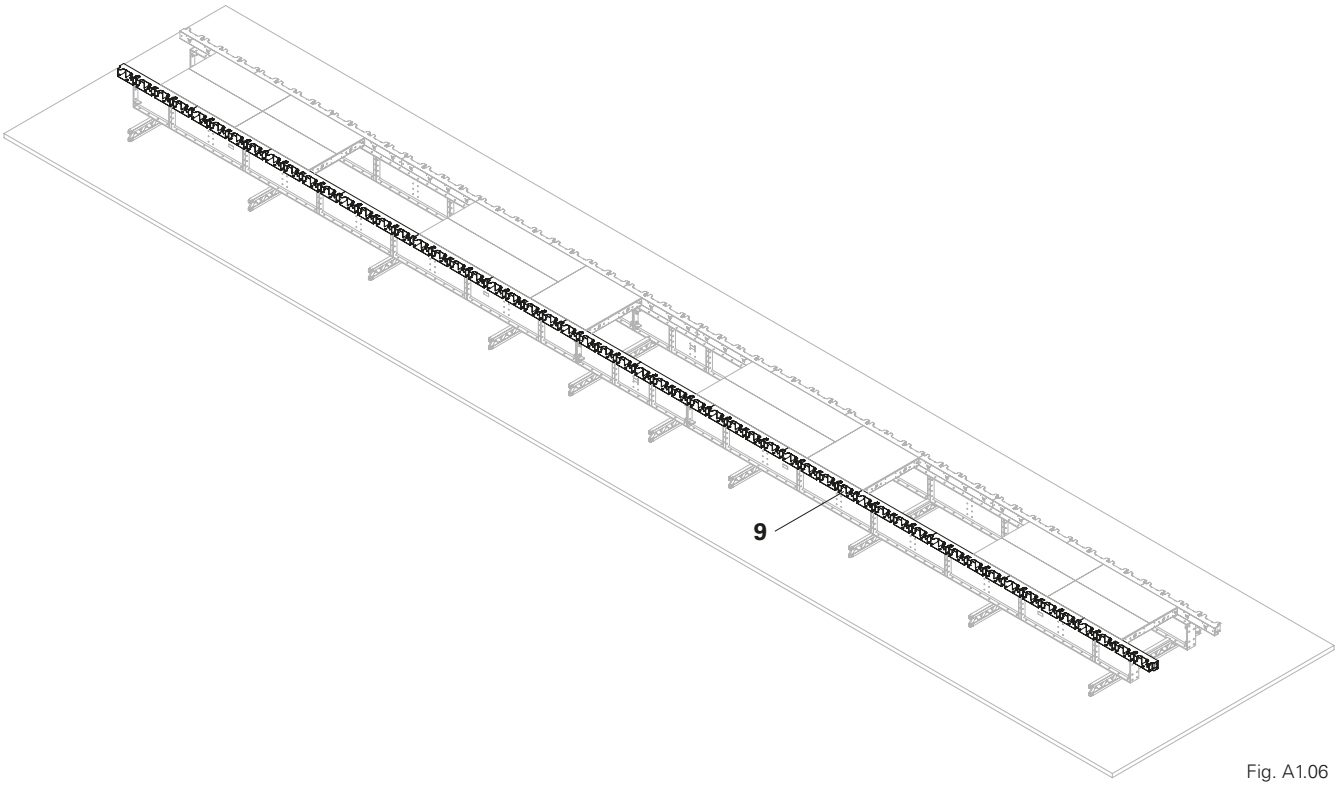


Fig. A1.06

Platform Bracket VPS

The Platform Bracket VPS (**10/11**) serves as a support for the working platform. The deck of the working platform is made of Steel Deck UDG-2.
If the Platform Bracket VPS is rotated by 180° before it is installed, the working platform can be covered with a wooden deck.
The respective distance of the Platform Bracket VPS can be taken from the assembly plans.

Technical data:

- Decking width: 1.00 m or 1.50 m.
- Permissible live load of the platforms with deck width 1.00 m:
  Load class 6: 6.0 kN/m²
  corresponds to Load Class 3 US Standard ASCE 37-14: 3.6 kN/m² (heavy-duty).

- The console bracket can be installed by one person.

Components

5	Fitting Pin Ø21 x 120
6	Cotter Pin 4/1 ga
10	Platform Bracket VPS 1.50 m
11	Platform Bracket VPS 1.00 m

Assembly

1. Insert the Platform Bracket VPS (**10/11**) with the upper short rectangular tube into the recess of the Speed Beam VPS 2.00 m (**9**).
   → The bracket supports itself but hangs at an angle.
2. Raise Platform Bracket VPS (**10/11**) and fit with 2x filler pins (**5**) and Cotter Pins 4/1 ga (**6**).
   (Fig. A1.07 + Fig. A1.07a)

Check whether all filler pins (**5**) are inserted and secured with cotter pins (**6**). A bracket that hangs down at an angle is an indicator that the bolts have not been inserted.
(Fig. A1.07b)

When using the outermost connection possibilities in the Speed Beam VPS 2.00 m (**9**), the Platform Bracket VPS (**10/11**) must be connected with 2x bolt ISO 4017 M20 x 160-8.8 (**25**) and Hex-Nut ISO 4032-M20-8-ga (**20**).
In addition, another Platform Bracket VPS (**10/11**) must be mounted in the previous position rotated by 180° (with wooden deck as a spacer).

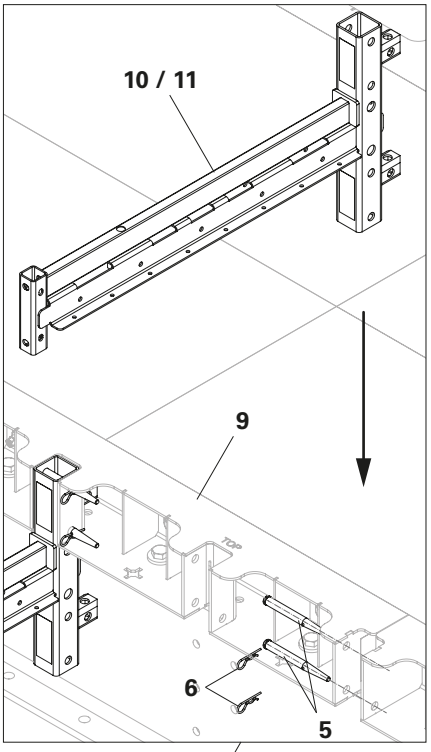


Fig. A1.07a

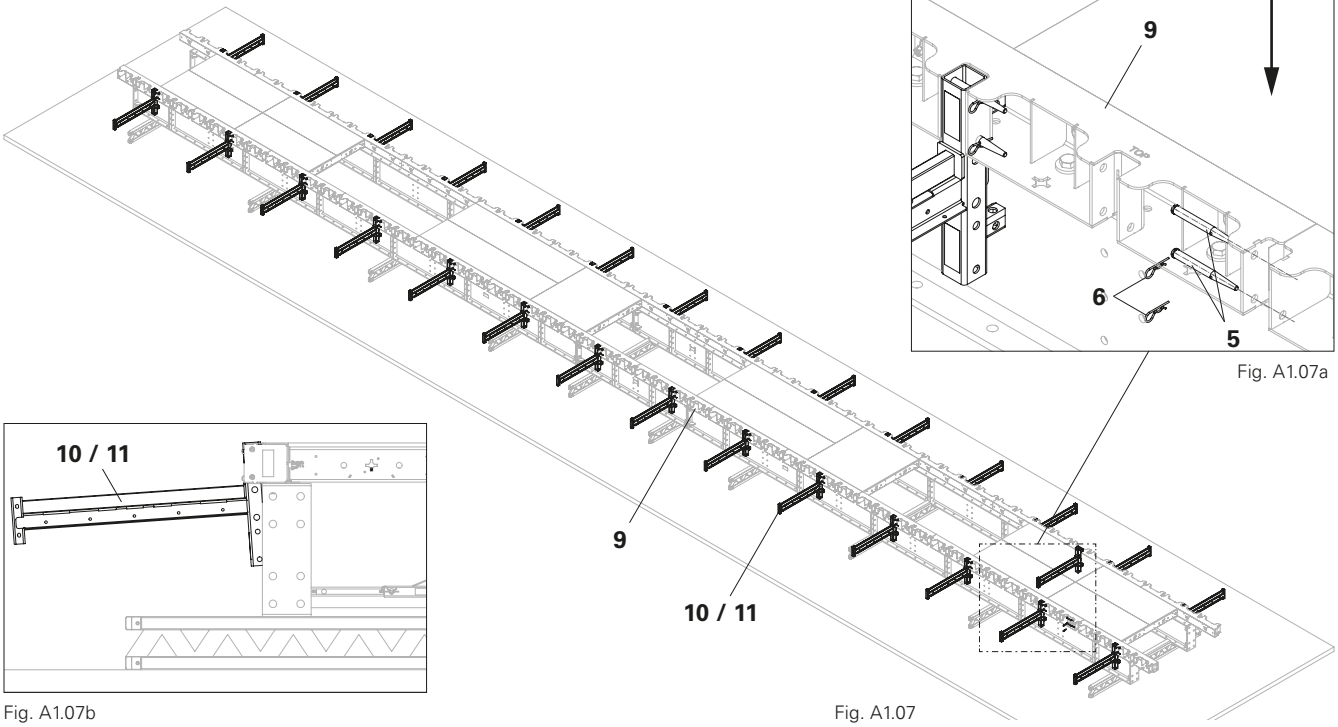


Fig. A1.07

Fig. A1.07b

Decks

Alternatively, plank decking can be fittedSee section “C8 Planking” on page 106.

Components

21	Steel Deck UDG-2

Assembly

1. Place Steel Decks UDG (**21**) on the Platform Brackets VPS (**10/11**).

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

Check that the lift locks fully engage with the Platform Brackets VPS.

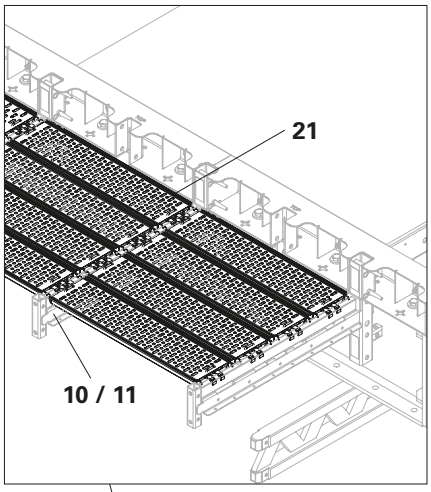


Fig. A1.08a

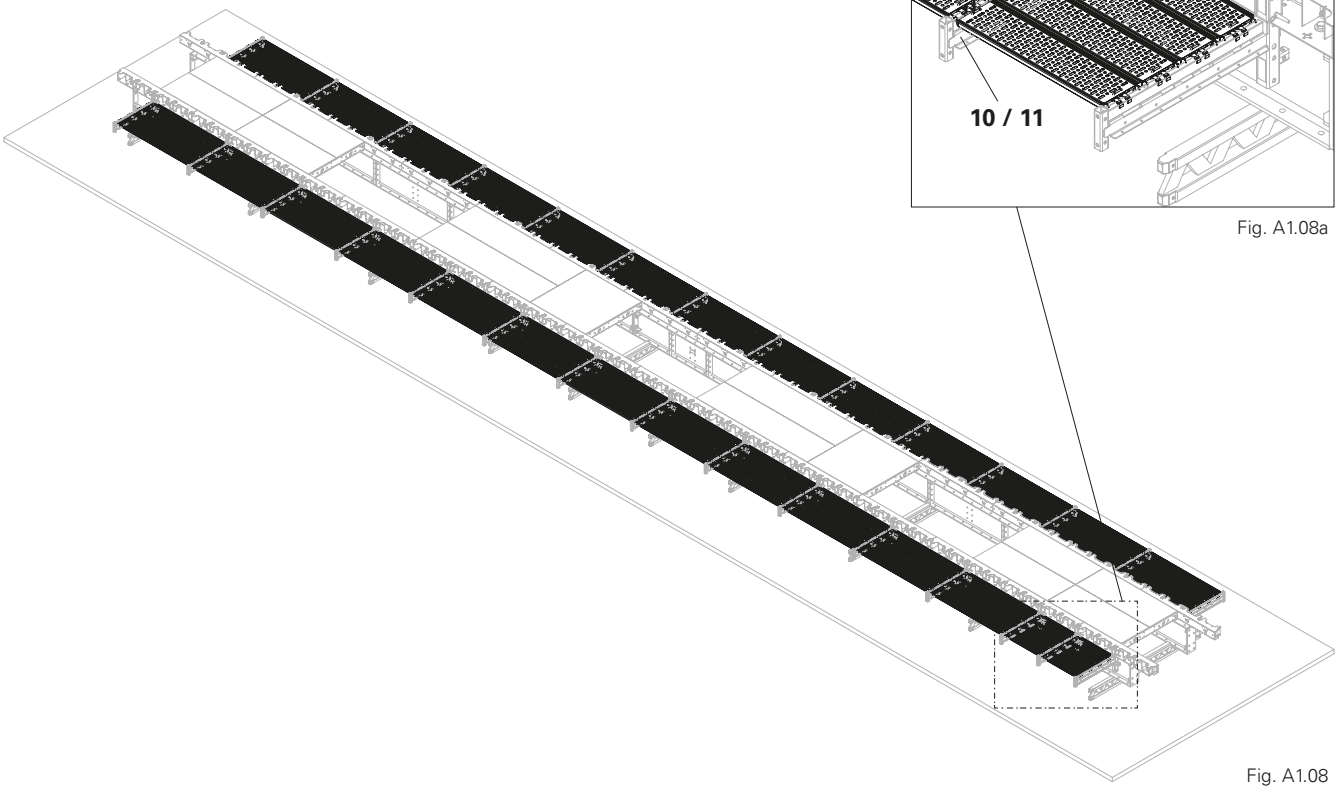


Fig. A1.08

Sideform Holder VPS

The Sideform Holder VPS (**12**) serves as a pressure point for the side formwork and absorbs the fresh concrete pressure loads. Depending on the concrete pressure and the side formwork system, the Sideform Holder VPS (**12**) is fitted into the Speed Beam VPS (**9**) at distance "a", according to the project-specific requirements. (Fig. A1.09)

If a VARIO GT 24 Girder Wall Formwor k is used, the spindle holder (**12.3**) must be mounted with a Fitting Pin Ø21 x 120 (**12.1**) and Cotter Pin 4/1 ga (**12.2**) in the rear position.

Components

5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga
12 Sideform Holder VPS
12.1 Fitting Pin Ø21 x 120
12.2 Cotter Pin 4/1 ga
12.3 Spindle holder
17 Base Spindle UJB 38-50/30

Assembly

1. Fit the spindle holder (**12.3**) at the specified position with Fitting Pin Ø21 x 120 (**12.1**) and secure it with Cotter Pin 4/1 ga (**12.2**).
2. Insert the thrust spindle (**17**) into the Sideform Holder VPS (**12**).

(Fig. A1.09a)

3. Insert the Sideform Holder VPS (**12**) at the appropriate position on the Speed Beam VPS 2.00 m (**9**).
4. Mount the Sideform Holder VPS (**12**) with 2x Fitting Pins Ø21 x 120 (**5**) on the Speed Beam VPS 2.00 m (**9**) and secure with Cotter Pin 4/1 ga (**6**).

(Fig. A1.09 + Fig. A1.09b)

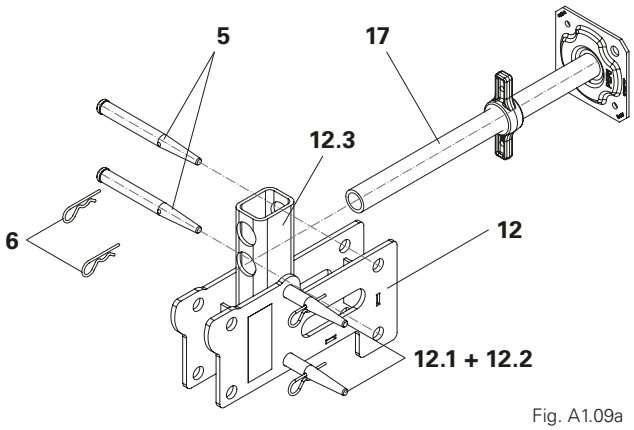


Fig. A1.09a

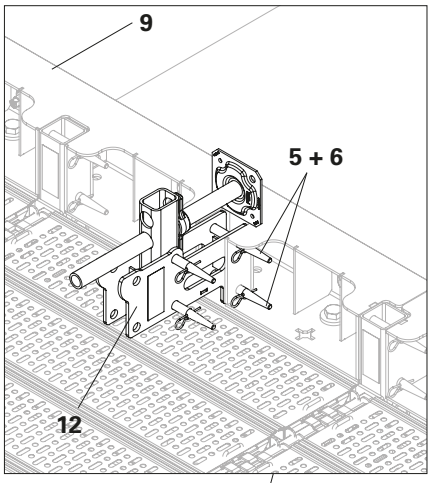


Fig. A1.09b

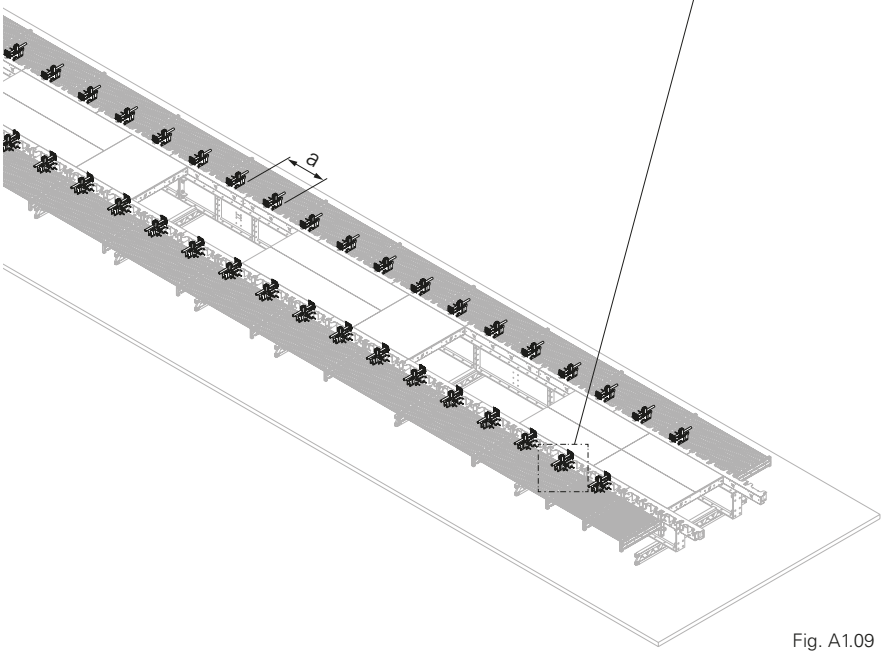


Fig. A1.09

Prepare the guardrail

When installing the anti-fall protection with Guardrail Posts HSGP-2 (**26**) and guardrail boards (**31**), only spigots with Spacer Tube URE 4/42 (**24**) may be fitted in the area of the exits.

Components

24 Spigot w. Spacer Tube URE 4/42

Assembly

1. Insert pin with Spacer Tube URE 4/42 (**24**) into the outer square tube of Platform Bracket VPS (**10/11**).
2. If necessary, secure the pin and Spacer Tube URE 4/42 (**24**) with screw M10 x 70 and nut M10 (**126**) to prevent lifting.

(Fig. A1.10 + Fig. A1.10a)

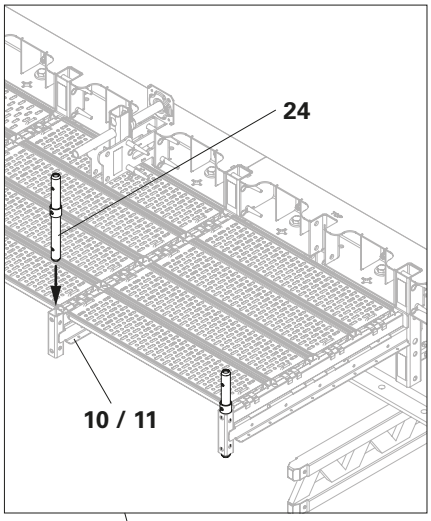


Fig. A1.10a

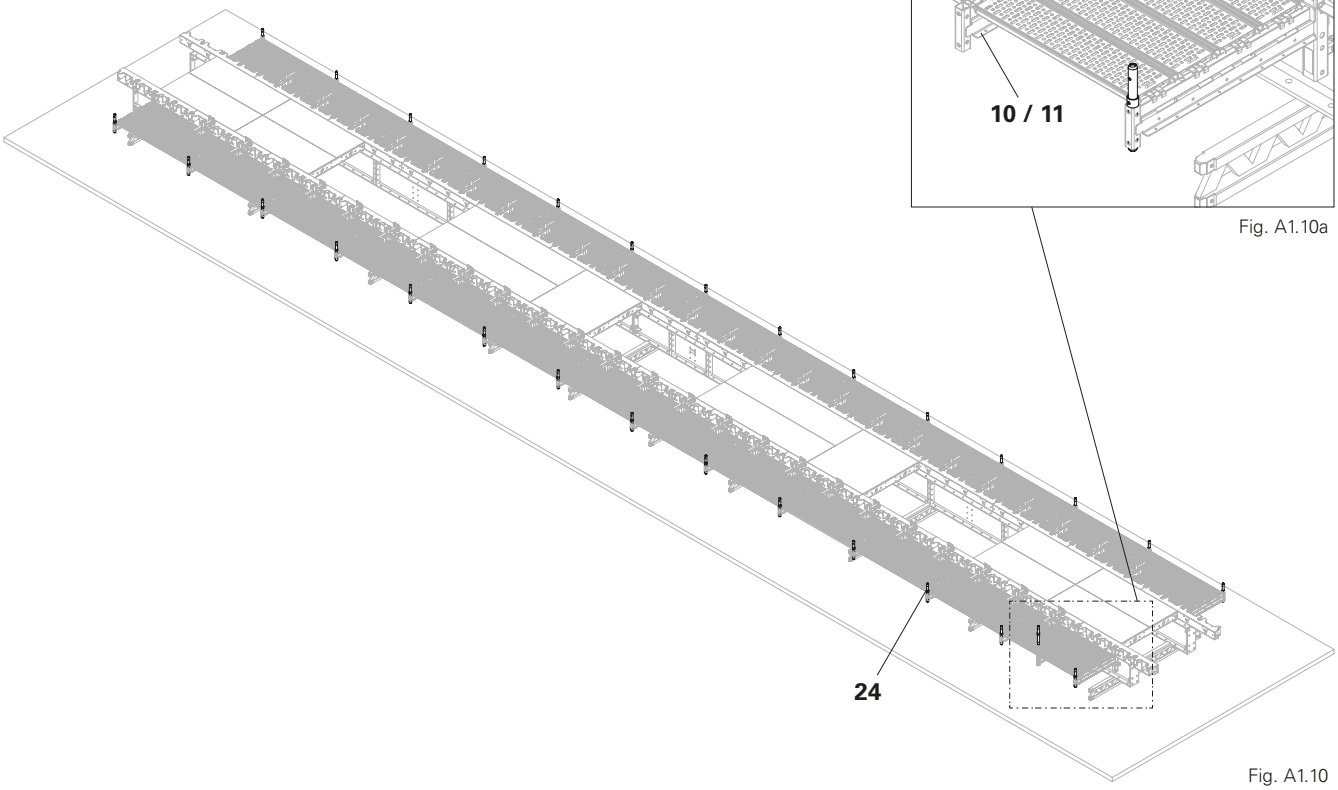


Fig. A1.10

Connector VPS-Flex

The Connector VPS-FLEX (**27**) is mounted on Top Standards UVH-2 (**33**).

Components

5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga
27 Connector VPS-FLEX

Assembly

1. Remove the upper Fitting Pin Ø21 x 120 (**5a**) from the Platform Bracket VPS (**10/11**).
2. Place Connector VPS-Flex (**27**) on the lower Fitting Pin Ø21 x 120 (**5b**) and swivel upwards.
3. Fit Connector VPS-Flex (**27**) and Platform Bracket VPS (**10/11**) again with Fitting Pin Ø21 x 120 (**5a**) and Cotter Pin 4/1 ga (**6a**).

(Fig. A1.11 – Fig. A1.11b)

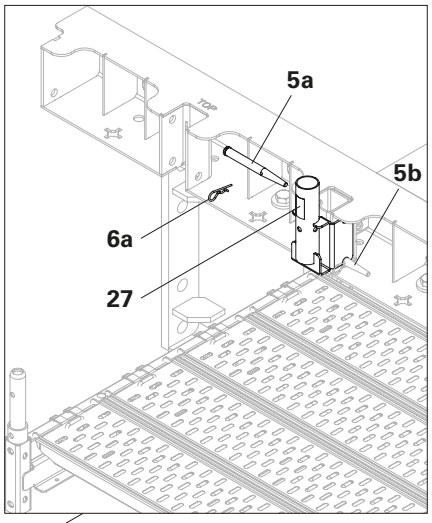


Fig. A1.11a

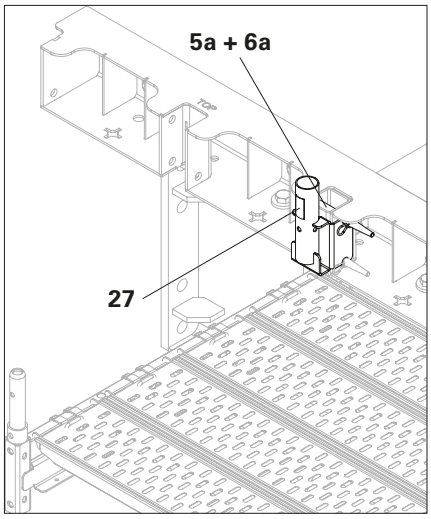


Fig. A1.11b

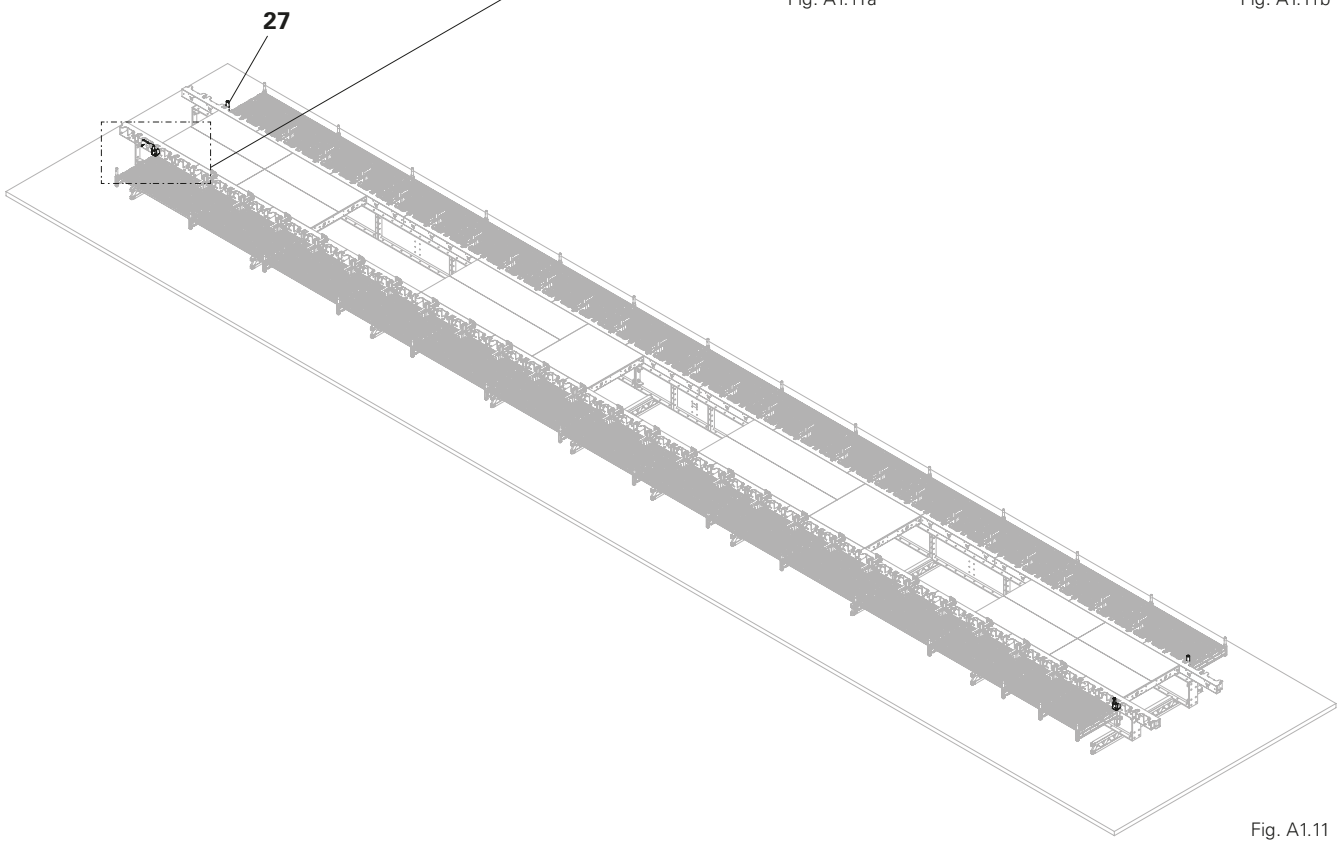


Fig. A1.11

Guardrail post

The Top Standards UVH-2 are connected to the pin with Spacer Tube URE 4/42 (**24**) or to the Connector VPS-Flex (**27**).

Components

28 Top Standard UVH-2 150
29 Top Standard UVH-2 200
126 Bolt ISO M10 x 70-8.8
or
131 Locking pin Ø 48/57

Assembly

1. Fit the Top Standards UVH-2 200 (**29**) in the area of the access points.
2. Fit Top Standards UVH-2 150 (**28**) onto the remaining spigots with Spacer Tube URE 4/42 (**24**) and Connectors VPS-Flex (**27**).
3. If necessary, secure the Top Standard UVH-2 (**28 + 29**) with screw M10 x 70- 8.8 (**126**) and nut M10 (**126.1**) to prevent lifting.

(Fig. A1.12 + Fig. A1.12a)

Instead of the bolt ISO M10 x 70-8.8 (**126**), the locking pin Ø 48/57 (**131**) can also be used.

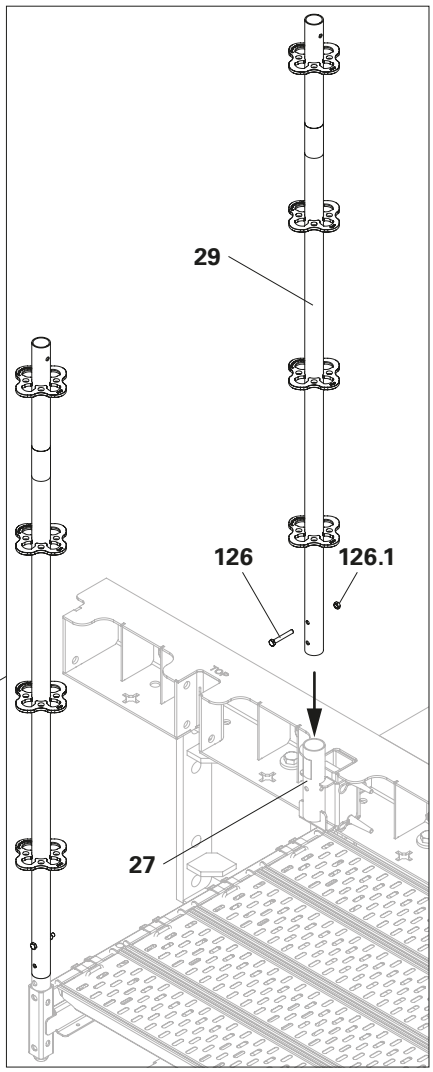


Fig. A1.12a

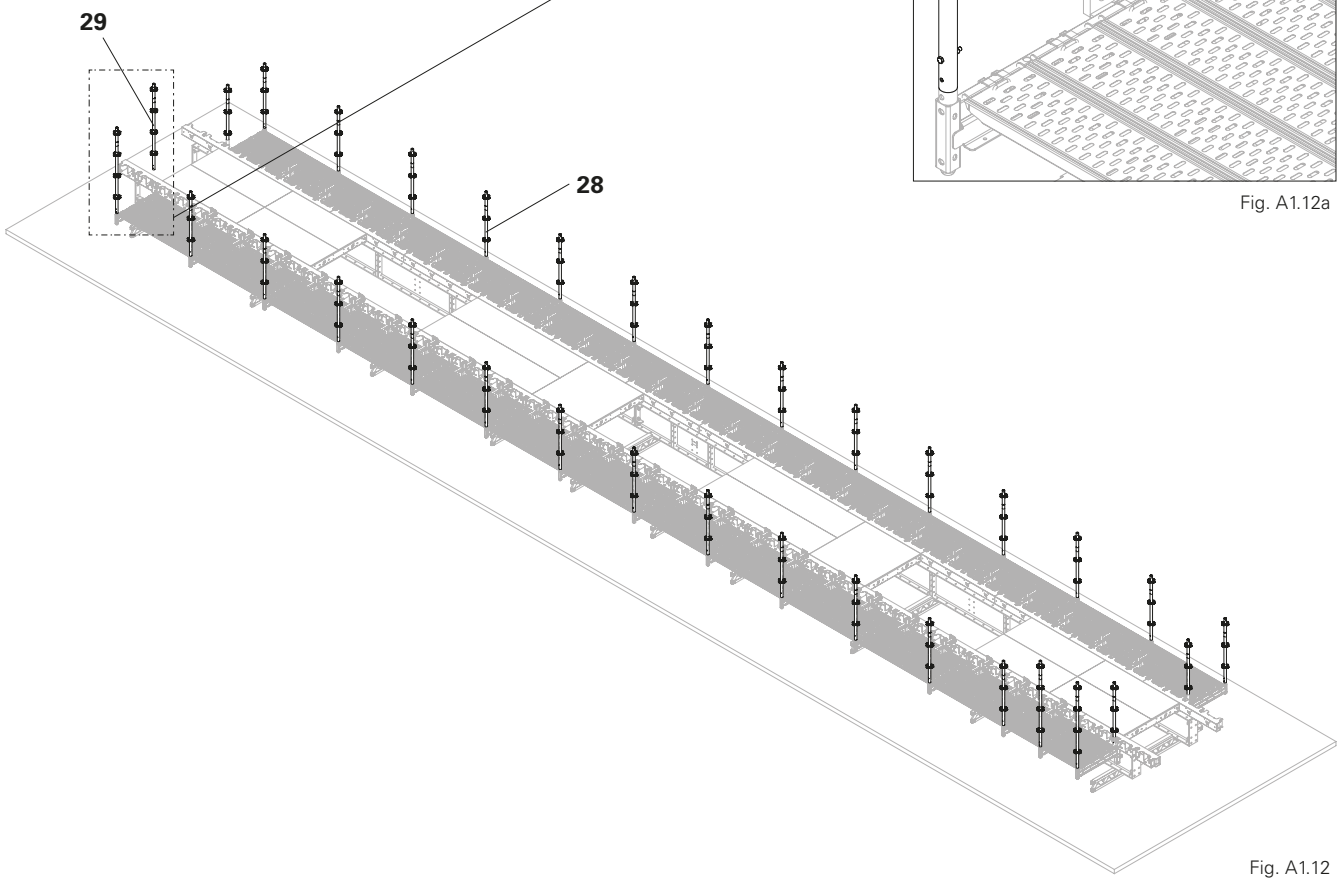


Fig. A1.12

Guardrails

- After fitting a component, drive in the wedges using a 500 g hammer.
- Alternatively, guardrail boards can be installed as anti-fall protectionSee section “C9 Guardrail boards” on page 107.

Components

30 Horizontal Ledger UH-2

Assembly

1. Hook Horizontal Ledger UH-2 (**30**) into the Top Standards UVH-2 (**28/29**) as anti-fall protection.
2. Hammer down Horizontal Ledger UH-2 (**30**) with a 500 g hammer.

(Fig. A1.13 + Fig. A1.13a)

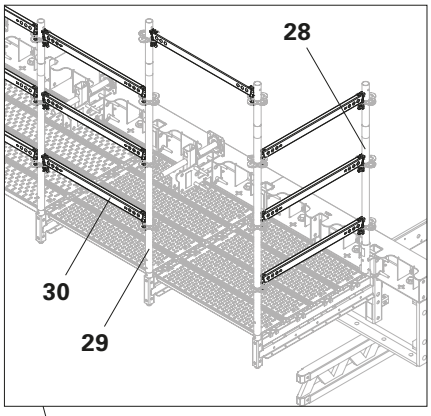


Fig. A1.13a

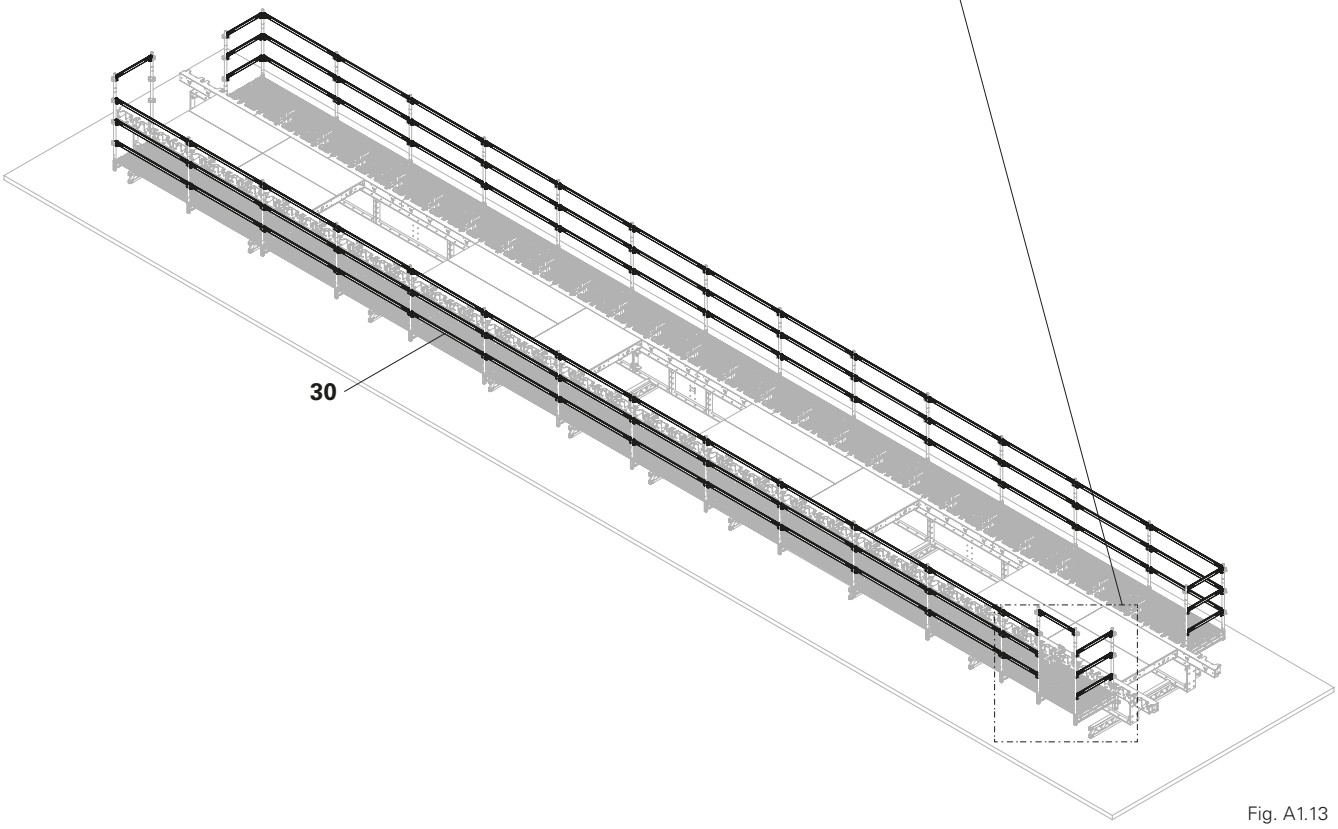


Fig. A1.13

Safety Entry Gate UPS 100

As access, a
Safety Entry Gate UPS 100 (**32**) can be installed between two
Platform Brackets VPS (**10/11**) and
Top Standards UVH-2 200 (**29**).

Components

32 Safety Entry Gate UPS 100

Assembly

1. Attach Safety Entry Gate UPS 100 (**32**) to Top Standards UVH-2 200 (**29**).

(Fig. A1.14 + Fig. A1.14a)

Steel Toe Board UPY

Components

33 Steel Toe Board UPY
128 Toe Board Compensation UPY-L

Assembly

1. Insert the Steel Toe Board UPY (**33**) between two Top Standards UVH-2.

(Fig. A1.14 + Fig. A1.14a)

For easier assembly, 2x
Steel Toe Board UPY 75 (**33a**) can also be fitted to the front side of the Platform Bracket VPS 1.00 m (**11**) and 2x Steel Toe Board UPY 100 (**33b**) can be fitted to the front side of the Platform Bracket VPS 1.50 m (**10**) with Toe Board Compensation UPY-L (**128**).
(Fig. A1.14b)

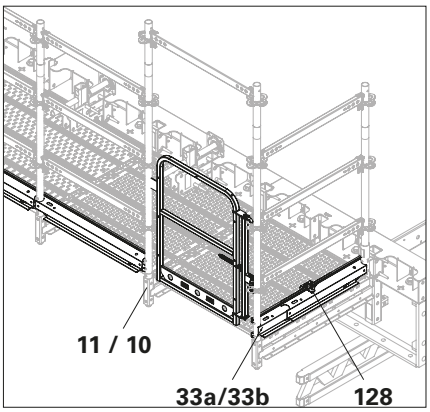


Fig. A1.14b

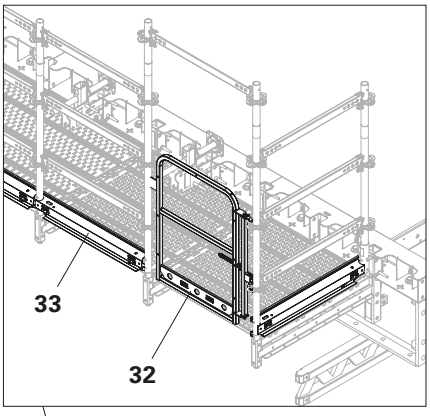


Fig. A1.14a

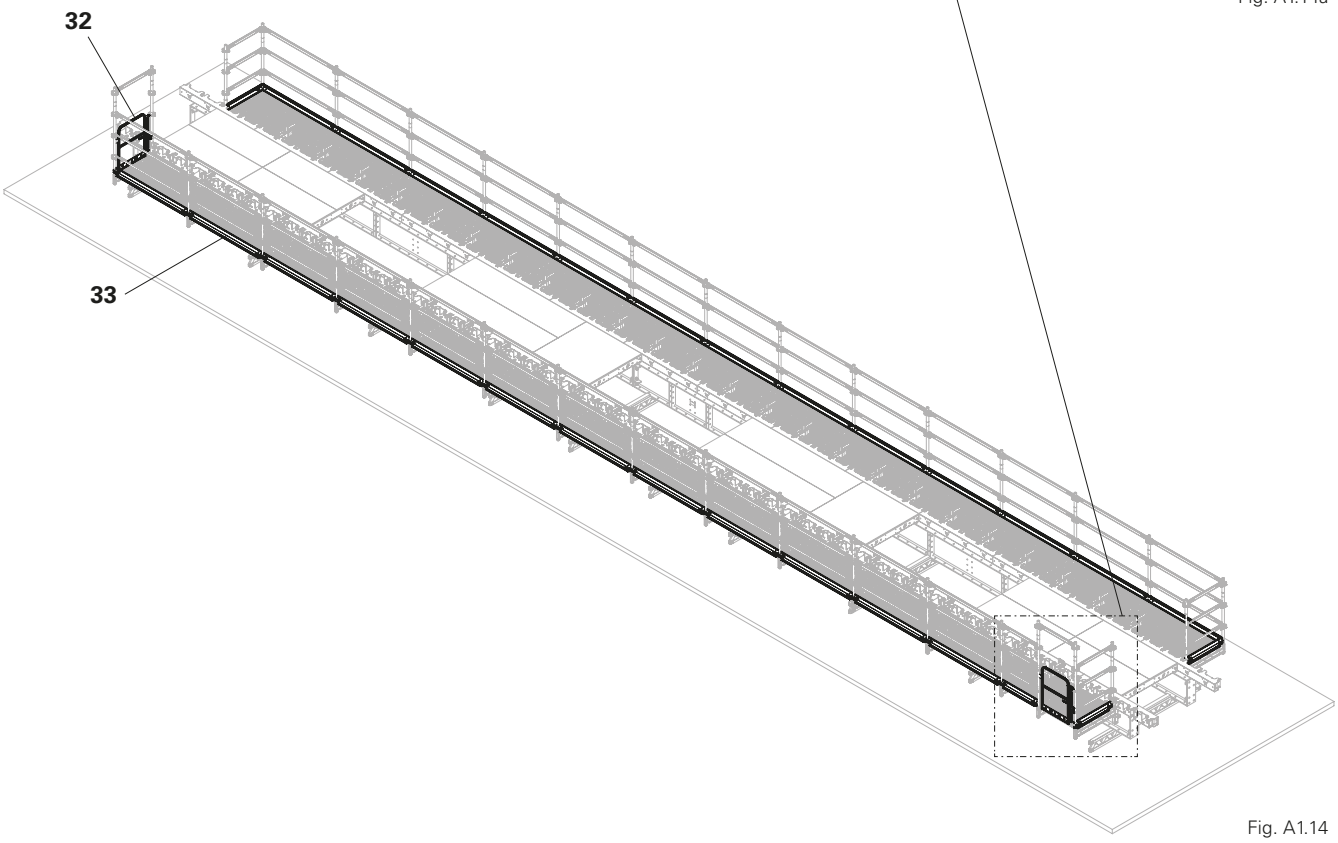


Fig. A1.14

Completing the anti-fall protection

Components

14 Bolt ISO 4017 M24 x 60-8.8
15 Nut ISO 40132 M24-8
34 End Rail Post Holder VPS
35 Angle bracket 90°reinforced
36 Toe board
39 Spax screw TX 30 6 x 20

Assembly

1. Fit End Rail Post Holder VPS (**34**) onto the panel using bolts ISO 4017 M24 x 60-8.8 (**14**) and Hex-Nuts ISO 4032-M24-8-ga (**15**).
2. Fasten reinforced angle brackets 90° (**35**) onto the panels with Spax Screw TX 30 6 x 20 (**39**).
3. Saw toe boards (**36**) to the specified length and fit them onto the reinforced angle brackets 90° (**35**) with Spax Screw TX 30 6 x 20 (**39**).

(Fig. A1.15 – Fig. A1.15b)

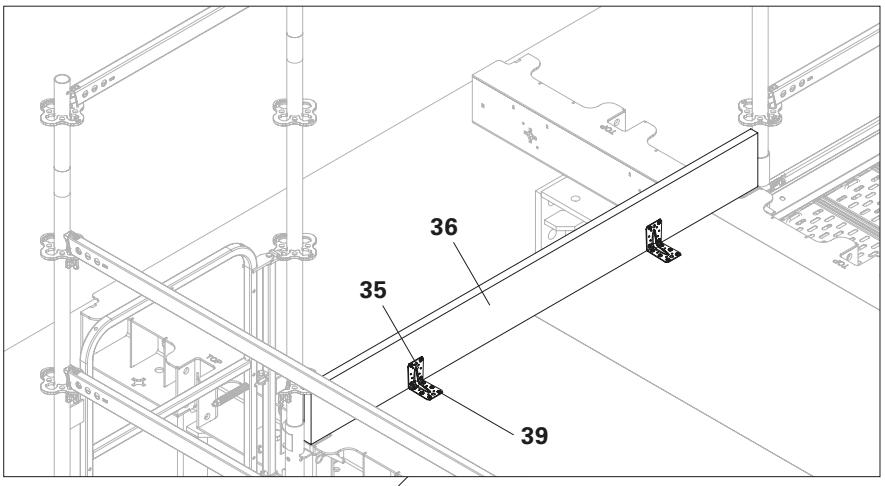


Fig. A1.15b

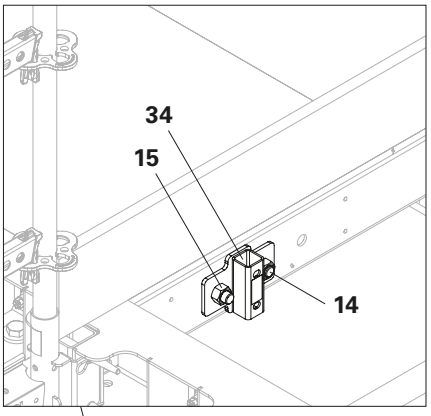


Fig. A1.15a

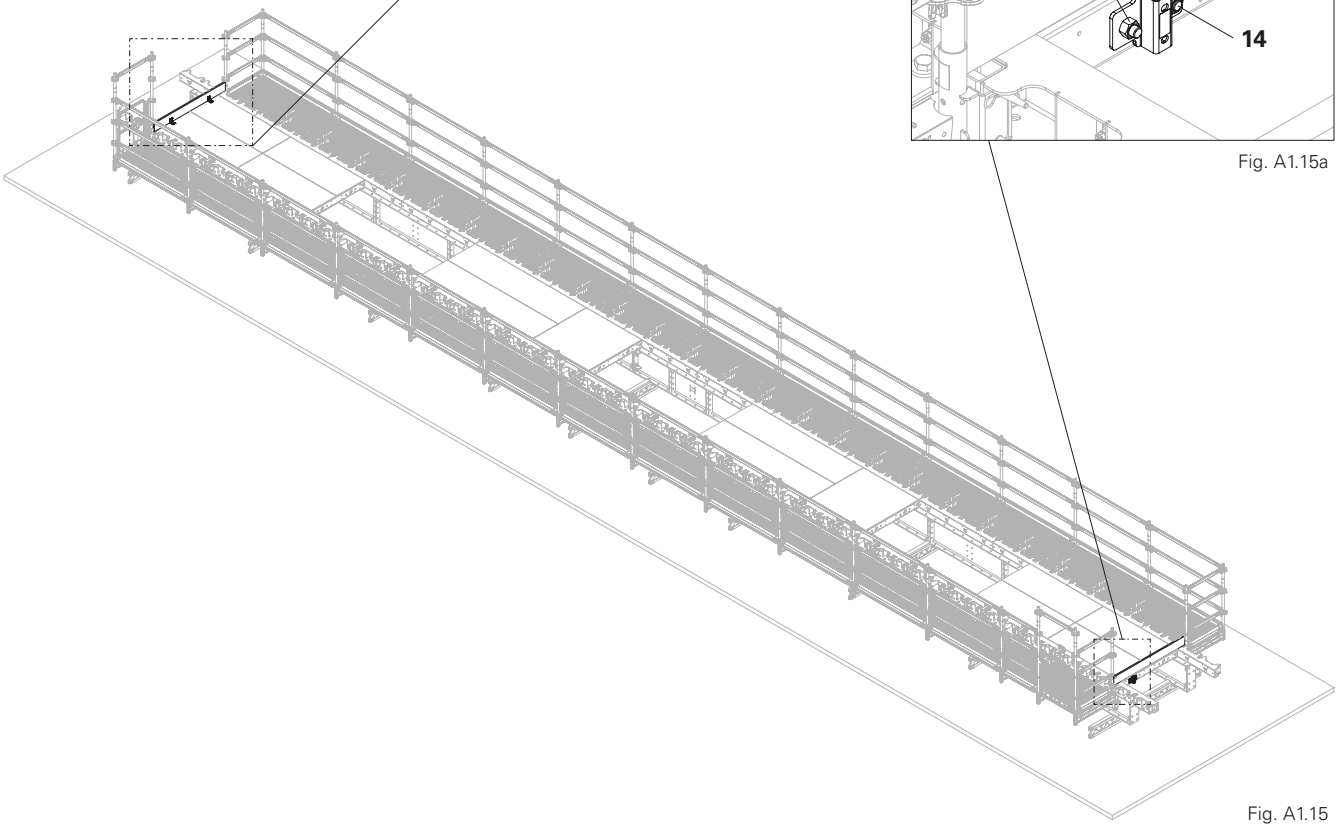


Fig. A1.15

Components

24 Spigot w. Spacer Tube URE 4/42
28 Top Standard UVH-2 150
37 Steel scaffolding tube Ø 48.3 x 3.2
38 Standard Coupler RA 48/48

Assembly

1. Insert the spigot with the Spacer Tube URE 4/42 (**24**) into the End Rail Post Holder VPS (**34**).
2. If necessary, secure the pin and Spacer Tube URE 4/42 (**24**) with screw M10 x 70 and nut M10 to prevent lifting.
3. Insert the Top Standard UVH-2 150 (**28**) into the pin with the Spacer Tube URE 4/42 (**24**).
4. Fit steel scaffolding tubes Ø 48.3 x 3.2 (**37**) onto the Top Standards UVH-2 150 (**28**) with Standard Couplers RA 48/48 (**38**).

(Fig. A1.16 + Fig. A1.16a)

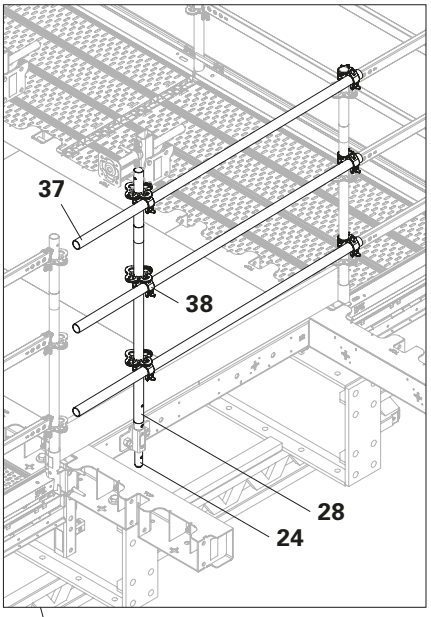


Fig. A1.16a

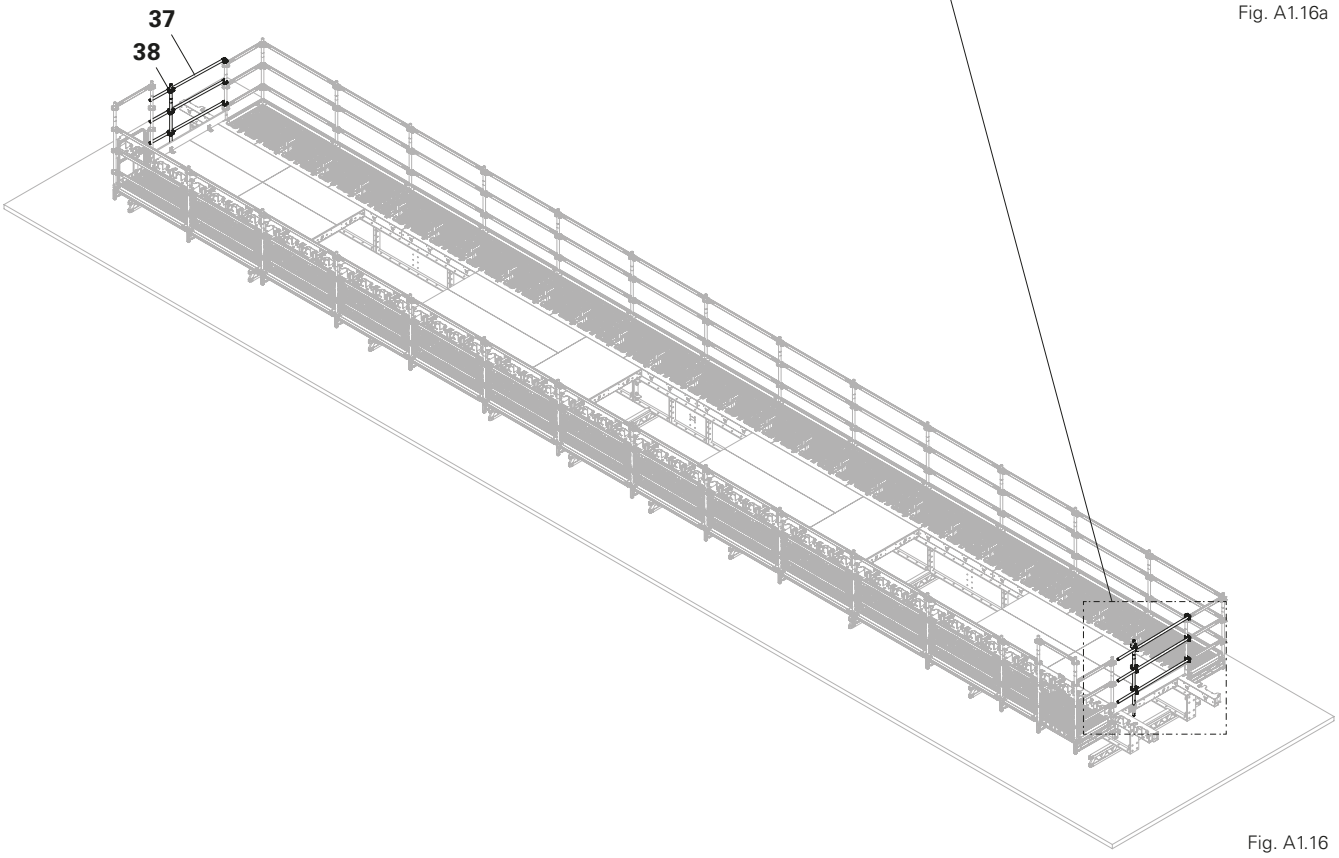


Fig. A1.16

Stopend Connector VPS

- $Width_S$ = Width of the formwork system used
- Adaptor SRU (**45.1**) is continuously adjustable within a range of 10 cm.

Components

45 Stopend Connector VPS
45.1 Adaptor SRU
45.2 Plate
45.3 Fitting Pin Ø21 x 120
45.4 Cotter Pin 4/1 ga
45.5 Bolt ISO 4014 M24 x 200-8.8
45.6 Nut ISO 7040 M24-8
45.7 Wedge KZ

Assembly

1. Pre-drill holes Ø 25 mm for bolt ISO 4014 M24 x 200-8.8 (**45.5**) in the deck.
2. Place Stopend Connector VPS (**45**) in the specified position.
3. Fit Stopend Connector VPS (**45**) onto the panel using bolts ISO 4014 M24 x 200-8.8 (**45.5**), plate (**45.2**) and nuts ISO 7040 M24-8 (**45.6**).
4. Secure this position with Wedge KZ (**45.7**).

(Fig. A1.17 + Fig. A1.17a)

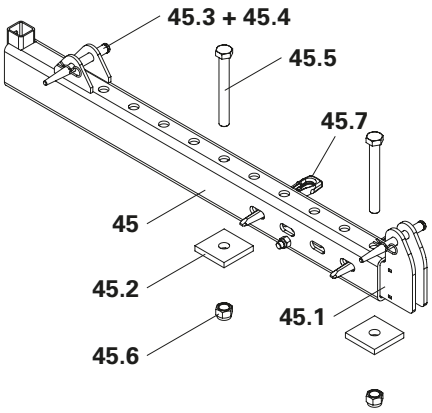


Fig. A1.17b

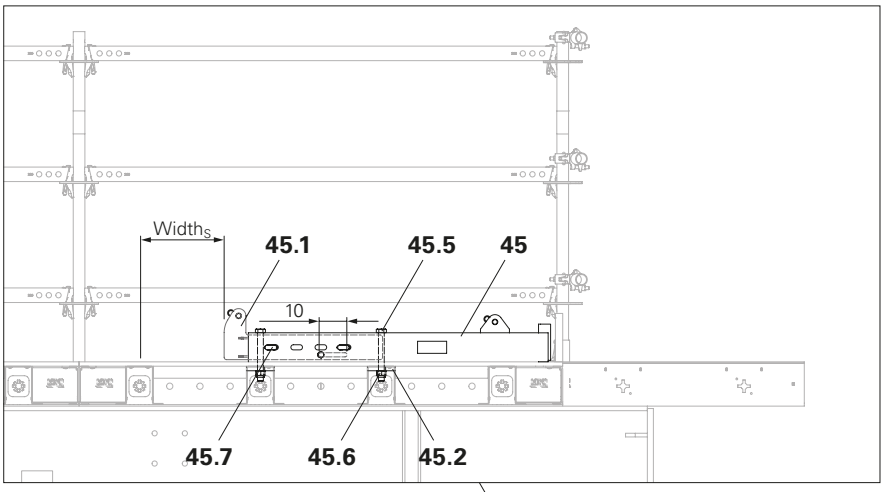


Fig. A1.17a

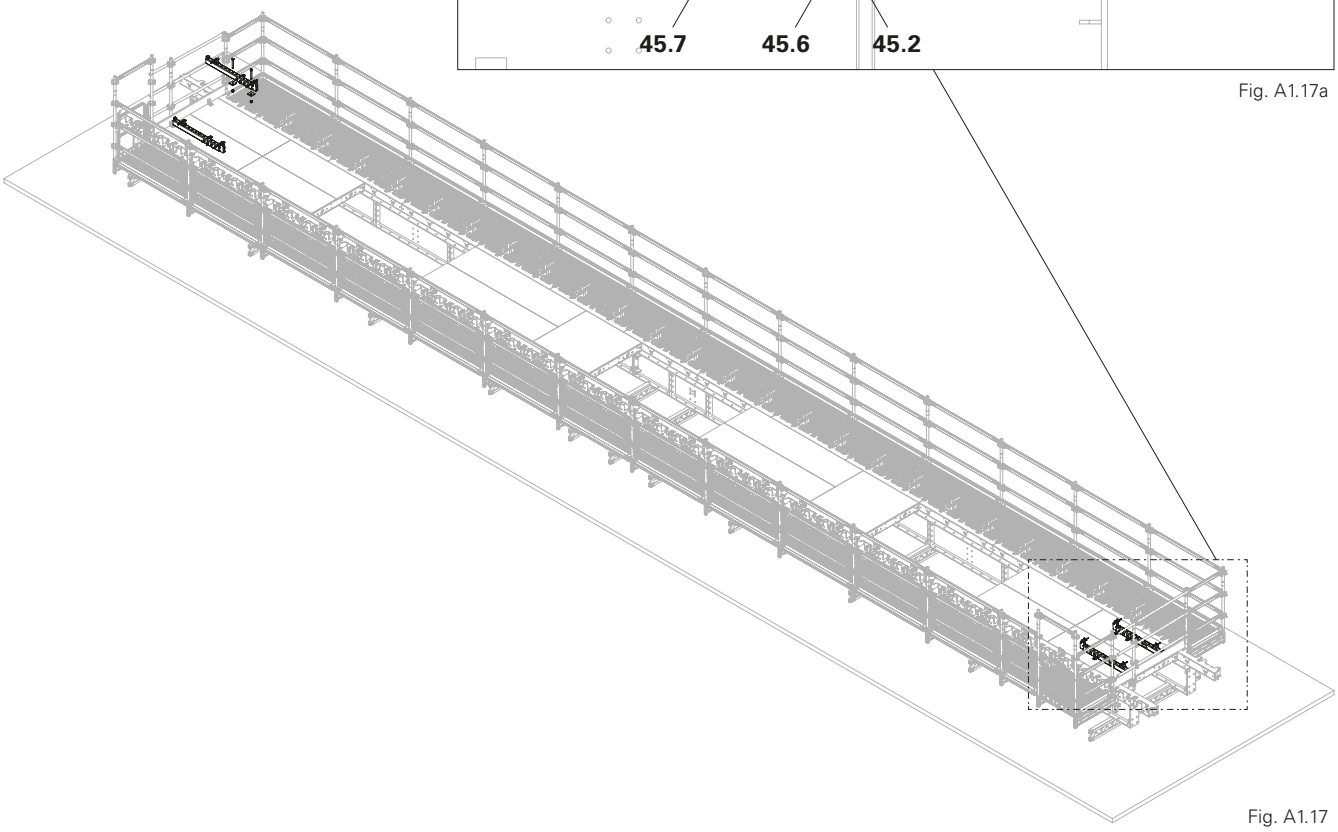


Fig. A1.17

Positioning the formwork

Danger

Formwork can fall down during transport!
This can lead to serious injuries or even death.
⇒ Do not stand under the suspended load.

- Formwork elements must be temporarily secured against falling over using push-pull props before assembly can continue.
- Select a brace connector that is suitable for the formwork and assembly type.
- Observe the Instructions for Assembly and Use for the formwork system used.

Components

50	Panel MX 330 x 240
51a	Brace Connector-2
52a	Push-Pull Prop RS
55a	Base Plate-3 f. RS 210 – 1400

Assembly

1. Place Brace Connector-2 (**51a**) on the element strut of Panel MX 330 x 240 (**50**) in such a way that the hook tie engages in a connection hole.
2. Tighten Brace Connector-2 (**51a**) with the three-winged nut.
3. Erect Panel MX 330 x 240 (**50**), e.g. with Lifting Hook MAXIMO.
4. Attach Push-Pull Props RS (**52a**) to Brace Connector-2 (**51a**) with bolts Ø 16 x 42 (**51.1**) and Cotter Pins 4/1 ga (**51.2**).
5. Attach Push-Pull Props RS (**52a**) to Base Plates-3 f. RS 210 – 1400 (**55a**) with bolts Ø 20 x 140 (**55.1**) and Cotter Pins 4/1 ga (**55.2**).
6. Anchor Base Plates-3 f. RS 210 – 1400 (**55a**) to the floor.
7. Align Panel MX 330 x 240 (**50**) vertically with Push-Pull Props RS (**52a**).

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

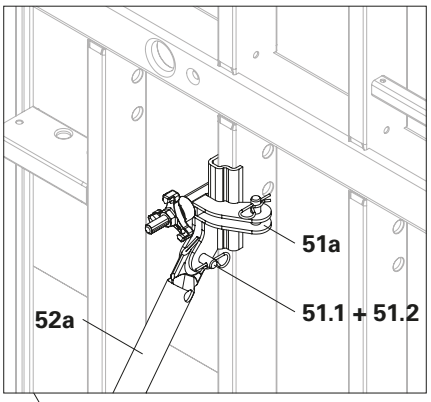


Fig. A2.01a

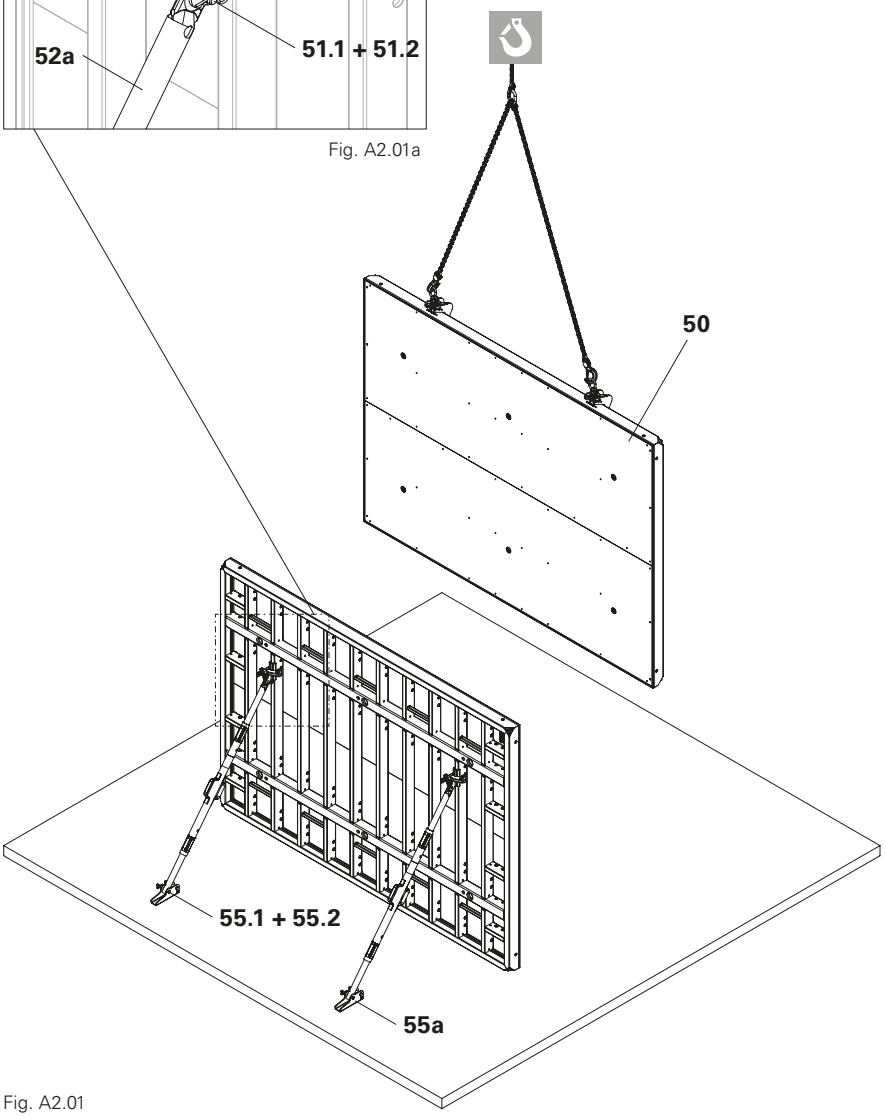


Fig. A2.01

Mounting Steel Waler Universal SRU U120

Ensure that the projections x are equal.

Components

54 Steel Waler Universal SRU U120

Assembly

1. Place Steel Waler Universal SRU U120 (**54**) on the Panels MX 330 x 240 (**50**).
2. Align Steel Waler Universal SRU U120 (**54**).

(Fig. A2.02 + Fig. A2.02b)

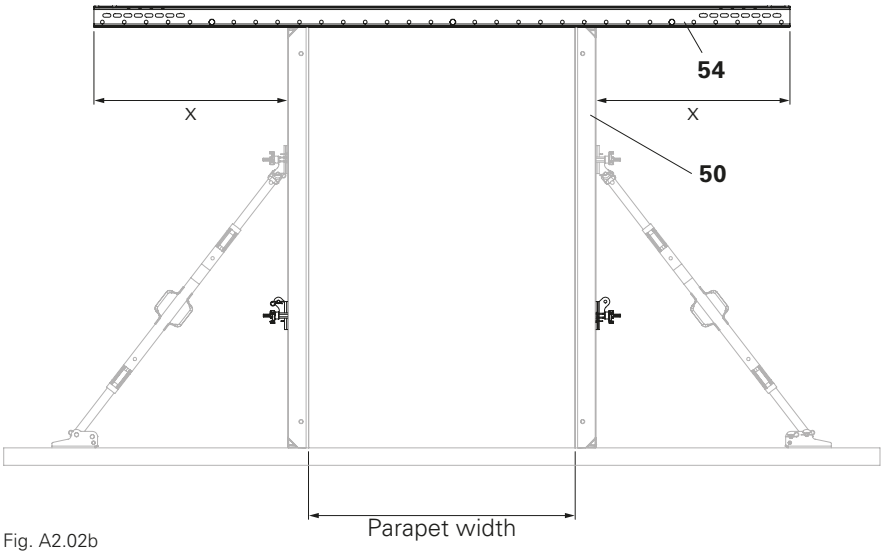


Fig. A2.02b

Fitting Brace Connector-2

- Select a brace connector that is suitable for the formwork and assembly type.
- Observe the Instructions for Assembly and Use for the formwork system used.

Components

51 Brace Connector-2

Assembly

1. Place Brace Connector-2 (**51**) on the element strut of Panel MX 330 x 240 (**50**) in such a way that the hook tie engages in a connection hole.
2. Tighten Brace Connector-2 (**51**) with the three-winged nut.

(Fig. A2.02 + Fig. A2.02a)

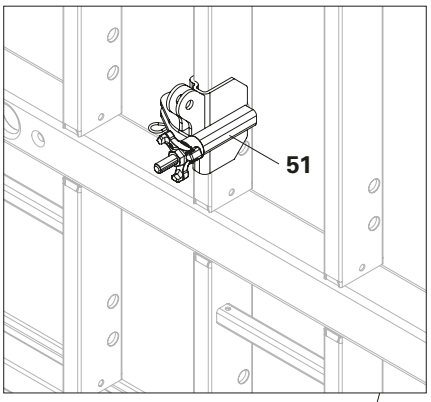


Fig. A2.02a

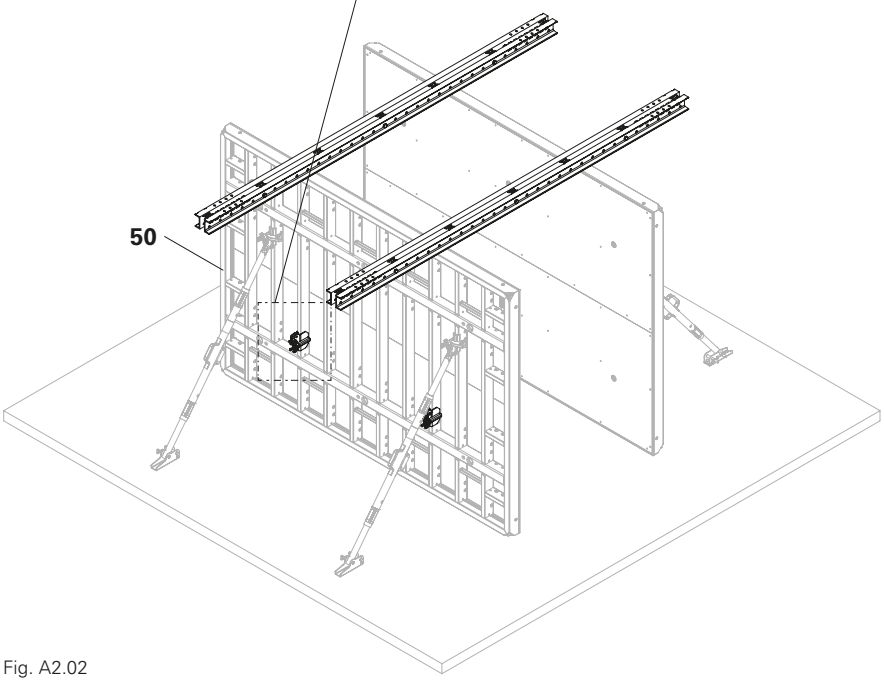


Fig. A2.02

Fitting the Top Tie Adaptor SRU-MX

- The Top Tie Adaptor SRU-MX (**56**) can only be used in conjunction with TRIO or MAXIMO formwork.
- The Top Tie Adaptor SRU-MX (**56**) is infinitely adjustable.

Components

5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga
56 Top Tie Adaptor SRU-MX
57 Tie Rod DW15 spec. Length
58 Wingnut Counterplate DW 15

Assembly

1. Insert the Top Tie Adaptor SRU-MX (**56**) into the Steel Waler Universal SRU U120 (**54**).
2. Fit Top Tie Adaptor SRU-MX (**56**) with 2x Fitting Pins Ø21 x 120 (**5**) and secure with a Cotter Pin 4/1 ga (**6**).
3. Tighten Top Tie Adaptor SRU-MX (**56**).
4. Screw Tie Rod DW15 spec. Length (**57**) into the Top Tie Adaptor SRU-MX (**56**).
5. Clamp Tie Rod DW 15 (**57**) with Wingnut Counterplate DW 15 (**58**).

(Fig. A2.03 – Fig. A2.03b)

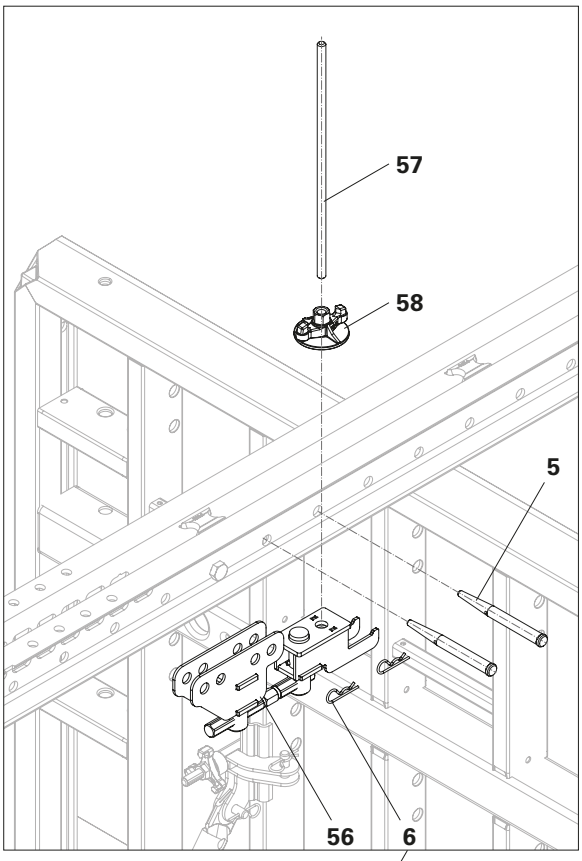


Fig. A2.03a

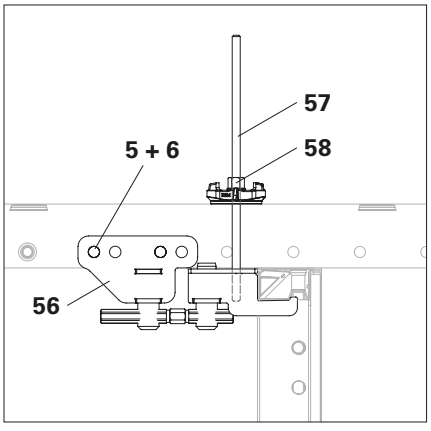


Fig. A2.03b

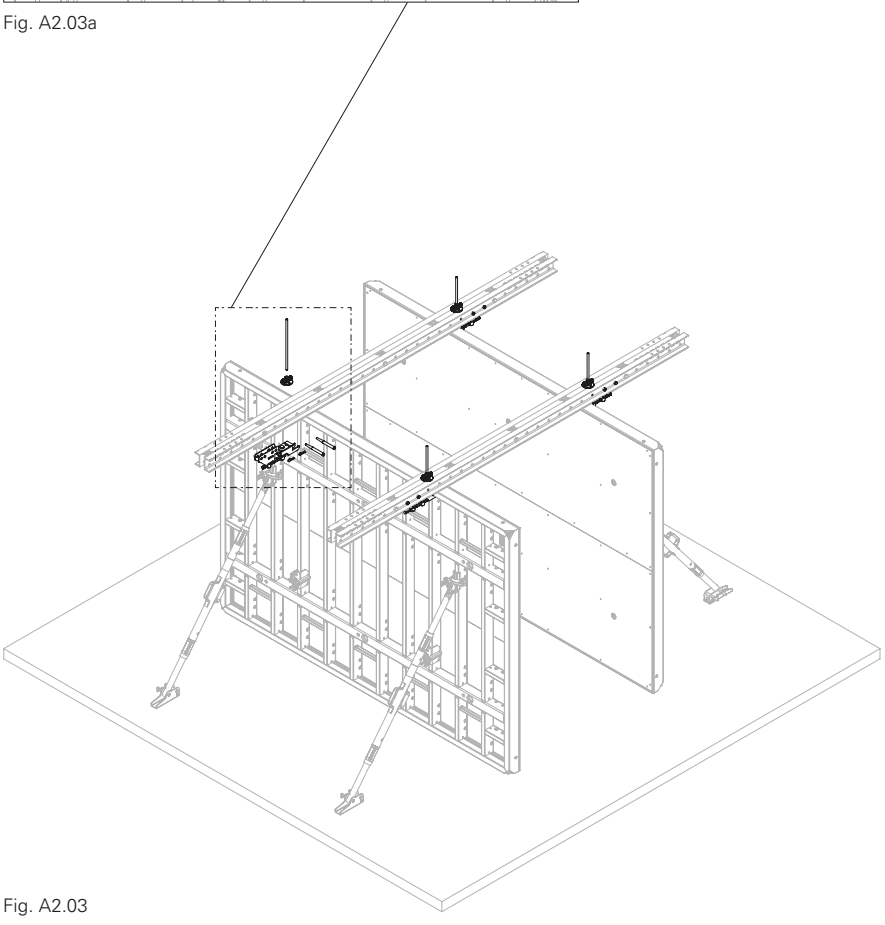


Fig. A2.03

Fitting Push-Pull Props RS

Components

5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga
52 Push-Pull Prop RS

Assembly

1. Attach Push-Pull Props RS (**52**) to Steel Waler Universal SRU U120 (**54**) with Fitting Pins Ø21 x 120 (**5**) and Cotter Pins 4/1 ga (**6**).
2. Spindle Push-Pull Props RS (**52**) to the specified length.
3. Swivel the Push-Pull Props RS (**52**) inwards.
4. Attach Push-Pull Props RS (**52**) to Brace Connector-2 (**51**) with bolts Ø 16 x 42 (**51.1**) and Cotter Pins 4/1 ga (**51.2**).

(Fig. A2.04 – Fig. A2.04b)

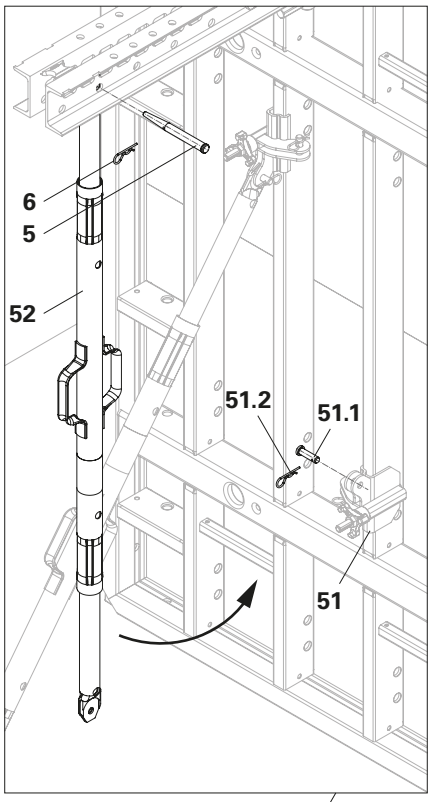


Fig. A2.04a

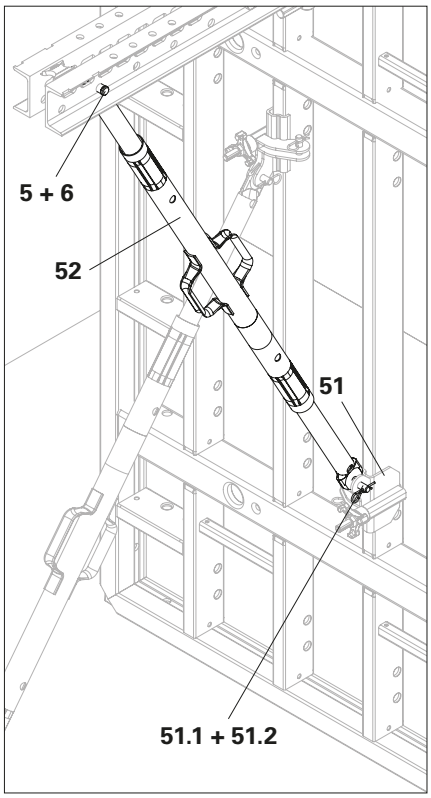


Fig. A2.04b

Removing temporary Push-Pull Props RS

Components

51a Brace Connector-2
52a Push-Pull Prop RS
55a Base Plate-3 f. RS 210 – 1400

Disassembly

1. Remove temporary Push-Pull Props RS (**52a**).
2. Remove temporary clamping heads-2 (**51a**).
3. Remove the Base Plates-3 f. RS 210 – 1400 (**55a**).

(Fig. A2.04)

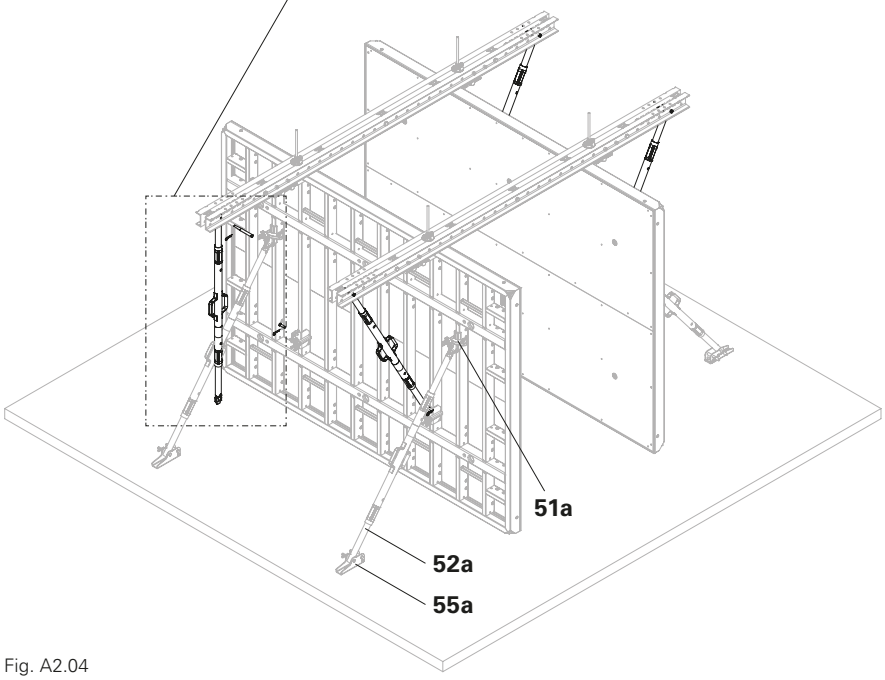


Fig. A2.04

Danger

Formwork packages (**59**) can fall down during transport!
This can lead to serious injuries or even death.
⇒ Do not stand under the suspended load.

- Repeat the assembly steps in section A2 until the specified number of formwork packages (**59**) has been pre-assembled.
- The fasteners used for the formwork packages depend on the formwork system used.

Components

53 Alignment Coupler BFD
59 Formwork package

Assembly

1. Attach the formwork packages (**59**) to the crane with the lifting hook MAXIMO (**116**). (Fig. A3.01 + Fig. A3.01a)
2. Place the formwork packages next to each other and align them.
3. Connect the formwork packages with Alignment Couplers BFD (**53**). (Fig. A3.01)
4. Repeat the procedure until the specified panel size has been achieved. (Fig. A3.02)

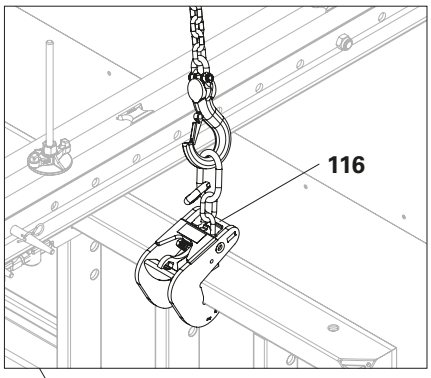


Fig. A3.01a

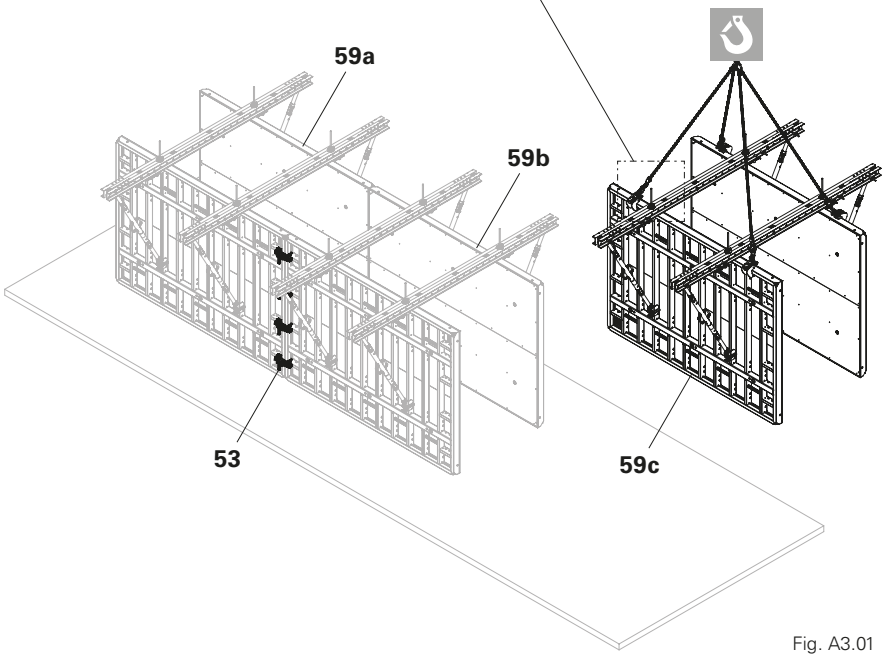


Fig. A3.01

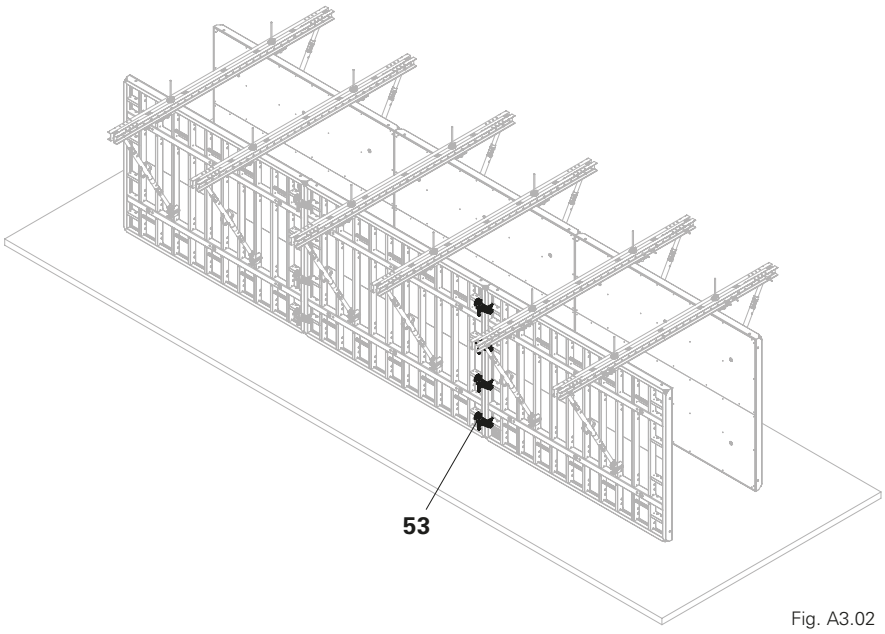


Fig. A3.02

Overview

- For anchoring the Support Bracket VPS to the concrete piers, threaded rods M48 and M56 are available in 5 different lengths, from 2.5 m to a maximum of 4.5 m each.
- Both threaded rod sizes are available coated and uncoated.

Components

40 Support Bracket VPS
42 Threaded rod M56
43 Nut for M56
44 Washer for M56
118 Spacer tube Ø 63 x 0.45
119 Imbed Tube Holder VPS Ø 63
120 Plastic cap Ø 63

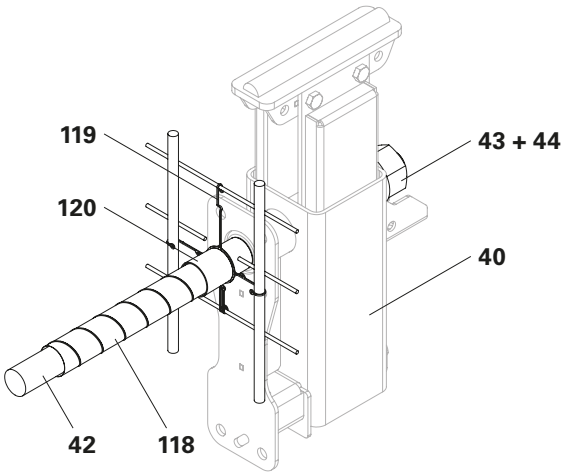


Fig. A4.01

Imbed Tube Holder VPS

Note

If the concrete is poured directly onto the spacer tube, spacer tubes and spacer tube holders can be damaged!
⇒ Do not pour concrete directly onto the spacer tube.
⇒ Secure the spacer tube additionally with spacer tube holders and reinforcement bars. (Fig. A4.03)

- The Imbed Tube Holder VPS Ø 63 (**119**) is used to help position the spacer tube Ø 63 x 0.45 (**118**) correctly.
- Buoyancy force and gravity require the spacer tube to be fixed from above and below.

Assembly

1. Place the spacer tube holder Ø 63 x 0.45 (**118**) on the plastic cap Ø 63 (**120**) and fix it to the reinforcement of the column. (Fig. A4.02)

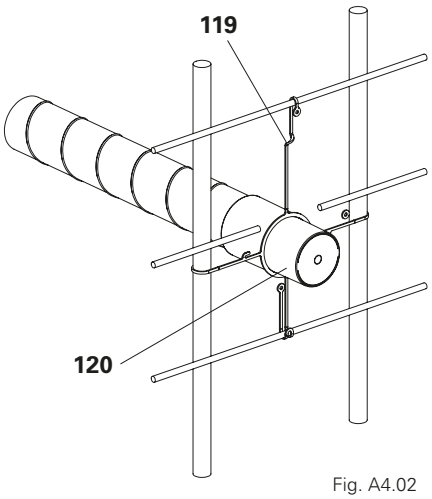


Fig. A4.02

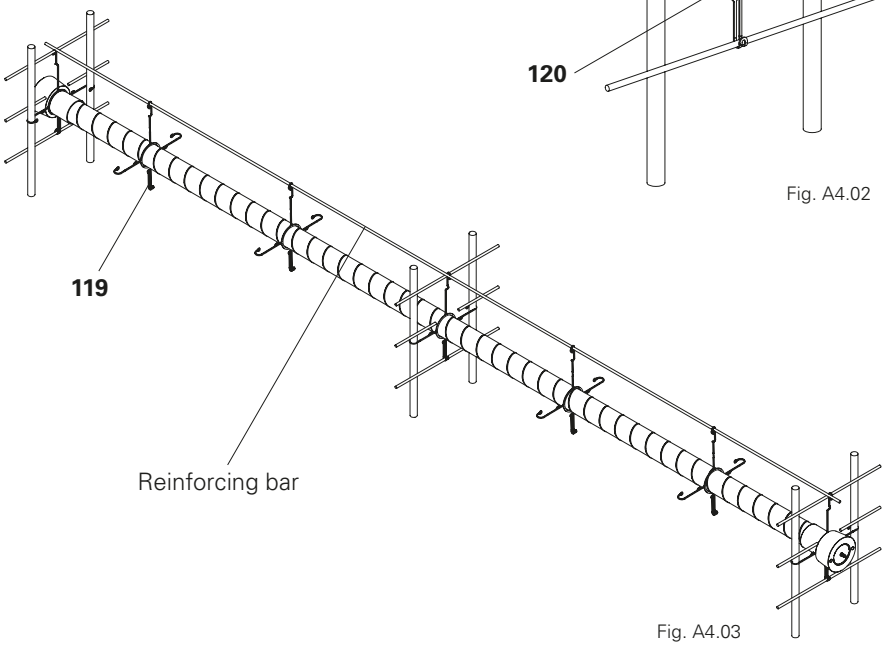


Fig. A4.03

Spacer tube and plastic cap

- The plastic cap Ø 63 (**120**) serves as a termination and spacer for the spacer tube Ø 63 x 0.45 (**118**).
- The first plastic cap can be fixed to the formlining in the appropriate position with a Spax screw.
- The spacer tube is suitable for both the threaded rod M48 and the threaded rod M56.

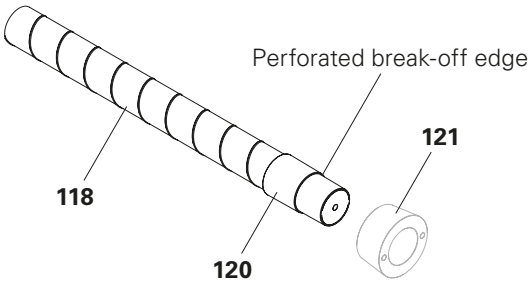


Fig. A4.04

Assembly with spacer tube Ø 58

1. Cut the spacer tube Ø 58 to the specified length.
2. Fix plastic cap Ø 63 (**120**) with Imbed Tube Holder VPS Ø 63 (**119**) at the specified position.
3. Fix plastic cap Ø 63 (**120**) using Spax Screw TX 30 8 x 20 (**123**).
4. Insert the spacer tube Ø 58 into the plastic cap Ø 63 (**120**).
5. Put plastic cap Ø 63 (**120**) on the other side of the spacer tube Ø 58 and secure with Imbed Tube Holder VPS Ø 63 (**119**).

(Fig. A4.05)

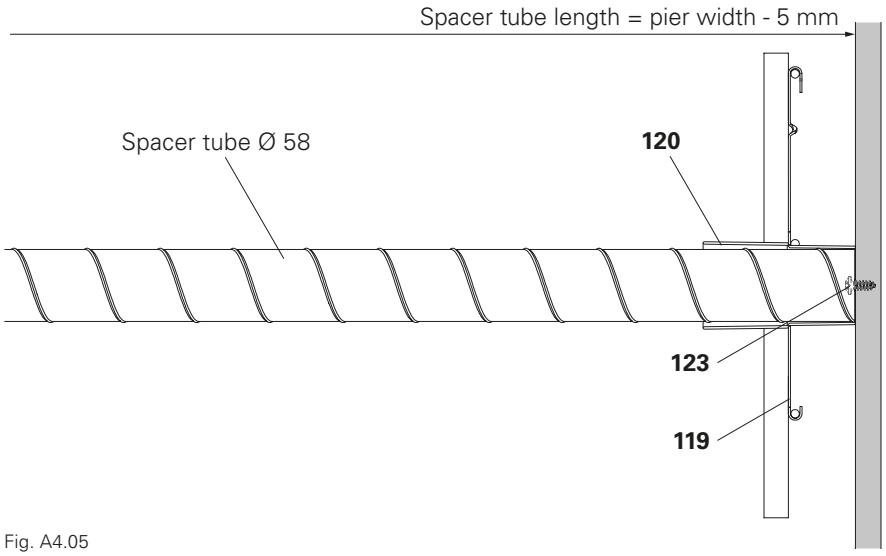


Fig. A4.05

Assembly with spacer tube Ø 63 x 0.45

1. Cut the spacer tube Ø 63 x 0.45 (**118**) to the specified length.
2. Fix plastic cap Ø 63 (**120**) with Imbed Tube Holder VPS Ø 63 (**119**) at the specified position.
3. Fix plastic cap Ø 63 (**120**) using Spax Screw TX 30 8 x 20 (**123**).
4. Insert the spacer tube Ø 63 x 0.45 (**118**) into the plastic cap Ø 63 (**120**).
5. Put plastic cap Ø 63 (**120**) on the other side of the spacer tube Ø 63 x 0.45 (**118**) and secure with Imbed Tube Holder VPS Ø 63 (**119**).

(Fig. A4.06)

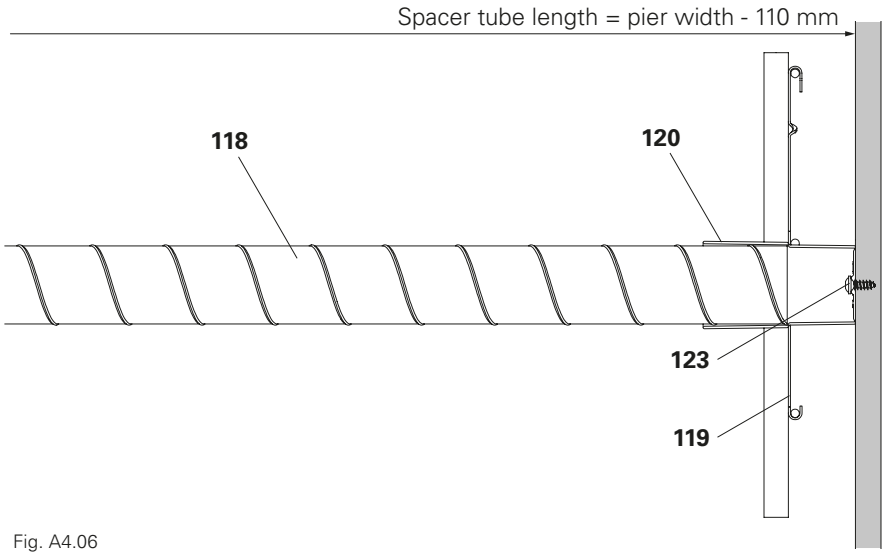


Fig. A4.06

The tie points are closed on site when installed with spacer tube Ø 58 or 63.

Grease the inside and outside of the Conical Ring VPS Ø 63 108/55 (**121**) before assembly.

Assembly with Conical Ring VPS

1. Cut the spacer tube Ø 63 x 0.45 (**118**) to the specified length.
2. Push the Imbed Tube Holder VPS Ø 63 (**119**) and the Conical Ring VPS Ø 63 108/55 (**121**) onto the plastic cap Ø 63 (**120**).
3. Fix plastic cap Ø 63 (**120**) with Imbed Tube Holder VPS Ø 63 (**119**) at the specified position.
4. Fix plastic cap Ø 63 (**120**) using Spax Screw TX 30 8 x 20 (**123**).
5. Insert the spacer tube Ø 63 x 0.45 (**118**) into the plastic cap Ø 63 (**120**).
6. Put plastic cap Ø 63 (**120**) on the other side of the spacer tube Ø 63 x 0.45 (**118**) and secure with Imbed Tube Holder VPS Ø 63 (**119**).
7. Push the Conical Ring VPS Ø 63 108/55 (**121**) onto the plastic cap Ø 63 (**120**).

(Fig. A4.07)

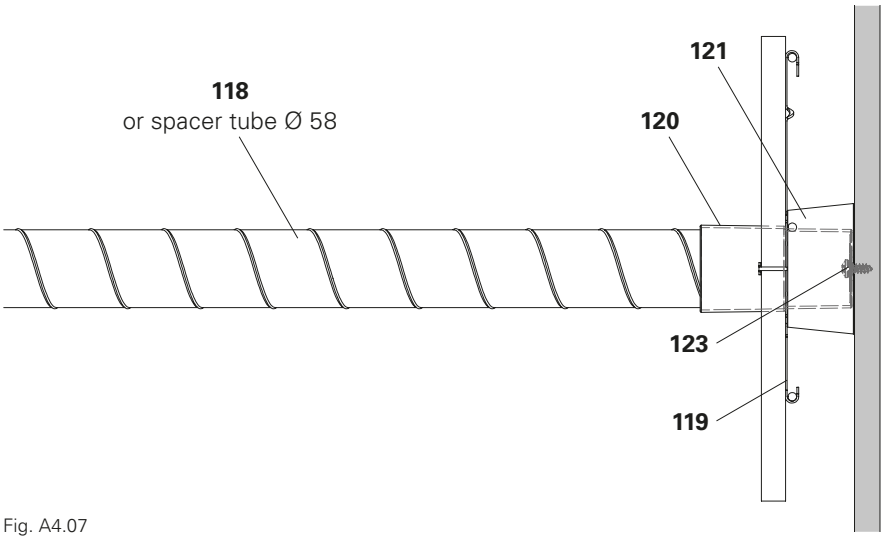


Fig. A4.07

The tie points are closed with SWLK concrete cone M36-105/52 (**122**) when installed with conical ring VPS Ø 63 108/55 (**121**).

Threaded rod M56/M48

- Before each use, the threaded rods must be checked for damage and deformation. Replace the threaded rod immediately if it is damaged or deformed.
- Select the threaded rods according to the length and thread diameter, the geometric conditions and the loads specific to the project. Threaded rods must not be shortened.
- Install the threaded rod so that the thread on one end of the threaded rod projects beyond the nut by approx. 15 mm. Tighten the threaded rod on this end with a nut AF 75 or 85 and a torque ratchet or torque multiplier 3,200 Nm (**124**). (Fig. A4.08)
- For tightening torque, see Tab. A4.02.

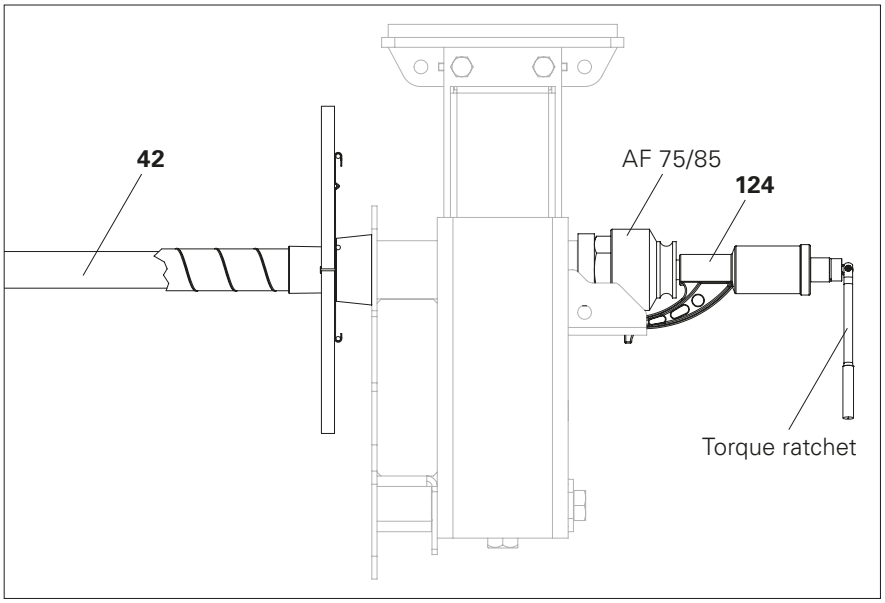


Fig. A4.08

Load-bearing capacity of the Support Bracket VPS

Prerequisites:
- The concrete has a strength of at least C35/45 and has sufficient reinforcement to transfer the acting loads.
- The Support Bracket VPS is prevented from twisting around the axis of the threaded rod with an Anchor Bolt 14x150 (article no.: 132889).

Notes:
- When using a threaded rod M48 in combination with a support adapter (article no.: 137633, 137637), the load-bearing capacity of the M48 is decisive and no additional calculation for the support adapter is required.
- The structural design of the console bracket does not comply with the requirements of a general technical approval.
- The load-bearing capacity when using a threaded rod M48 takes into account an additional safety factor of 1.15 to consider the design class B2 according to DIN EN 12812.
- The load-bearing capacity when using an M56 was determined directly by tests and does not require any additional reduction for design class B2.
- Structural design according to Eurocode.

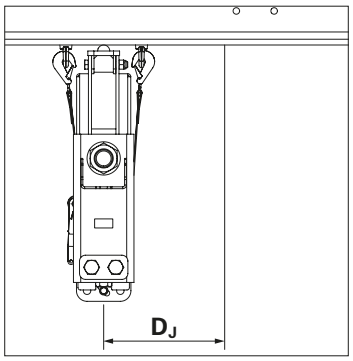


Fig. A4.09

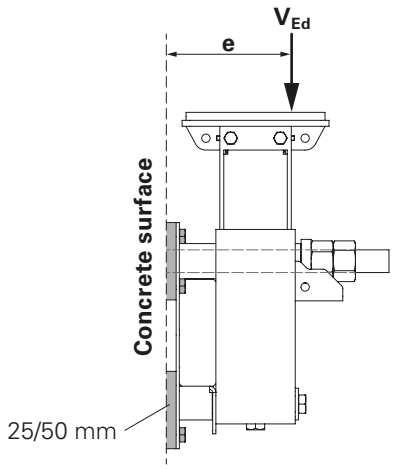


Fig. A4.10

Load-bearing capacity of the Support Bracket VPS

Intermediate values can be interpolated.

System	Eccentricity e [mm]	Design V_{Rd} [kN]	Permitted $V_{perm.}$ [kN]
M56	138	576.1	384
M56	263	576.1	384
M56 + 25 mm	163	501.0	334.0
M56 + 25 mm	234	525.0	350.0
M56 + 25 mm	288	525.0	350.0
M56 + 50 mm	188	508.0	338.7
M56 + 50 mm	241	525.0	350.0
M56 + 50 mm	313	525.0	350.0
M48 C35/45	138	320.9	213.9
M48 C35/45	313	374.8	249.9
M48 C55/75	138	387.4	258.3
M48 C55/75	313	442.6	295.1

Tab. A4.01

	Permissible load for Support Bracket VPS and threaded rod M56		
D_J Edge distance	30 cm / 11.8"	35 cm / 13.8"	40 cm / 15.8"
Permissible load	200 kN	300 kN	380 kN

Tab. A4.02

Threaded rod	Nut ISO 4032	Washer ISO 7089	Tightening torque on nut [Nm]	Torque on the torque multiplier [Nm]
M48-10.9	M48-8 (AF 75)	48-200 HV	1,500 – 2,500	60 – 100
M56-10.9	M56-8 (AF 85)	56-200 HV	1,500 – 2,500	60 – 100

Tab. A4.03

Support Bracket VPS

The Support Bracket VPS (**40**)
- serves as a support for the IPE 600 VARIOKIT (**1**) or the Longitudinal Beam VARIOKIT (**18**).
- is fixed to rectangular or round bridge piers.

Warning

- The load-bearing capacity of the Support Bracket VPS (**40**) is only ensured if the support is positioned in a perpendicular manner and the threaded rod is pretensioned at the concrete pier with the specified tightening torque.
  ⇒ Align Support Bracket VPS (**40**) vertically and fix it with Anchor Bolt SW21 Ø14 x 150 (**41**).
  ⇒ Tightening torque for
  – Threaded rod M48: 1,500 – 2,500 Nm
  – Threaded rod M56: 1,500 – 2,500 Nm
- Moving components!
  Hands are at risk of being crushed when the support is fitted onto the threaded rods.
  ⇒ Wear suitable protective gloves.
  ⇒ Use appropriate tools.

- The minimum extension for deshuttering is 225 mm, which corresponds to a distance of 50 mm for striking operations between the lower edge of the main beam and the upper edge of the support. (Fig. A5.01d – Fig. A5.01f)
- According to static specifications, the following threaded rods can be used:
  – Threaded rod M48,
  – Threaded rod M56.

When using a torque multiplier, the threaded rod should not protrude more than 15 mm on the end of the single nut. On the opposite side, the threaded rod must be secured with a nut and locknut. The projection of the thread over the lock nut results from the length of the threaded rod.

Components for two Support Brackets

40	Support Bracket VPS	2x
41	Anchor Bolt SW21 Ø14 x 150	2x
42	Threaded rod M56	1x
43	Nut M56	3x
44	Washer M56	2x

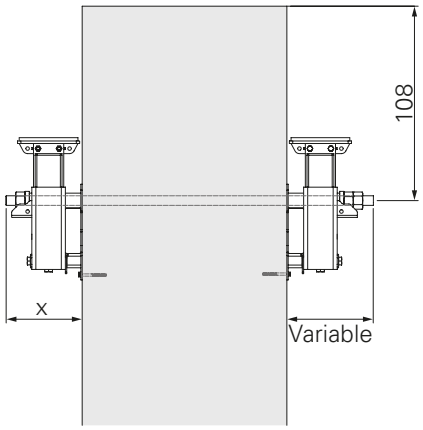
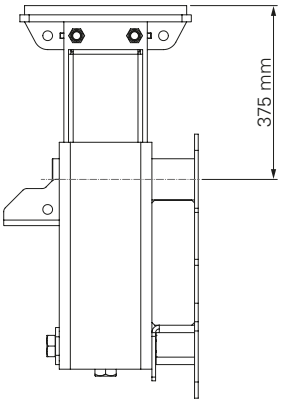


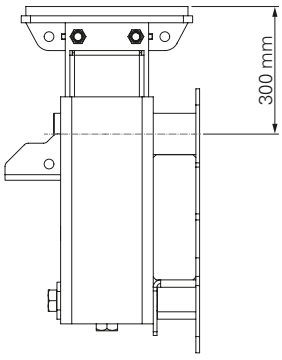
Fig. A5.01c

"x" depends on the nut used and should be between 38.5 cm and 41.5 cm.



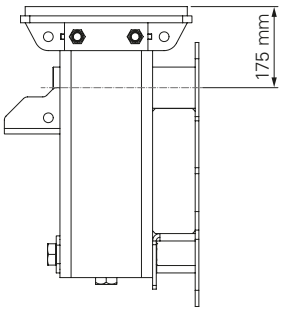
Maximum extension: 375 mm

Fig. A5.01d



Ideal extension: 300 mm

Fig. A5.01e



Attachment point: 175 mm

Fig. A5.01f

A5 Mounting the platform

Assembly

1. Insert the threaded rod (**42**) into the intended position on the bridge pier.
2. Check the projections of the threaded rod (**42**) on the pier. (Fig. A5.01c)
3. Using a lifting tool and crane belt, place the Support Bracket VPS (**40**) on the threaded rod (**42**).
4. Place washer (**44**) and nut (**43**) on threaded rod (**42**) and tighten slightly.
5. Align Support Bracket VPS (**40**) vertically and secure with Anchor Bolt SW21 Ø14 x 150 (**41**).
   → Unintentional twisting is prevented.
6. Place the opposite Support Bracket VPS (**40**) on the threaded rod (**28**) with a projection of 41.5 cm.
7. Place the washer (**44**), nut (**43**) and lock nut (**43**) on top and tighten them slightly.
8. Vertically align Support Bracket VPS (**40**) and secure it with Anchor Bolt SW21 Ø14 x 150 (**41**).
   → Unintentional twisting is prevented.
9. Tighten the nuts (**43**) to required torque on threaded rod (**42**).
   → Both Support Bracket VPS (**40**) are mounted on the pier and clamped.
10. Turn the central spindle (**40.1**) (AF 46).
    → The required height level is set. (Fig. A5.01b)

(Fig. A5.01 + Fig. A5.01a)

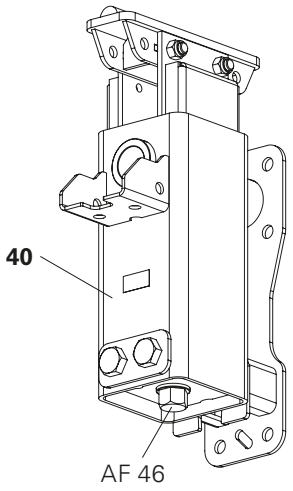


Fig. A5.01b

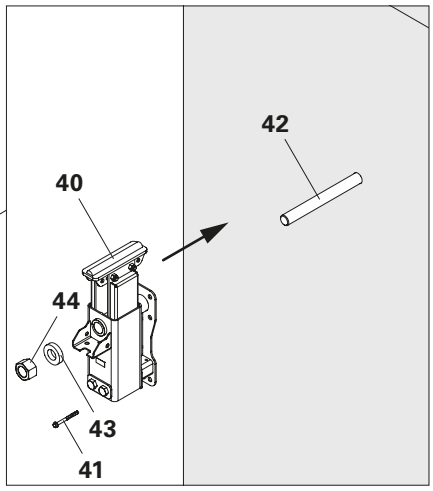


Fig. A5.01a

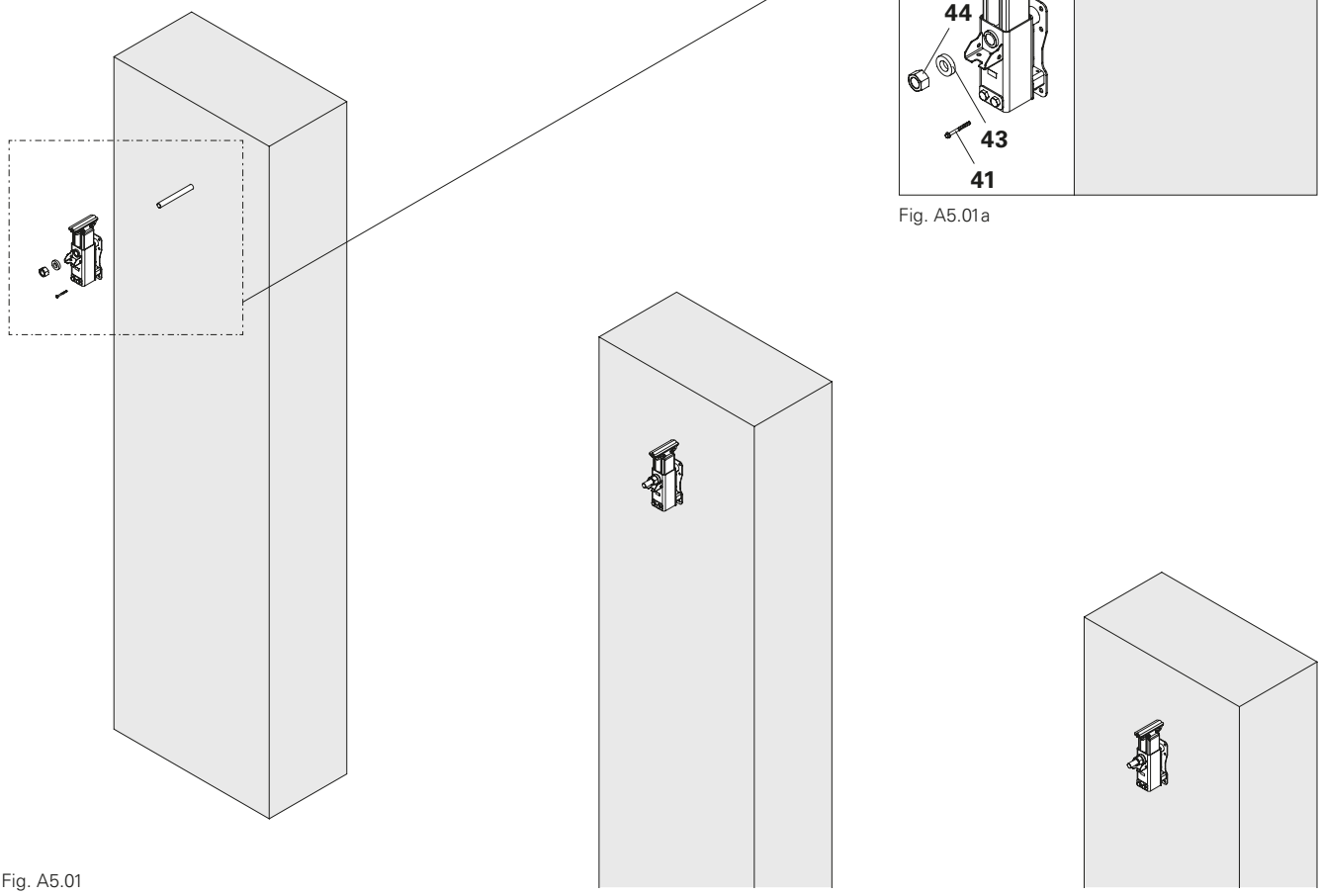


Fig. A5.01

Mounting the platform

Danger

Components may fall off the VPS Platform or the VPS Platform may collapse!
This can lead to serious injuries or even death.

⇒ Remove all loose parts from the VPS Platform before mounting.
⇒ Do not stand under the suspended load.
⇒ Guide the VPS Platform with ropes when moving and mounting it.

- The Fitting Pins Ø21 x 120 (**5**) in the Speed Beam VPS 2.00 m are used as attachments point for the platform.
- Each Fitting Pin Ø21 x 120 (**5**) has an attachment load of 25 kN.
- For higher loads, use double Fitting Pins Ø21 x 120 with a suitable round sling (**46**) as an attachment point for a maximum attachment load of 50 kN. (Fig. A5.02b)

Mounting

1. If necessary, temporarily remove the Sideform Holders VPS (**12**) at the attachment points.
2. Attach the VPS Platform to the crane.
3. Mount the VPS platform on Support Bracket VPS (**40**) with IPE 600 VARIOKIT (**1**).
4. Fit the Sideform Holders VPS (**12**).

(Fig. A5.02 + Fig. A5.02a)

Check the position of the VPS Platform.

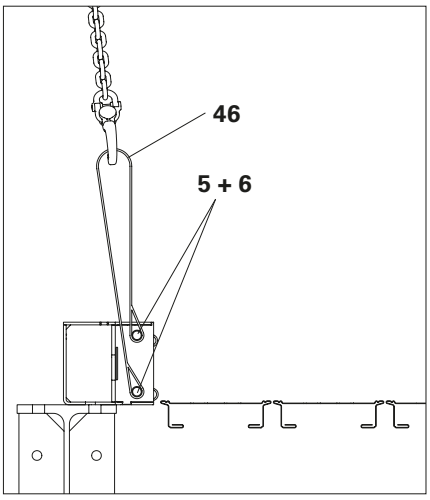


Fig. A5.02b

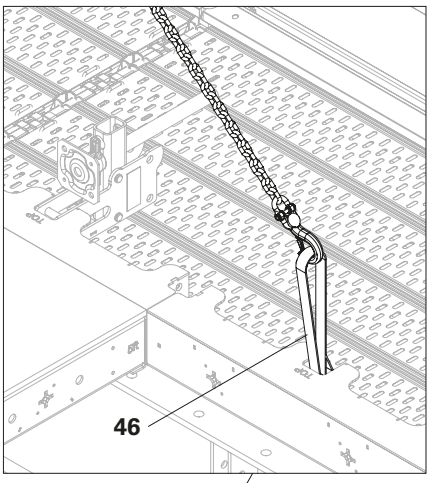


Fig. A5.02a

Fig. A5.02

Fitting the Filler Support VPS

Danger

People or the Filler Support VPS can fall off the VPS platform!
This can lead to serious injuries or even death.
⇒ Carry out assembly from a safe working position or wear PPE to prevent falling.
⇒ Do not remain under the assembly opening.
⇒ Secure the Filler Support VPS against falling down.

The Filler Support VPS (**47**) serves as a support for 6 ½" x 4" squared timber (**16.5 cm x 10.1 cm**) in the filler area between the floor panels (**7**) around the bridge pier.
The Filler Support VPS(**47**) can be adapted to the distance to the pier in increments of 50 mm over a length of 400 mm.

- In the case of small filler areas and/ or low parapet heights, the Filler Support VPS (**47**) can, if necessary, be dispensed with following a statistical check. Thus, a squared timber can be placed directly from main beam to main beam (**1**) as formlining support.
- One Filler Support VPS(**47**) must be fitted for each X- plate (**7.1**) on the front side of the panel.

Components

16 X-Bolt VPS M24 x 70
47 Filler Support VPS

Assembly

1. Determine the required cantilever length and fix the tube (**47.1**) with 2x Fitting Pins Ø21 x 120 (**47.2**) and secure with Cotter Pin 4/1 ga (**47.3**).
2. Fasten the Filler Support VPS (**47**) to the front side (position X-plate (**7.1**)) of the floor panel (**7**) with the X-Bolt VPS M24 x 70 (**16**).

(Fig. A6.01 – Fig. A6.01b)

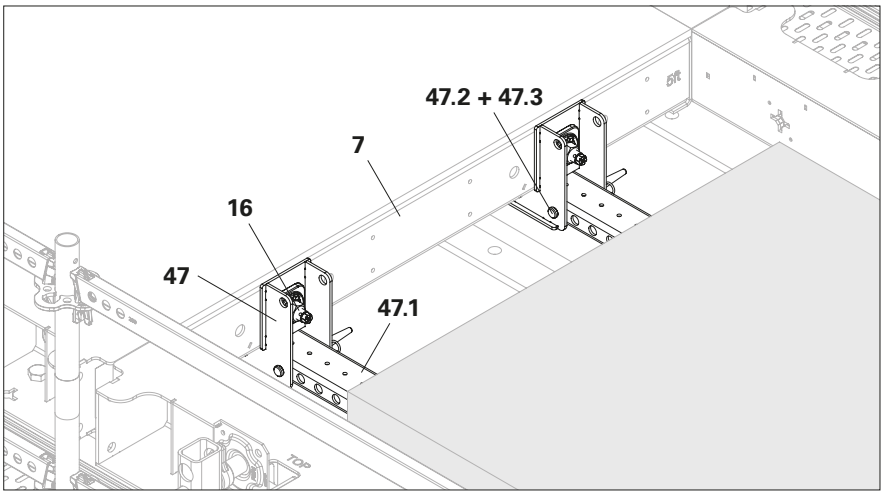


Fig. A6.01a

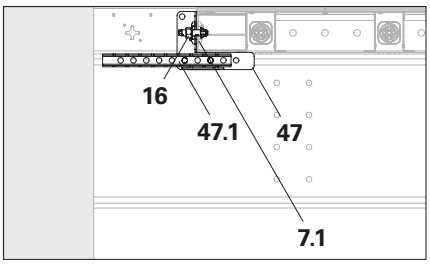


Fig. A6.01b

Fig. A6.01

Positioning the squared timber

In the case of small filler areas and/or low parapet heights, the Filler Support VPS (**47**) can, if necessary, be dispensed with following a statistical check. Thus, a squared timber can be placed directly between the IPE 600 VARIOKIT (**1**) as formlining support.

Components

48 Squared timber

Assembly

1. Saw the squared timbers (**48**) to the specified length and place them on the Filler Supports VPS (**47**).

(Fig. A6.02 + Fig. A6.02a)

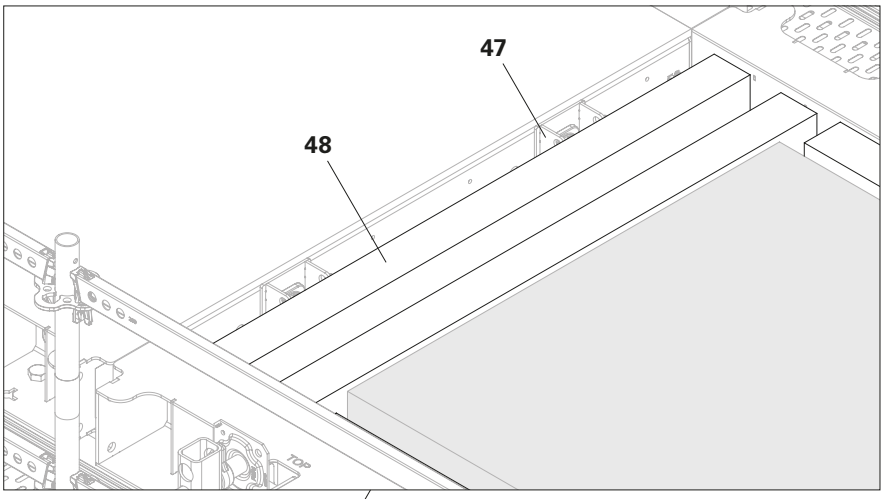


Fig. A6.02a

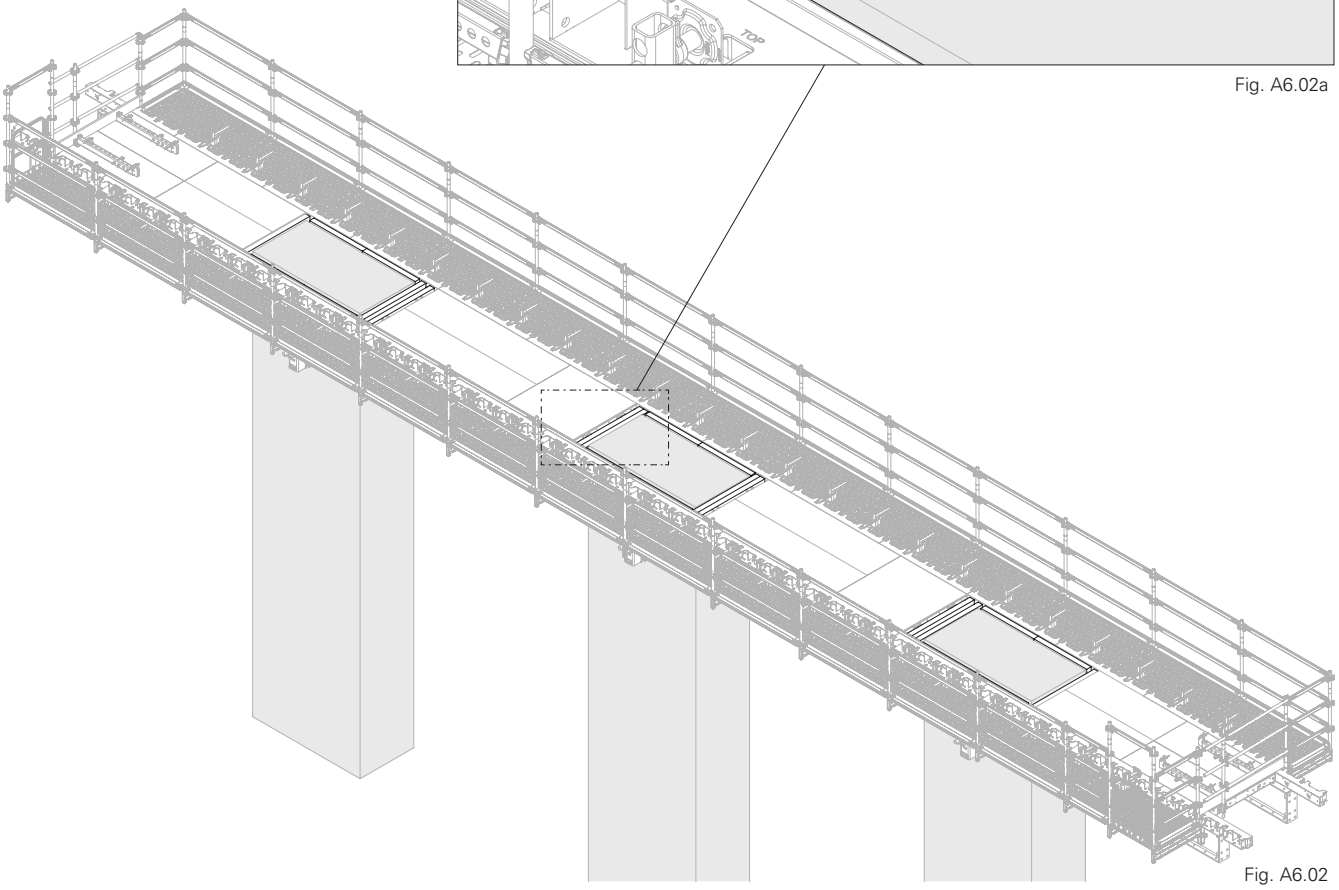


Fig. A6.02

Fitting formlining

Fix the 18 mm formlining (**49**) and the squared timber (**48**) in such a way that there are no constraints when the platform is deshuttered or separated.

Components

49 Formlining 18 mm

Assembly

1. Saw the 18 mm formlining (**49**) to the specified geometry and place it on the squared timber (**48**).

(Fig. A6.03)

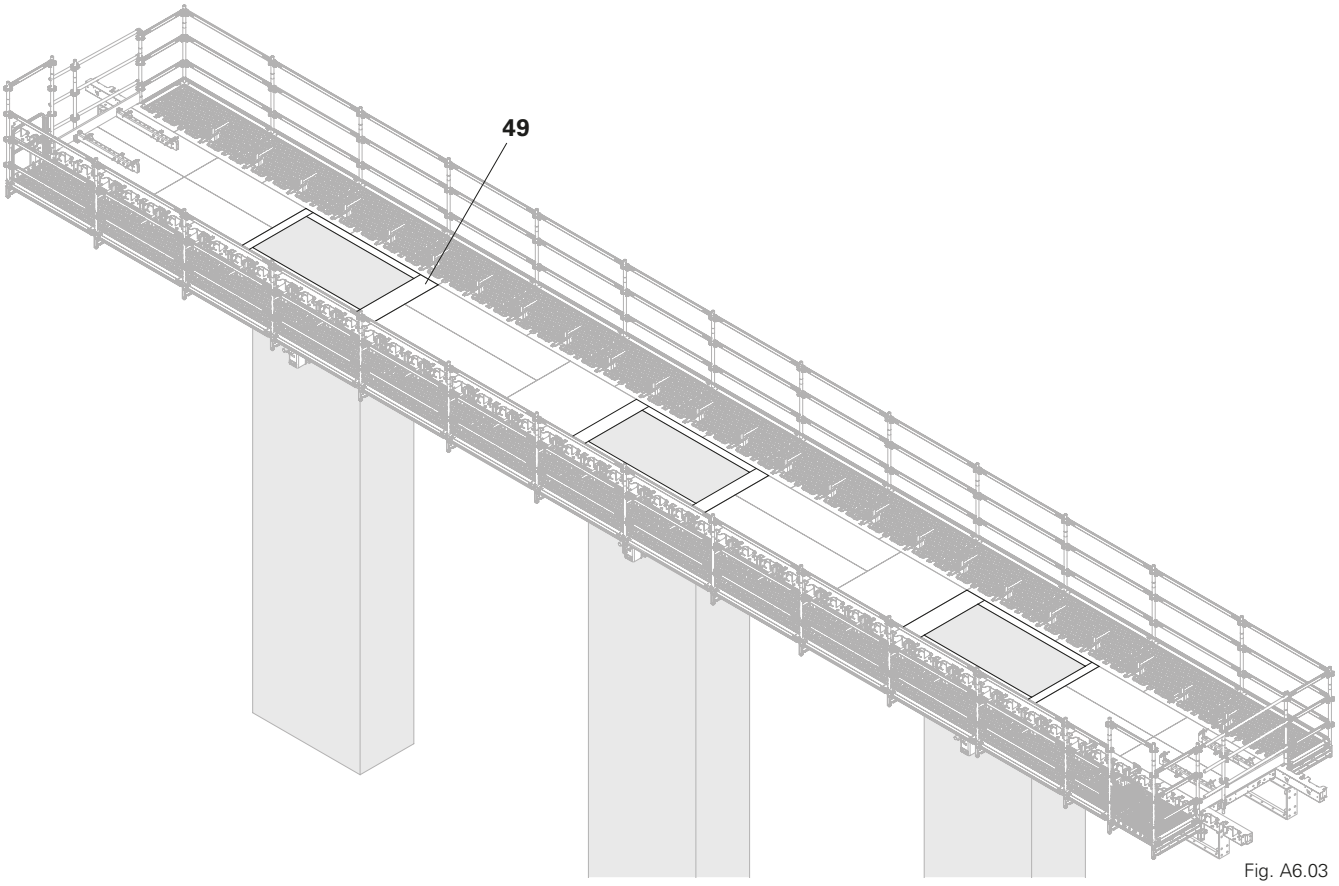


Fig. A6.03

Placing formwork units

Danger

Formwork units may fall down during transport!
This can lead to serious injuries or even death.

⇒ Do not stand under the suspended load.
⇒ Guide units with ropes.
⇒ Consider the maximum size of the units.

Mounting

1. Install reinforcement.
2. Attach formwork units to the crane with the lifting hook MAXIMO 1.5 t (**116**).
3. Place the formwork units next to each other and align them.

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

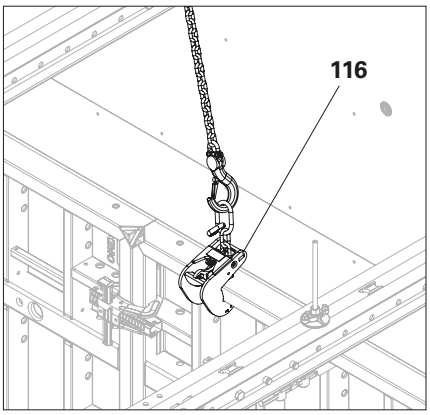


Fig. A6.04a

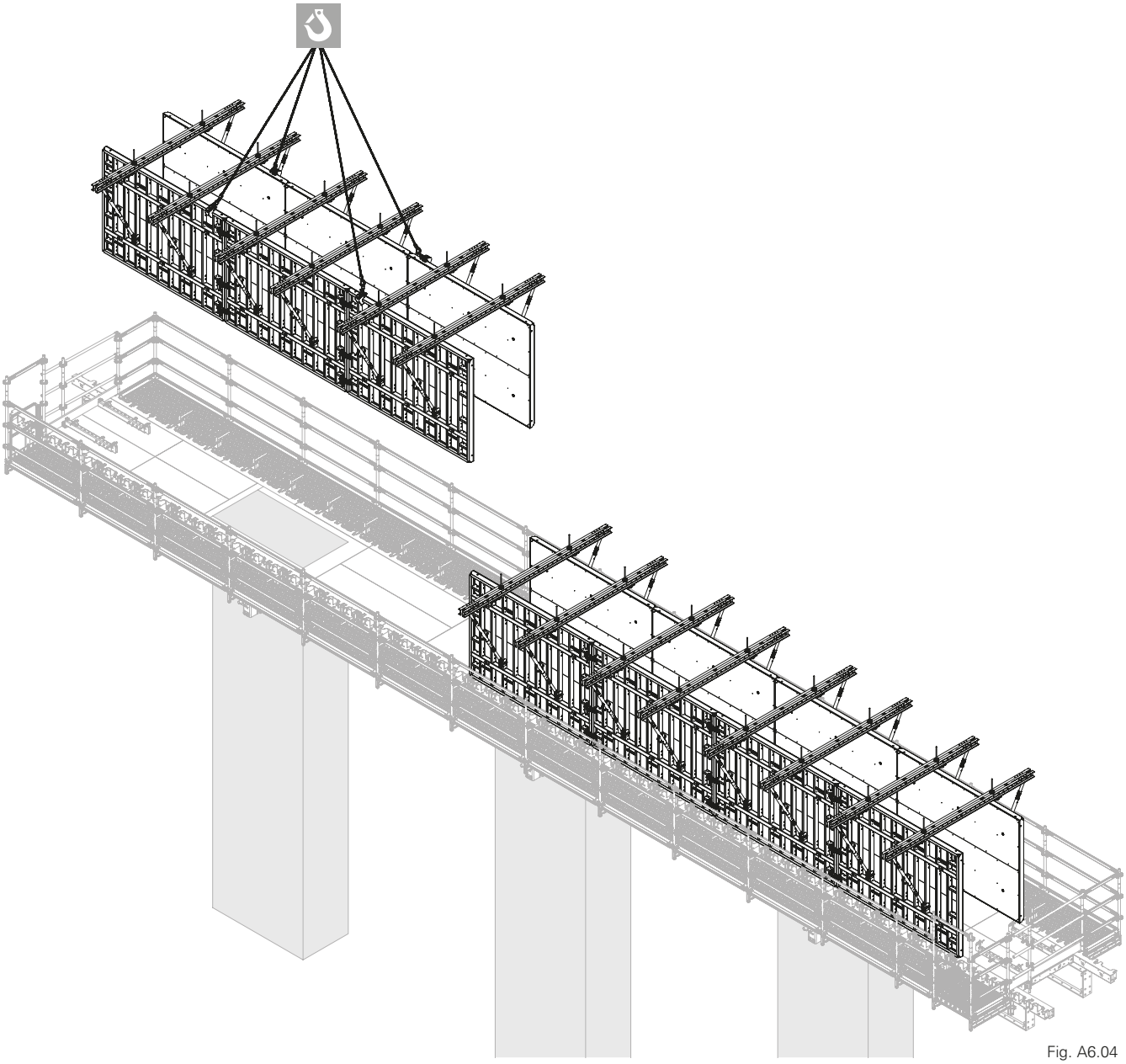


Fig. A6.04

Connecting formwork units

Do not tighten Base Spindle UJB 38-50/30 (**17**) on the Sideform Holder VPS (**12**) until the front formwork is mounted. (Fig. A6.05b)

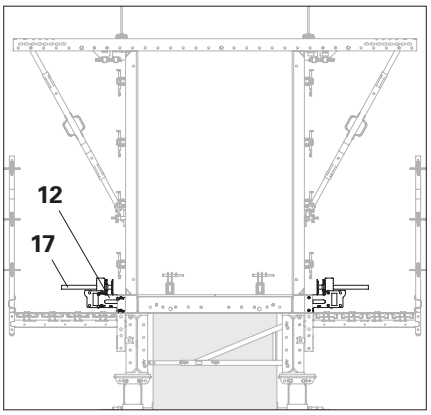


Fig. A6.05b

Components

53 Alignment Coupler BFD

Assembly

1. Connect the formwork packages with Alignment Couplers BFD (**53**). (Fig. A6.05 + Fig. A6.05a)

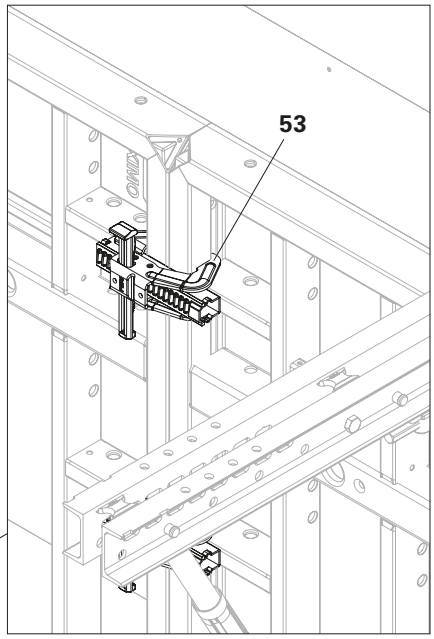


Fig. A6.05a

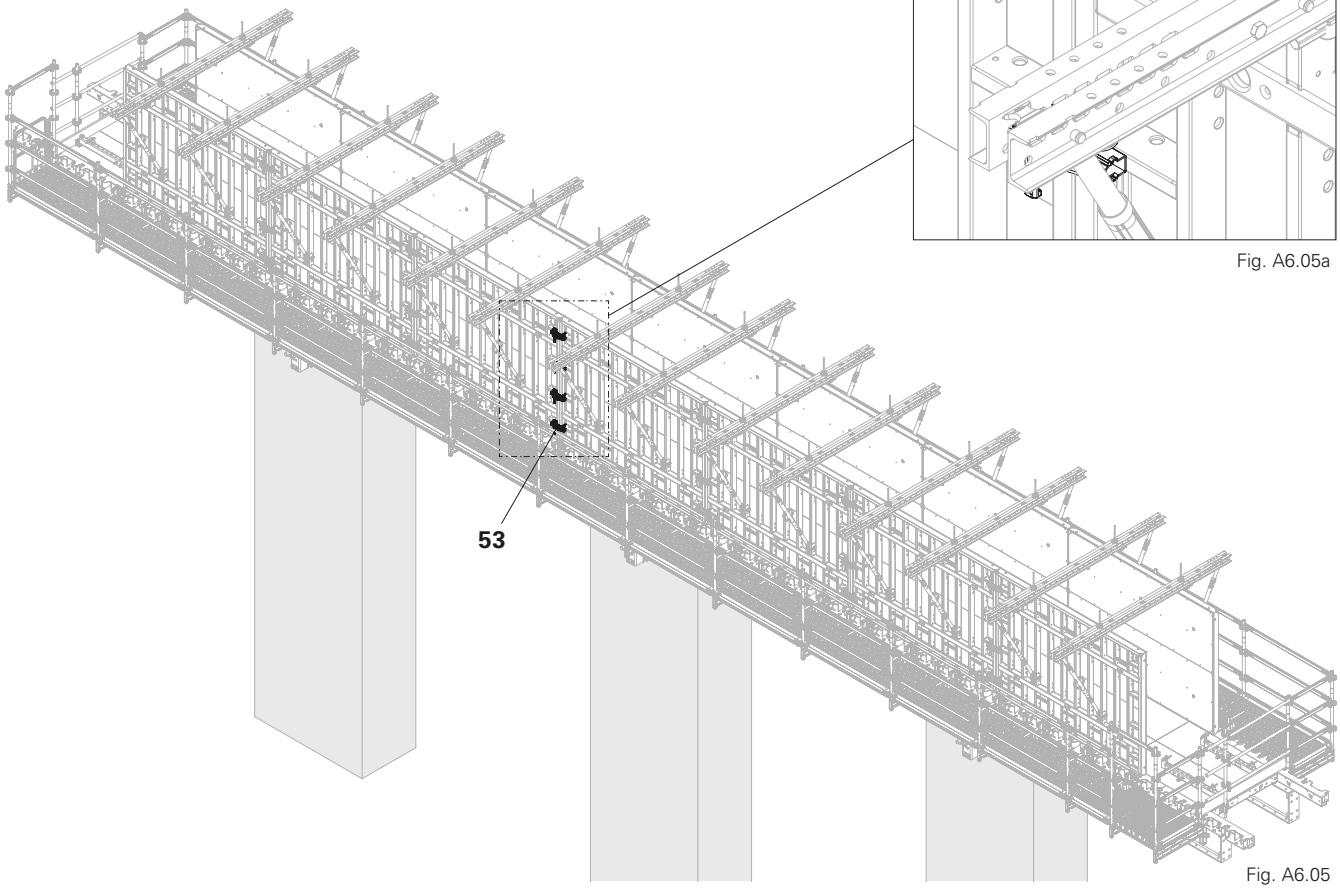


Fig. A6.05

Mounting the front formwork

Danger

Formwork units may fall down during transport!
This can lead to serious injuries or even death.
⇒ Do not stand under the suspended load.
⇒ Guide units with ropes.

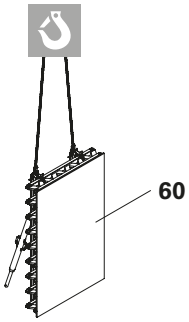
Components

60 Front formwork

Assembly

1. Attach the front formwork (**60**) to the crane.
2. Insert the front formwork (**60**) between the formwork units.
3. Fit the front formwork (**60**) onto the Stopend Connector VPS (**45**) with Fitting Pins Ø21 x 120 (**45.3**) and secure with Cotter Pins 4/1 ga (**45.4**).
4. Adjust the front formwork (**60**) with Push-Pull Props RS (**60.1**).

(Fig. A6.06 + Fig. A6.06a)



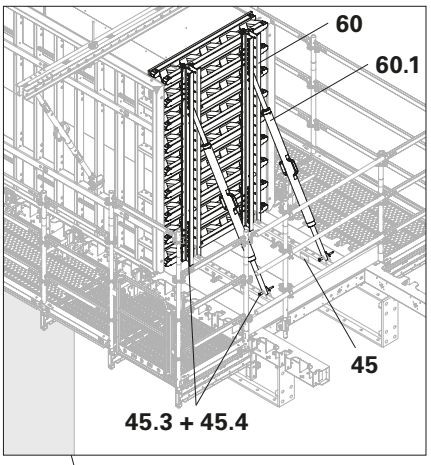


Fig. A6.06a

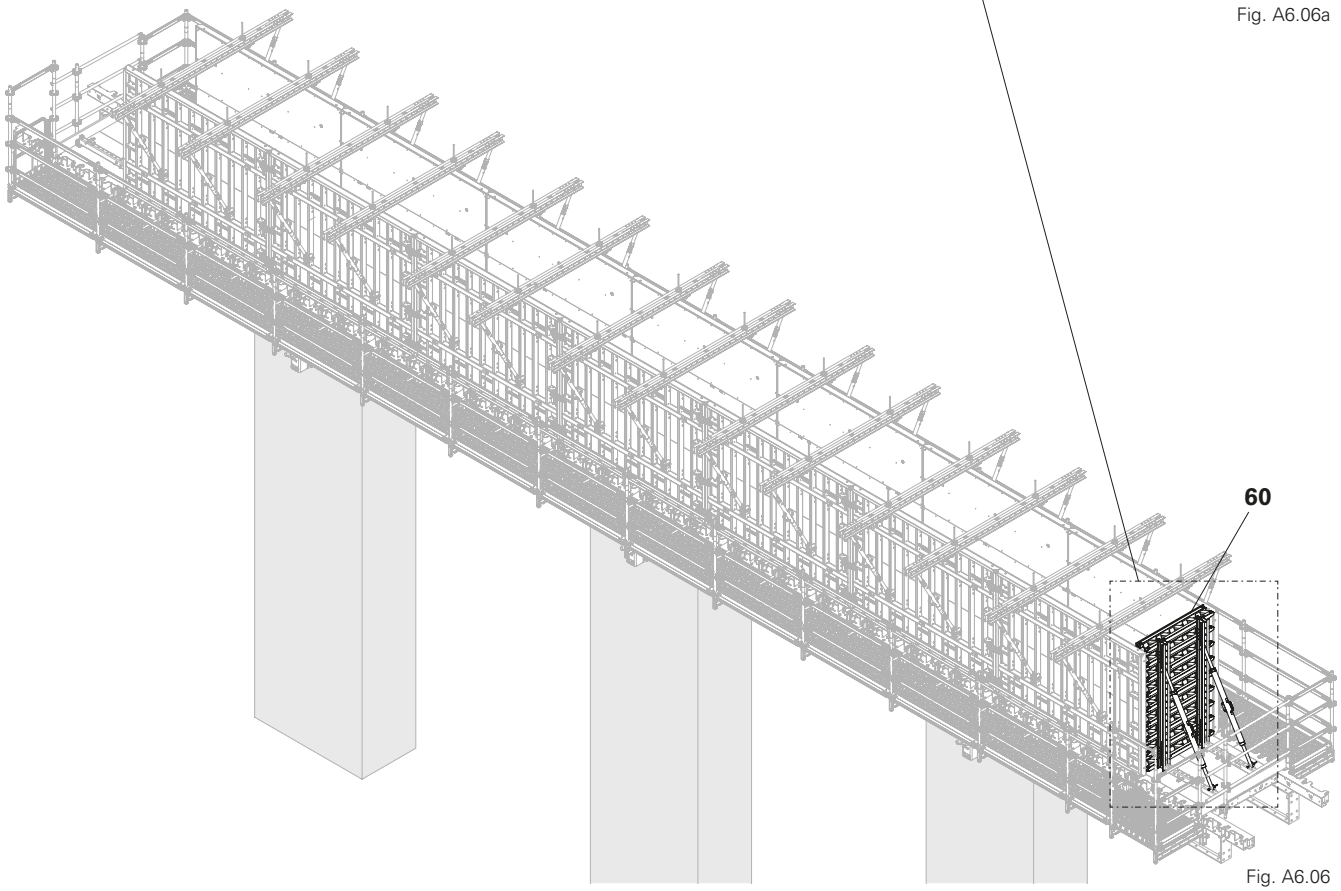


Fig. A6.06

Fixing the formwork

To ensure that the Base Spindle UJB 38-50/30 (**17**) is fully supported on the formwork it may be necessary to place squared timbers or similar between the Base Spindle UJB 38-50/30 (**17**) and the formwork.

Fixing

1. Spindle the Base Spindle UJB 38-50/30 (**17**) on the Sideform Holder VPS (**12**) against the formwork.
2. Tighten the quick jack nut of the Base Spindle UJB 38-50/30 (**17**).

(Fig. A6.07 – Fig. A6.07b)

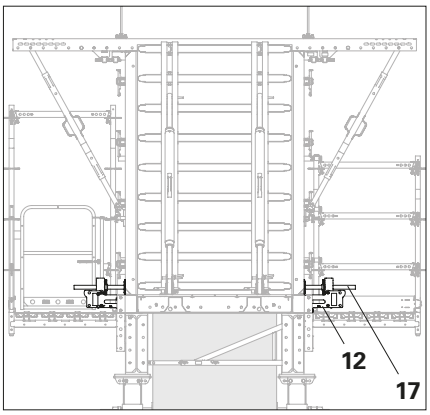


Fig. A6.07b

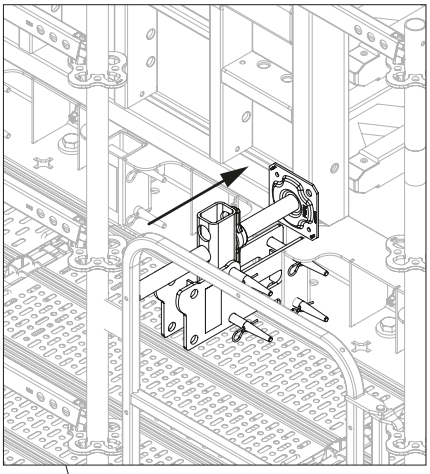


Fig. A6.07a

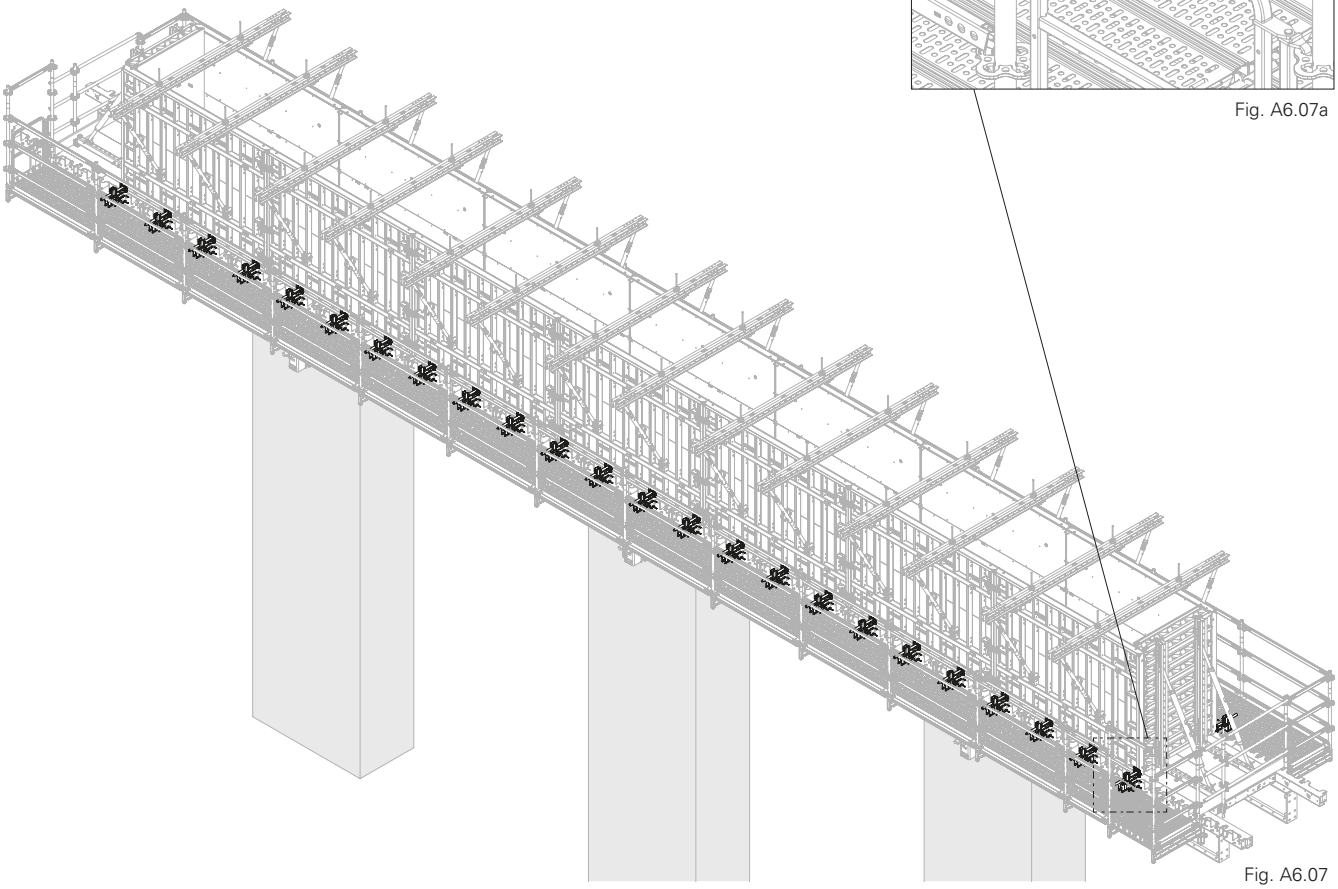


Fig. A6.07

A7 Concreting

- Adhere to the permissible fresh concrete pressure for the formwork.
- For this, observe the permissible rate of rise of the formwork.

The reinforcement must be removed prior to concreting.

Concreting

1. Pour concrete into the formwork from a safe working position.
2. Compact the concrete.
3. Allow concrete to cure until the required load-bearing capacity is achieved.

(Fig. A7.01)

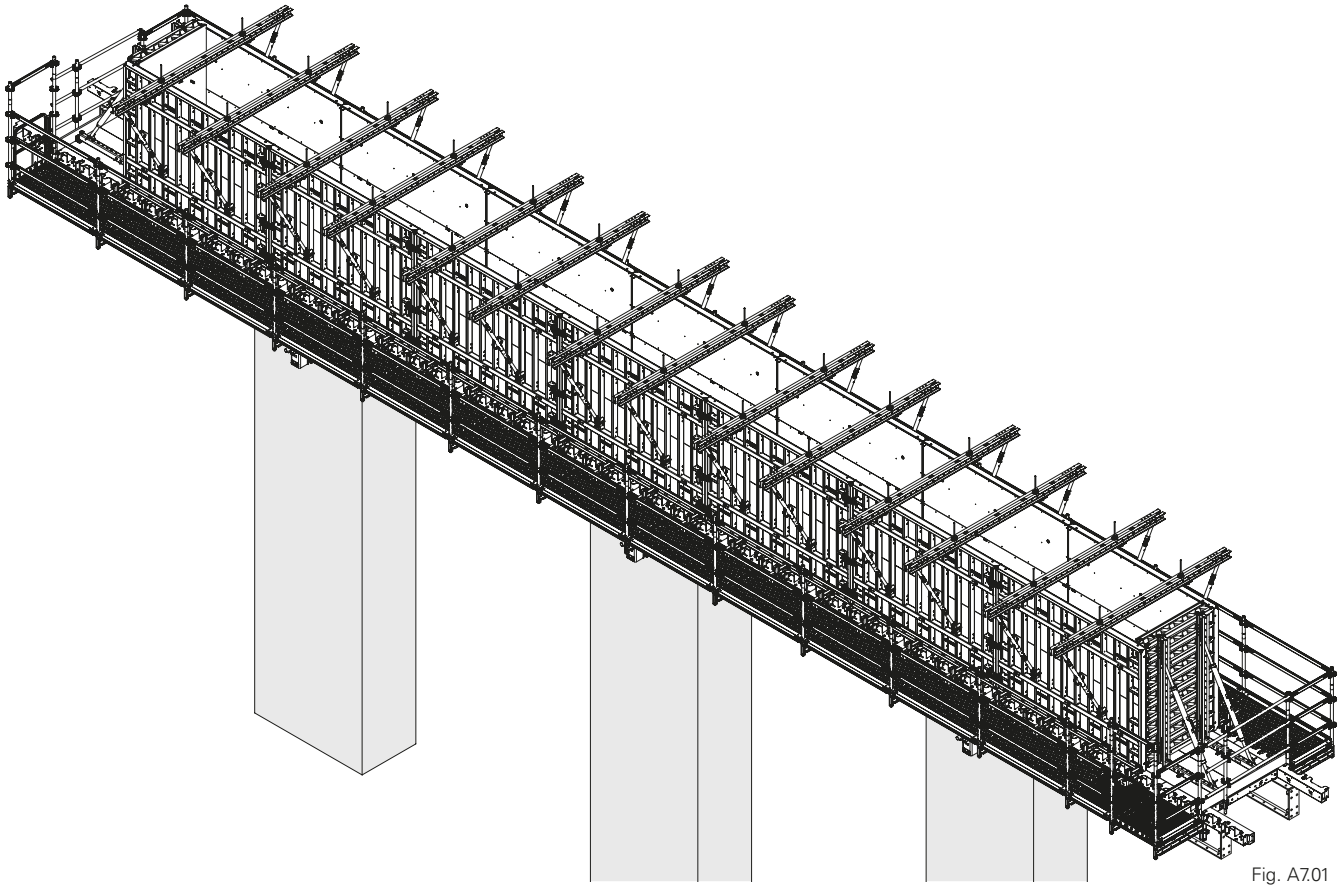


Fig. A7.01

Removing side formwork

The side formwork may only be removed,
- after the required concrete strength has been achieved,
- on the instructions of a competent person.

Warning

When removing the side formwork, components can fall over or fall down, strike people and seriously injure them!

⇒ Always secure the side formwork to prevent it from falling over, e.g. with push-pull props.

Dismantling side formwork

1. Open the Base Spindle UJB 38-50/30 (**17**) on the Sideform Holder VPS (**12**) with a suitable impact tool, e.g. hammer. (Fig. A8.01a)
2. Retract the Base Spindle UJB 38-50/30 (**17**).
3. Open the side formwork.
4. Remove the side formwork from the cap with a crane or similar lifting device. (Fig. A8.01)

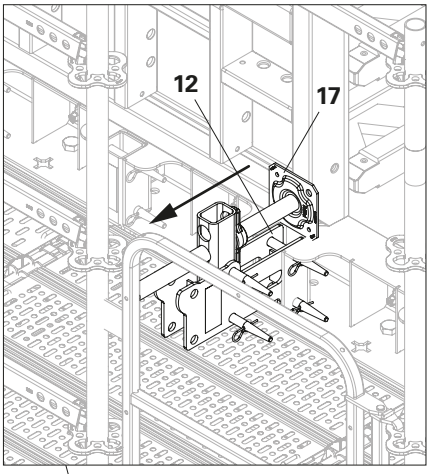


Fig. A8.01a

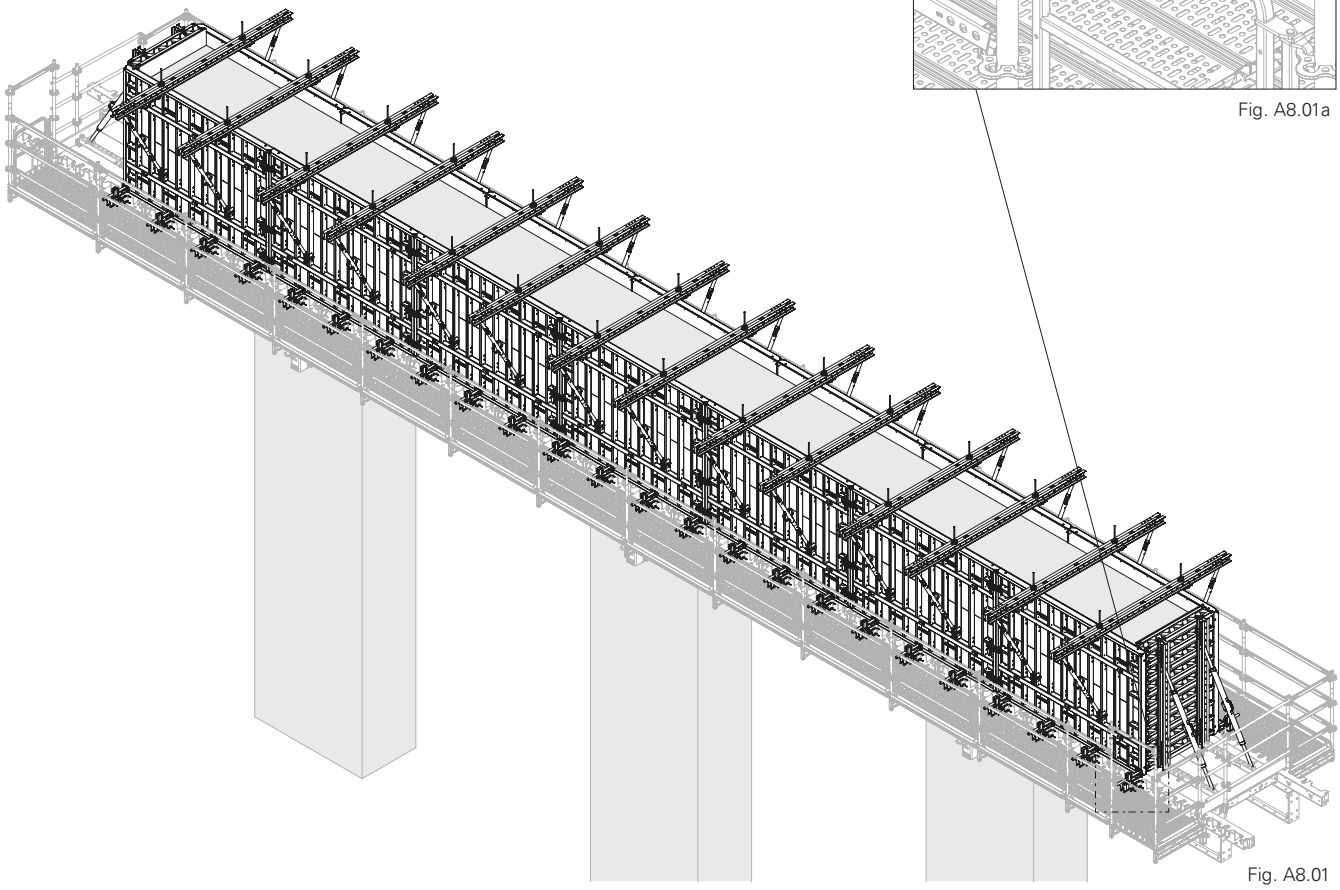


Fig. A8.01

Striking Adaptor VPS-RCS

The Striking Adaptor VPS-RCS (**13**) is needed for the striking procedure and serves as a connecting link between the Speed Beam VPS 2.00 m (**9**) and the Climbing Rail RCS (**76**). (Fig. A9.01)

Components

5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga
13 Striking Adaptor VPS-RCS

Preparation

Take the position of the Striking Adaptor VPS-RCS (**13**) from the project-specific drawing and, if necessary, remove the Sideform Holder VPS (**12**) at this point.

Assembly

1. Insert the Striking Adaptor VPS RCS (**13**) into the Speed Beam VPS 2.00 m (**9**).
   The directional lug (**13.1**) points in the direction of the platform deck. (Fig. A9.01a)
2. Fit the Striking Adaptor VPS-RCS (**13**) with Fitting Pins Ø21 x 120 (**5**) and Cotter Pins 4/1 ga (**2**).
   → The Striking Adaptor VPS-RCS (**13**) is in place. (Fig. A9.01b)

The position and number of Striking Adaptors VPS-RCS and StageStrikers VPS 6600 lb-3000 kg can be found in the design information or are determined on a project-specific basis.

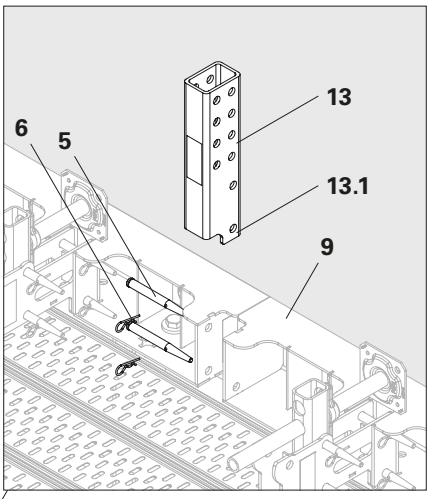


Fig. A9.01a

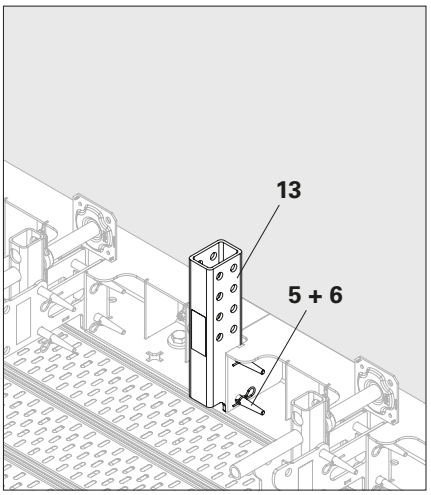


Fig. A9.01b

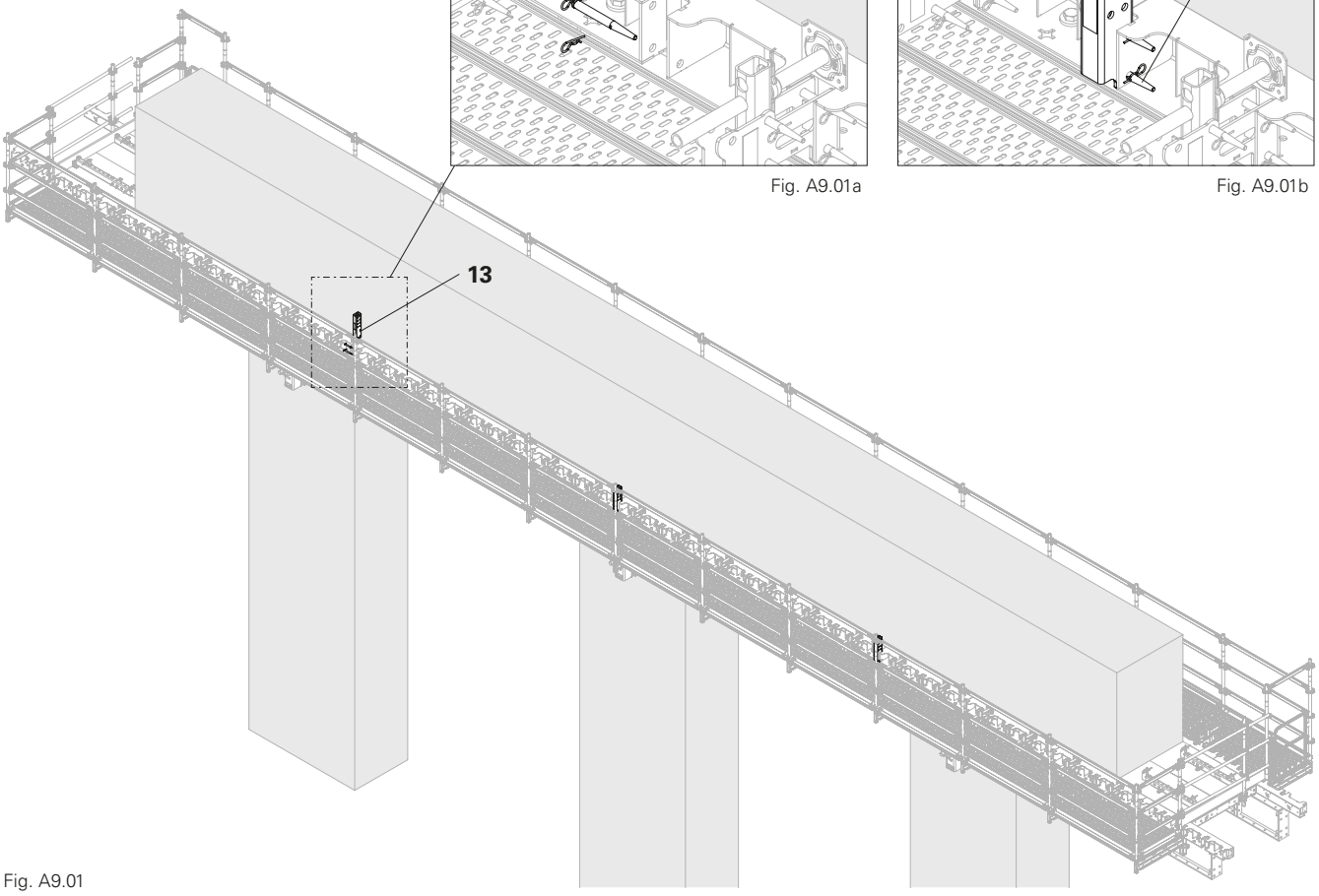


Fig. A9.01

Fitting Climbing Rail RCS

Components

5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga
76 Climbing Rail RCS

Assembly

1. Lift the Climbing Rail RCS (**76**) onto the Striking Adaptor VPS-RCS (**13**). (Fig. A9.02 + Fig. A9.02a)
2. Fit Climbing Rail RCS (**76**) with 2x Fitting Pins Ø21 x 120 (**5**) and secure with a Cotter Pin 4/1 ga (**6**). (Fig. A9.02 + Fig. A9.02b)

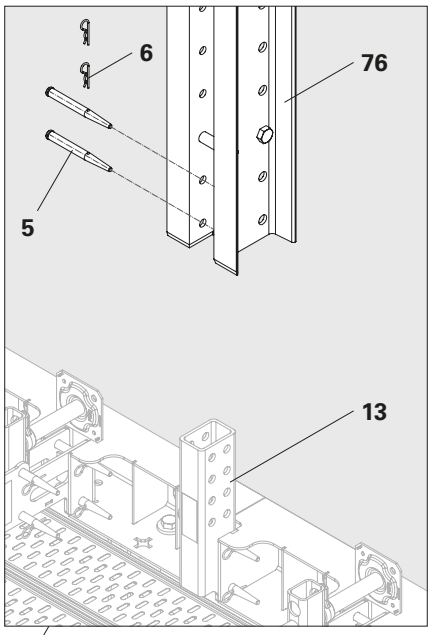


Fig. A9.02a

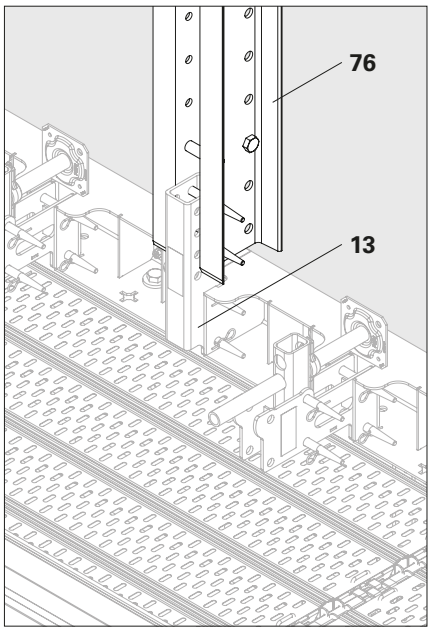


Fig. A9.02b

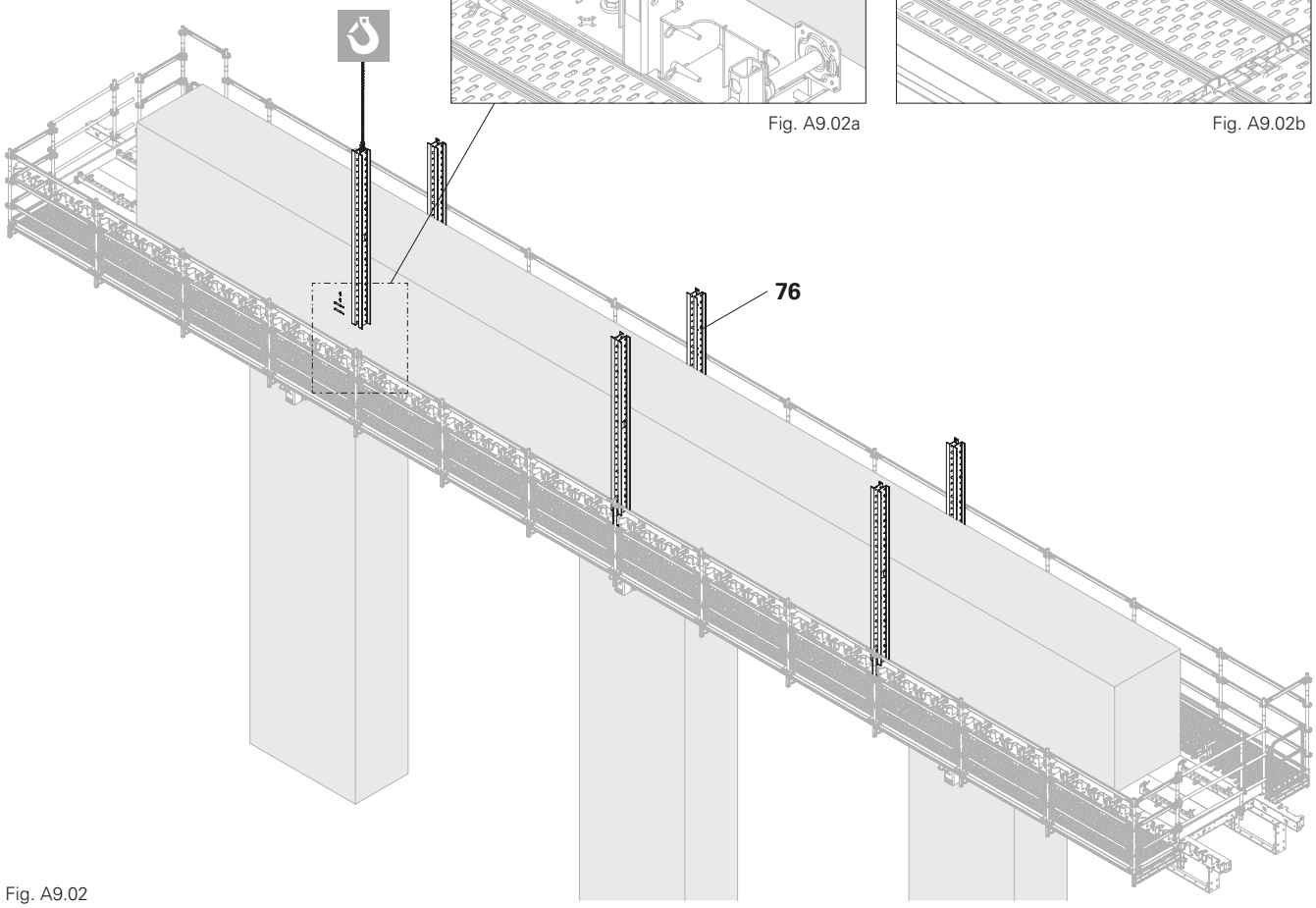


Fig. A9.02

Spacers

Only use the specified bolt lengths and nuts.

- It may be necessary to release adjacent spacers in the climbing rail.
- The assemblies are only shown in one component size. Both spacers can be mounted or offset in addition:
  – Spacer M20-82 (**77**).
  – Spacer M24-82 (**78**).

Installation of an additional spacer M20

1. Position the tube sleeve of the spacer M20-82 (**77.3**) in the Climbing Rail RCS (**76**) with the help of a hammer.
2. Insert bolt ISO 4014 M20 x 120-8.8 (**77.1**) through the Climbing Rail RCS (**76**) and tube sleeve of the spacer M20-82 (**77.3**).
3. Fit nut ISO 7042 M20-8 (**77.2**) onto bolt ISO 4014 M20 x 120-8.8 (**77.1**) and tighten.
   (Fig. A9.03)

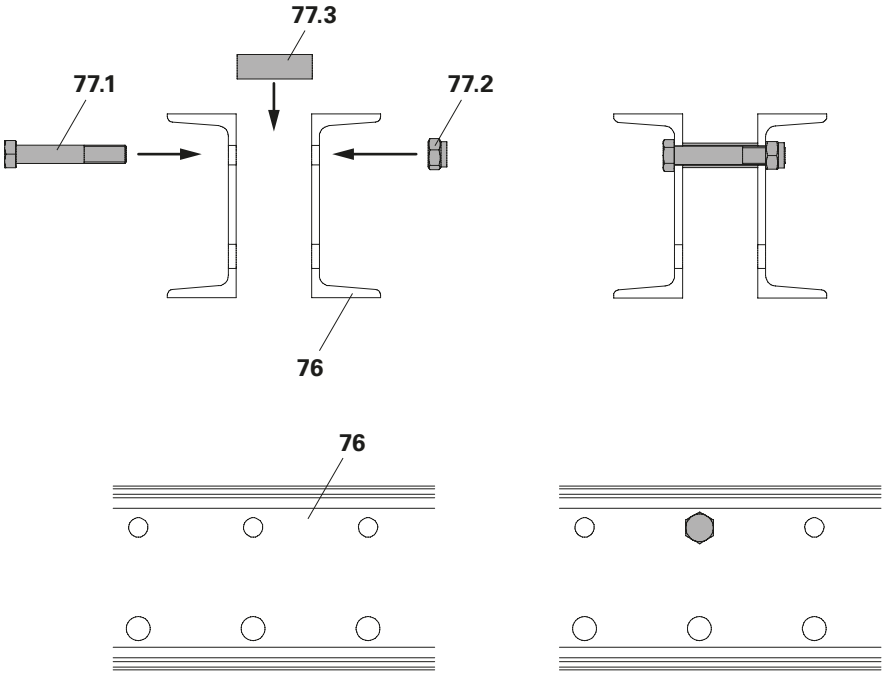


Fig. A9.03

Re-positioning a spacer M24

1. Release the nut ISO 7042 M24-8 (**76.2**).
2. Remove Bolt ISO 4014 M24 x 130-8.8 (**76.1**).
3. Remove the tube sleeve of the spacer M24-82 (**76.3**).
4. Re-position the tube sleeve with the help of a hammer to a Ø 26 hole.
5. Insert Bolt ISO 4014 M24 x 130-8.8 (**76.1**) through the tube sleeve of the Spacer M24-82 (**76.3**).
6. Fit nut ISO 7042 M24-8 (**76.2**) onto bolt ISO 4014 M20 x 120-8.8 (**76.1**) and tighten.

(Fig. A9.04)

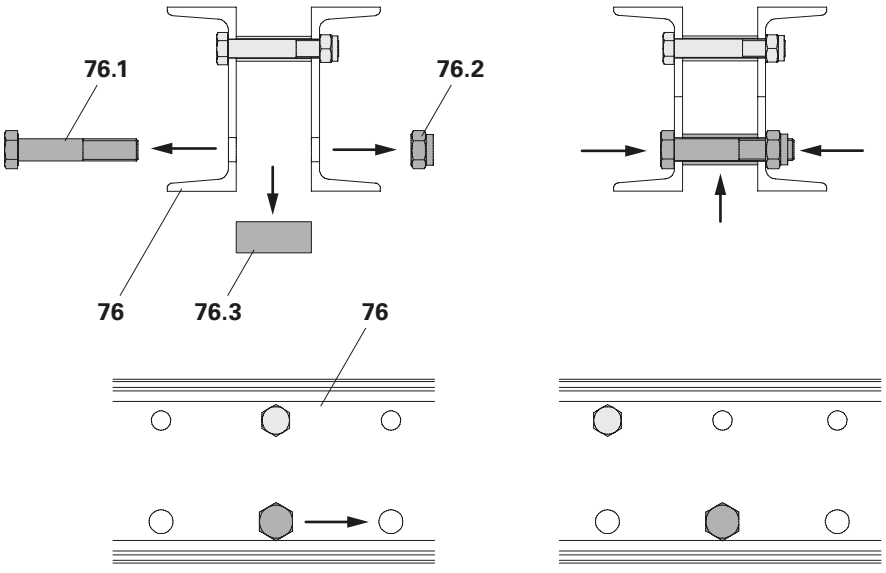


Fig. A9.04

StageStriker VPS 6,600 lb-3,000 kg

- **Refer to the assembly plans for the position of the KZ Wedges.**
- **When selecting the climbing rail RCS, make sure that there is sufficient space between the gallows and the nut AF 36 of the StageStriker for lowering.**
- **Position of the gallowsSee section “Gallows VPS” on page 62.**

The StageStriker VPS 6,600 lb-3,000 kg (**61**) is required for the striking procedure. As a result, the dead weight of the VPS Platform is transferred from the Support Bracket VPS (**40**) to the concrete cap during the lowering process.

Components

5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga
41 Anchor Bolt SW21 Ø14 x 150
54 Steel Waler Universal SRU U120
61 StageStriker VPS 6,600 lb-3,000 kg
97 Wedge KZ
125 Waler Fixation SRU

Assembly

1. Place the StageStriker VPS 6,600 lb-3,000 kg (**61**) on the left and right side of the concrete waler.
2. Insert the StageStriker VPS 6,600 lb-3,000 kg (**61**) between the Climbing Rail RCS (**76**).
3. Place Steel Waler Universal SRU U120 (**54**) on the StageStriker VPS 6,600 lb-3,000 kg (**61**).
4. Connect the Steel Waler Universal SRU U120 (**54**) and StageStriker VPS 6,600 lb-3,000 kg (**61**) with Wedges KZ (**97**).

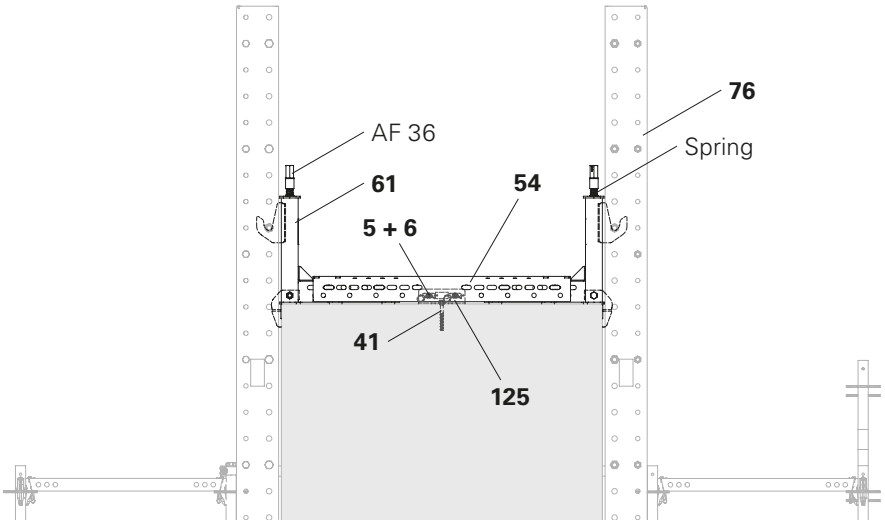


Fig. A9.05a

5. Connect Steel Waler Universal SRU U120 (**54**) with Waler Fixation SRU (**125**), Fitting Pin Ø21x120 (**5**), Cotter Pin 4/1 ga (**6**) and Anchor Bolt SW21 Ø14 x 150 (**41**) to the concrete waler.
6. On all StageStrikers VPS 6,600 lb-3,000 kg (**61**), turn the spindle to move the hook right underneath the spacer until there is contact.
   - The red spring must not be compressed in the process.

(Fig. A9.05 – Fig. A9.05b)

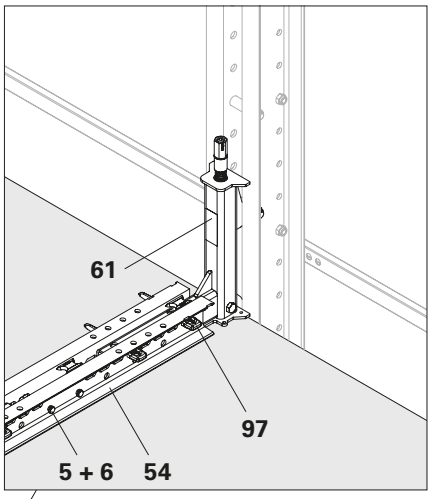


Fig. A9.05b

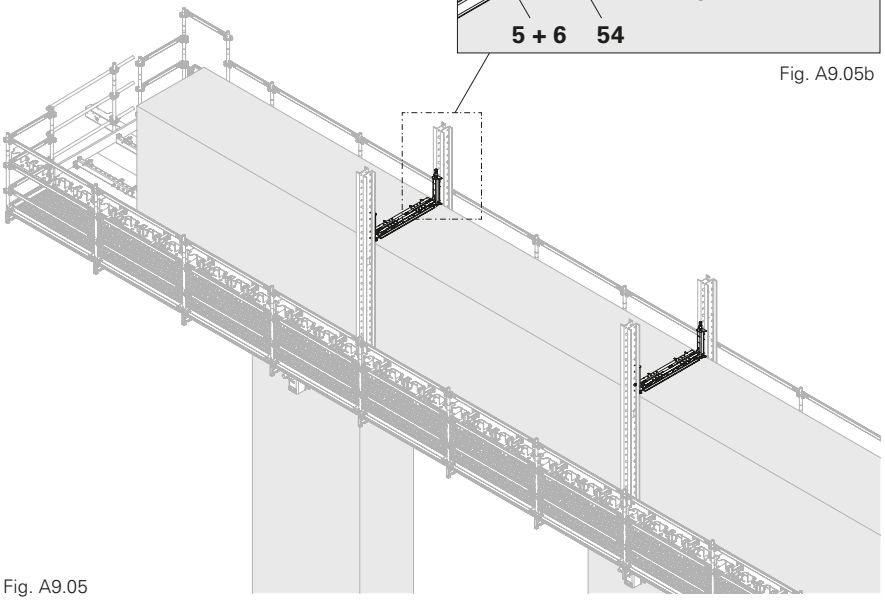


Fig. A9.05

Gallows VPS

Select a length for the Climbing Rail RCS that does not cause the StageStriker VPS 6,600 lb-3,000 kg to collide with the Gallows VPS during the lowering process and leaves space for the actuating tool to be removed.

The Gallows VPS (**70**) serve as an attachment point for the crane chains during the striking procedure. It is mounted in the Climbing Rails RCS (**76**) with 2x Fitting Pins Ø21 x 120 (**5**) or with 2x Fitting Pins Ø26 x 120 (**80**). The row of holes indicates the centre of gravity and thus the attachment point of the crane chain for the respective panel size [ft].

Components

5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga
76 Climbing Rail RCS
70 Gallows VPS
80 Fitting Pin Ø26 x 120
81 Cotter Pin 5/1 ga

Assembly

1. Slide the Gallows VPS (**70a + 70b**) between the profiles of the Climbing Rails RCS (**76**).
2. Fit the Gallows VPS (**70a**) with 2x Fitting Pins Ø21 x 120 (**5**) and secure with Cotter Pins 4/1 ga (**6**).
3. Fit the Gallows VPS (**70b**) with 2x Ø 26 x 120 fitting pins (**80**) and secure with Cotter Pins 5/1 ga (**81**).

(Fig. A9.06 + Fig. A9.06a)

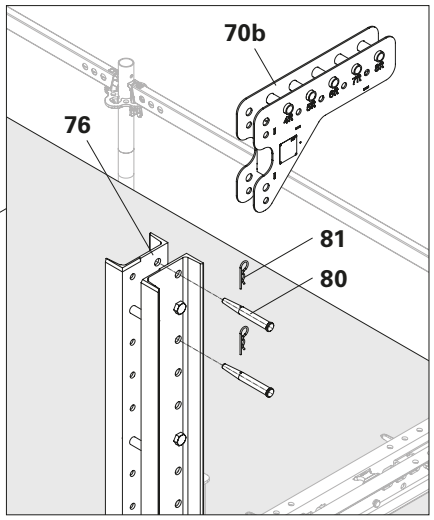


Fig. A9.06a

Fig. A9.06

Removing the Y-braces

Warning

Failure to comply with the following assembly steps may cause the platform to fall!
This could result in serious injuries or even death.
⇒ It is essential that the assembly sequence be followed.

To lower the platform, the following steps, the assembly plans and the general arrangement drawings must be adhered to.

Tools

- Man lifters for removing Y-Braces VPS and the Support Bracket VPS.
- Ratchet with nut AF 24, AF 46, AF 56.
- Torque multiplier.
- Lifting traverse 9 t.
- Lifting crane.

Removal

1. Remove Y-Braces VPS (**4**) between the two IPE 600 VARIOKITS (**1**). (Fig. A10.01)

The Y-Brace VPS (**4**) can only be unbolted and removed together with the element on one side.

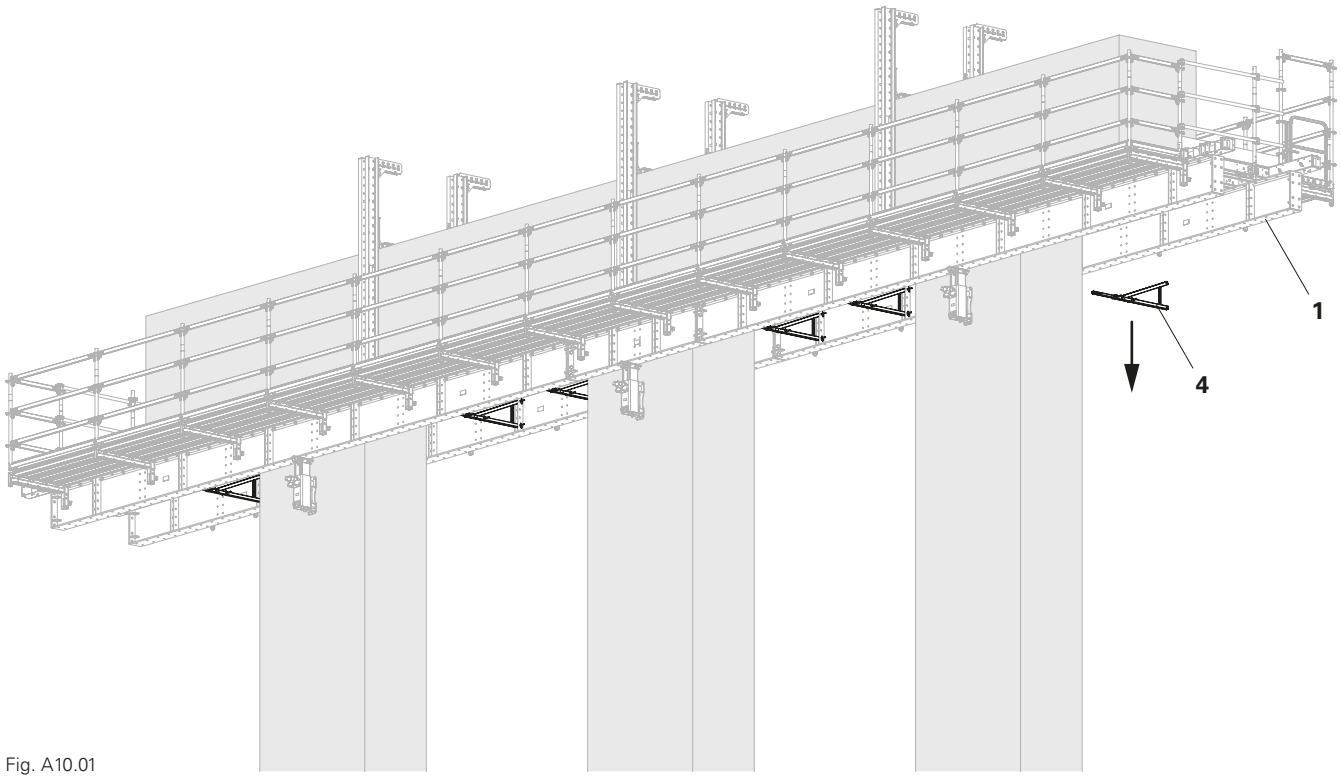


Fig. A10.01

Lowering the platform

Warning

- Incorrect assembly of the Striking Adaptors VPS-RCS (**13**), the Climbing Rails RCS (**76**) and the StageStrikers VPS 6,600 lb-3,000 kg (**61**) can result in the platform falling uncontrollably!
  This could result in serious injuries or even death.
  ⇒ Check that assembly is correct before lowering the platform.
- Keep an eye on the StageStriker VPS 6,600 lb-3,000 kg (**61**) when lowering it!
  Overloading or touching down can lead to serious injuries or even death.
  ⇒ When overloading occurs, the sleeve is compressed. Reduce load.
  ⇒ Replace the StageStriker VPS 6,600 lb-3,000 kg (**61**).
  ⇒ When touching down on obstacles, the red spring becomes visible. Remove any obstacles.
  (Fig. A10.02 + Fig. A10.02a)

Tools:

- Torque multiplier
- Nut AF 46
- Ratchet

Start deshuttering on the half of the platform where no floor panels are mounted.

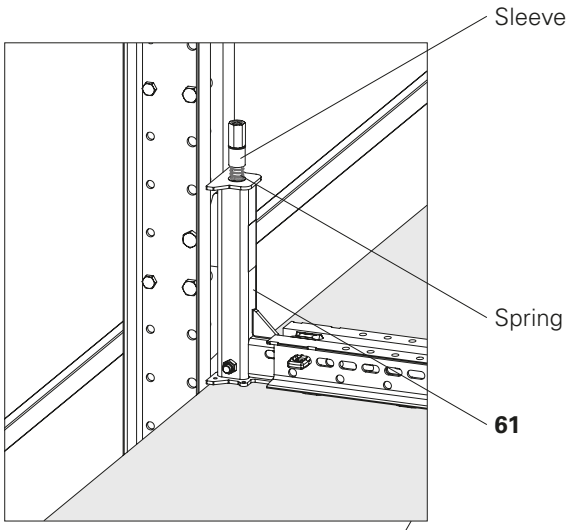


Fig. A10.02a

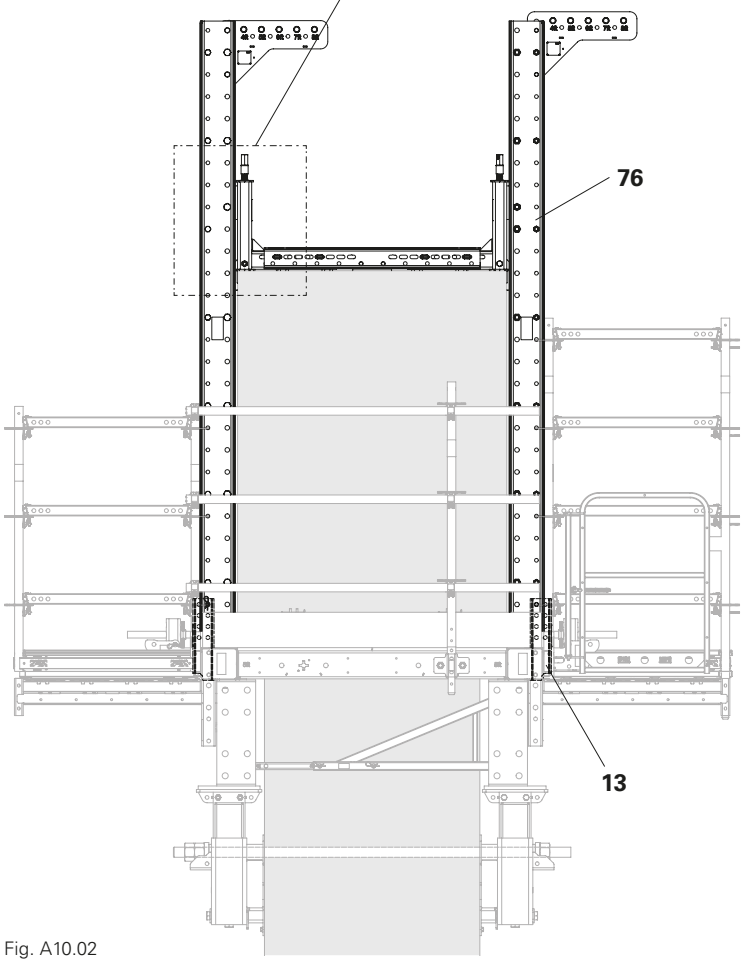


Fig. A10.02

A10 Lowering the platform

Deshuttering

1. Remove the X-Bolt VPS M24 x 70 (**16**). (Fig. A10.03a)
2. Place nut AF 46 on the central spindle (**40.1**).
3. Place the torque multiplier on the nut AF 46.
4. Turn the central spindle (**40.1**) anticlockwise.
5. Lower the Support Bracket VPS (**40**) down to the stop.
   → IPE 600 VARIOKIT is free.

(Fig. A10.03)

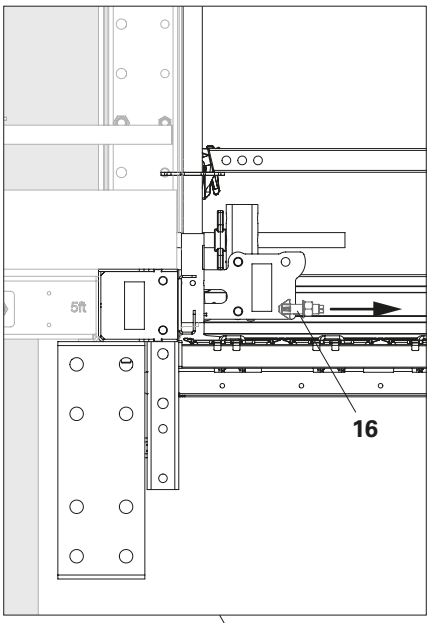


Fig. A10.03a

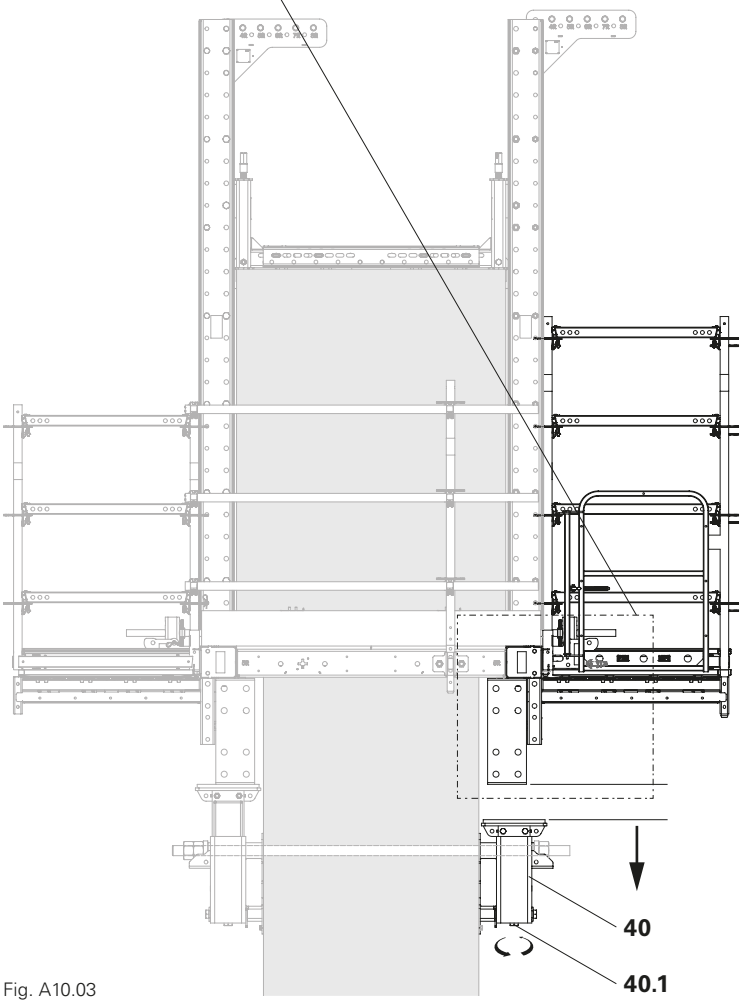


Fig. A10.03

A10 Lowering the platform

6. Lower the Climbing Rail RCS (**76**) onto the StageStriker VPS 6,600 lb-3,000 kg (**61**) from a safe working place with the adjusting screw (**61.1**). Turn anticlockwise to lower it.
(Fig. A10.04)

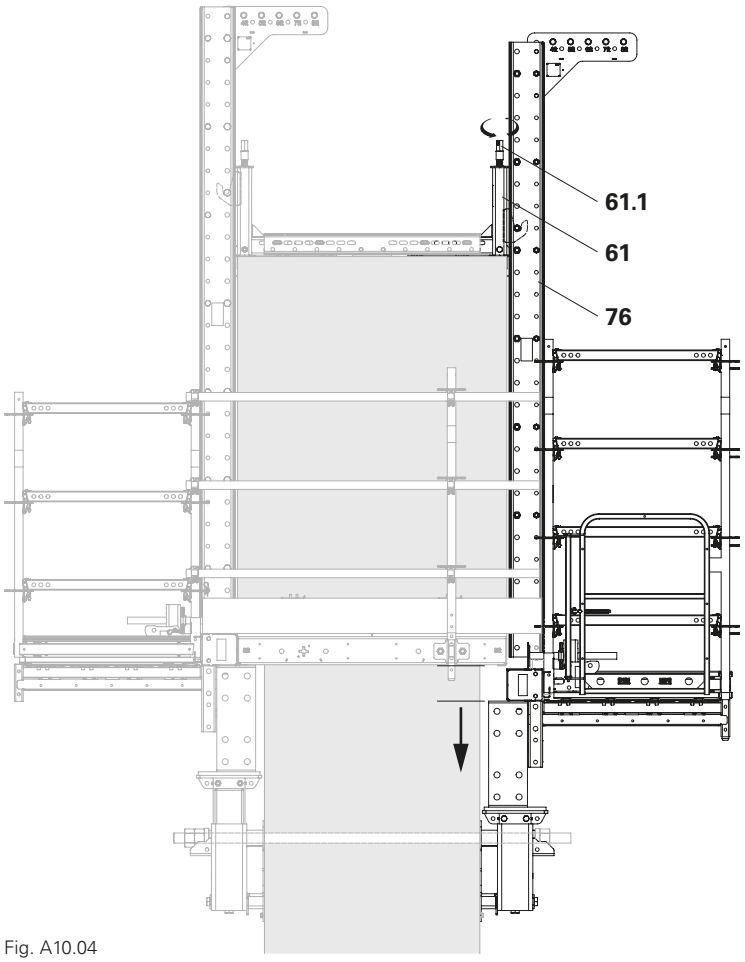


Fig. A10.04

A10 Lowering the platform

- Attach the load at the centre of gravity.
- Make sure that the Climbing Rail RCS (**76**) is in the vertical position.
- Hook (**61.2**) of the StageStriker VPS 6,600 lb-3,000 kg (**61**) must not jam.
- During the lifting process, guide the assembly with ropes to prevent unintentional swinging.

7. Attach the crane lifting gear to the 4-ft sleeve on the Gallows VPS (**70**).
8. Lift the assembly off the StageStriker VPS 6,600 lb-3,000 kg (**61**).
9. Use the crane to remove the first assembly and place it horizontally on a stable and level surface near the next place of use or bring it to the assembly/disassembly site.

(Fig. A10.05)

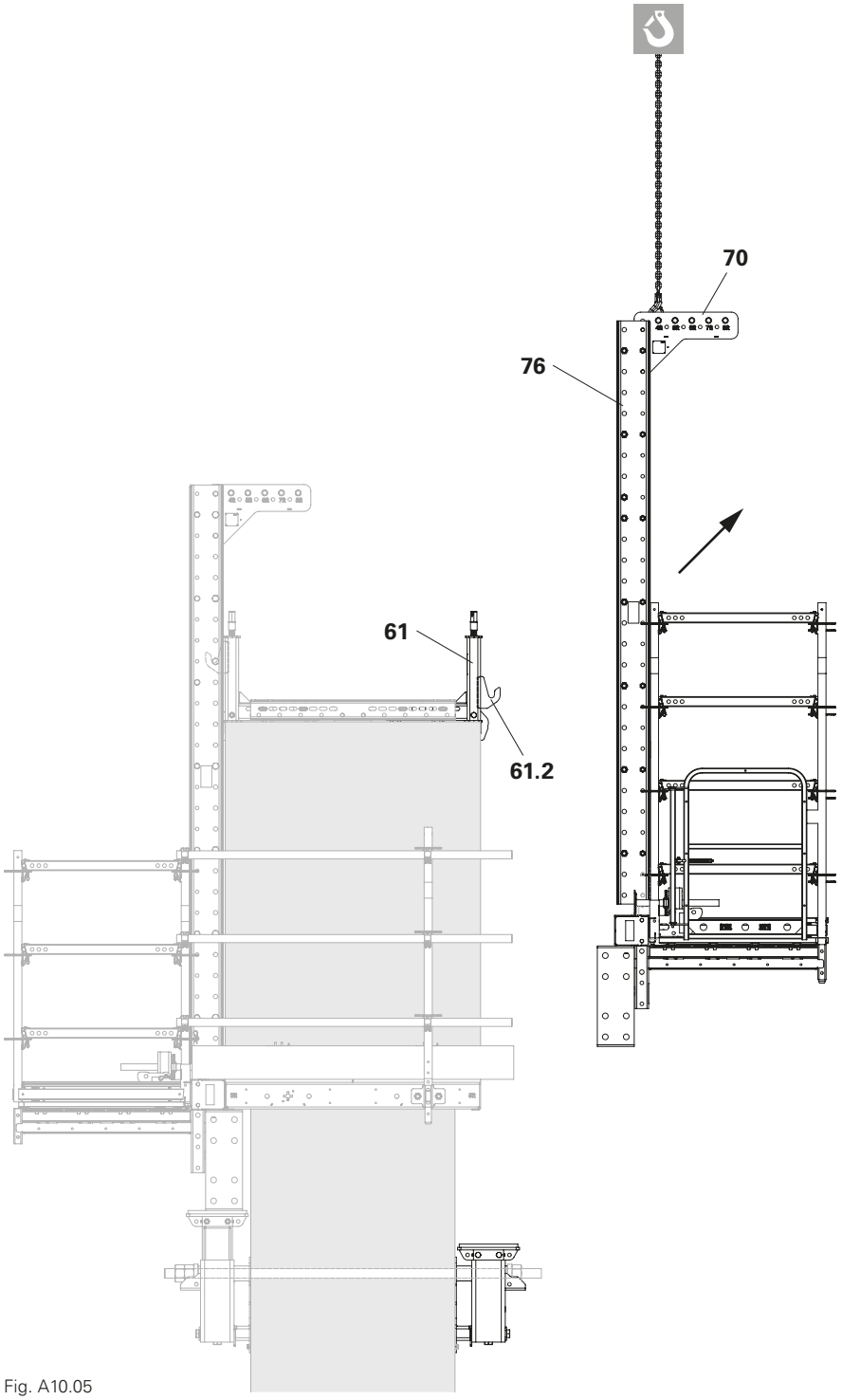


Fig. A10.05

Before the second Support Bracket VPS (**40**) is lowered, the first assembly must already be removed.

10. Place nut AF 46 on the central spindle (**40.1**).
11. Place the torque multiplier on the nut AF 46.
12. Turn the central spindle (**40.1**) anticlockwise.
13. Lower the Support Bracket VPS (**40**) down to the stop.

→ IPE 600 VARIOKIT is free.
(Fig. A10.06)

Are all the hooks of the StageStrikers VPS 6,600 lb-3,000 kg in their proper position beneath the sleeve?

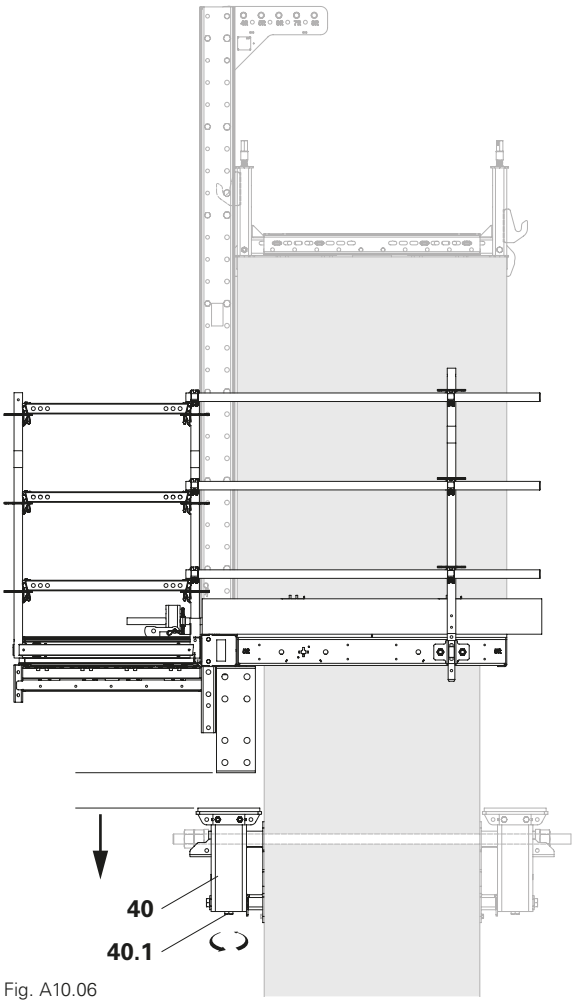


Fig. A10.06

14. Lower the Climbing Rail RCS (**76**) onto the StageStriker VPS 6,600 lb-3,000 kg (**61**) from a safe working place with the adjusting screw (**61.1**).
(Fig. A10.07)

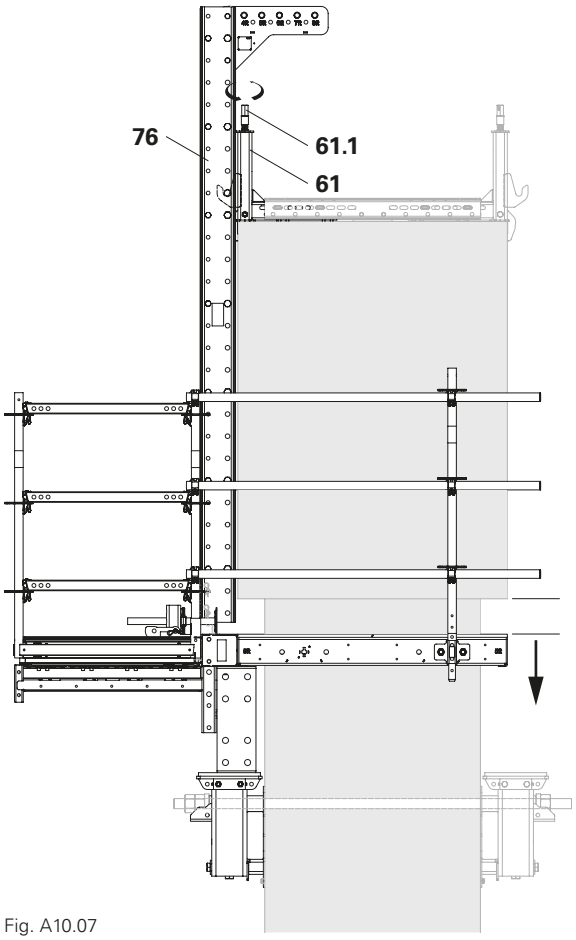


Fig. A10.07

A10 Lowering the platform

- The position of the crane lifting gear on the Gallows VPS (**70**) is dependent on the panel size.
- Attach the load at the centre of gravity.
- Make sure that the Climbing Rail RCS (**76**) is in the vertical position.
- The hook (**61.2**) of the StageStriker VPS 6,600 lb-3,000 kg (**61**) must not jam.
- During the lifting process, guide the assembly with ropes to prevent unintentional swinging.

15. Attach the crane lifting gear to the Gallows VPS (**70**).
16. Lift the assembly off the StageStriker VPS 6,600 lb-3,000 kg (**61**).
17. Use the crane to remove the second assembly and place it horizontally on a stable and level surface near the next place of use or bring it to the disassembly site.

(Fig. A10.08)

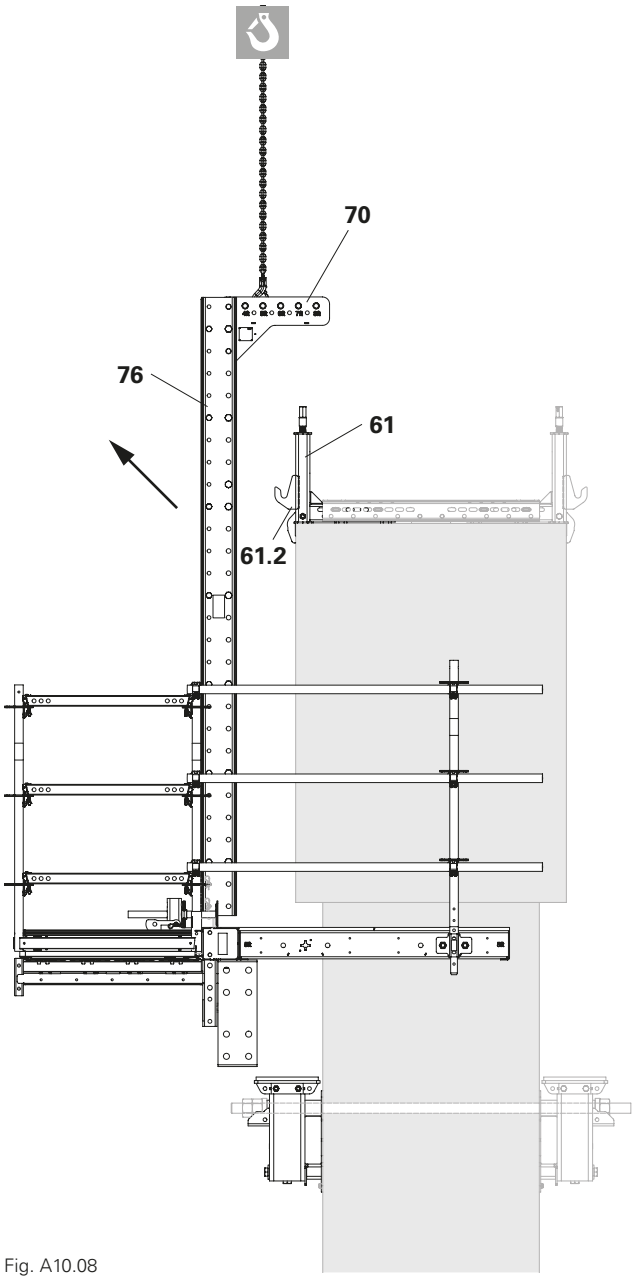


Fig. A10.08

18. Dismantle
Steel Waler Universal SRU U120 (**54**) and StageStriker VPS 6,600 lb-3,000 kg (**61**) from a safe working place.
19. Remove the Support Bracket VPS (**40**) and threaded rod M56 (**42**) from a safe working place.

(Fig. A10.09)

Danger

Components may fall down!
This can lead to serious injuries or even death.
⇒ No one is allowed to stand beneath the disassembly site.

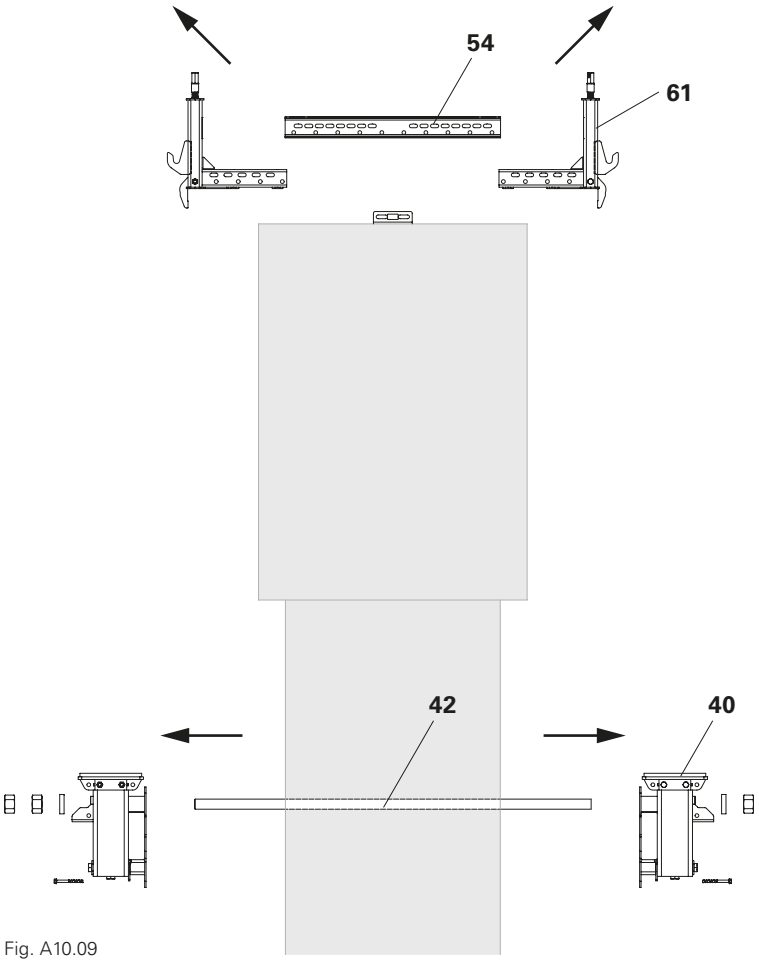
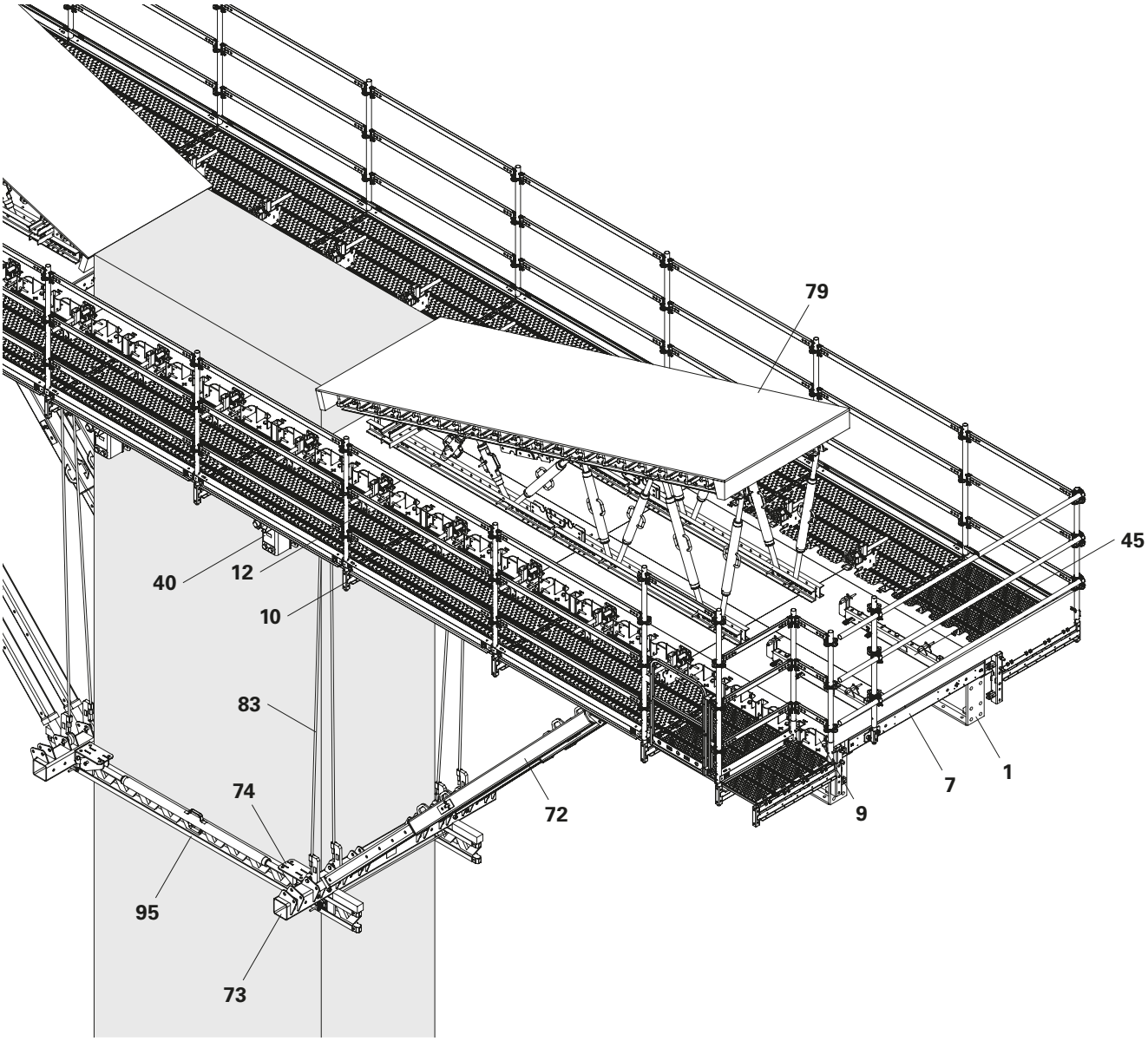


Fig. A10.09

Overview of hammerhead formwork

Main components



1 IPE 600 3.00 m VARIOKIT
7 Panel VPS
9 Speed Beam VPS 2.00 m
10 Platform Bracket VPS 1.00 m
12 Sideform Holder VPS
40 Support Bracket VPS
45 Stopend Connector VPS
72 Strut VARIOKIT
73 Strut Traverse VPS
74 Traverse Connector VPS
79 Formwork rafters
83 Tie Rod DW20 spec. Length
95 Project-specific support
129 Multi Panel VPS

A Multi Panel VPS can also be used instead of a Panel VPS.

Note

If a Multi Panel VPS is used, the lower load-bearing capacity must be taken into account!

List of components

Pos. no.	Component name	Article no.
1	IPE 600 VARIOKIT	–
4	Y-Brace VPS	137330
5	Fitting Pin Ø21 x 120	104031
6	Cotter Pin 4/1 ga	018060
7	Panel VPS (red)	–
9	Speed Beam VPS 2.00 m	136806
10	Platform Bracket VPS 1.00 m	137149
11	Platform Bracket VPS 1.50 m	137153
12	Sideform Holder VPS	137141
18	Longitudinal Beam VARIOKIT	–
21	Steel Deck UDG-2	–
40	Support Bracket VPS	137423
41	Anchor Bolt SW21 Ø14 x 150	132889
42	Threaded Rod M56	–
43	Nut M56	–
44	Washer M56	–
45	Stopend Connector VPS	137357
46	Round sling	–
59	Formwork package	–
60	Front formwork	–
72	Strut VARIOKIT	–
73	Strut Traverse VPS	137490
74	Traverse Connector VPS	137503
75	Traverse Extension VPS	137558
79	Formwork rafters	-
80	Fitting Pin Ø26 x 120	111567
81	Cotter Pin 5/1 ga	022230
82	Articulated Spanner VRB DW20	125741
83	Tie Rod DW20 spec. Length	030700
84	Hex Nut AF 36/60 DW 20 coat	114440
89	Screw ISO 4014-M24 x 220-10.9	106797
90	Hex-Nut ISO 4032-M24-10	706488
91	Heavy-Duty Spindle SLS	PACKAGE
92	Tension belt 2.5 m	-
93	Eye Bolt M20 x 40	710130
94	Hex-Nut ISO 4032-M20-8-ga	710334
95	Project-specific support	-
96	Project-specific anchoring	-
129	Multi Panel VPS (yellow)	-

Tab. 05

Standard work flow

1. Carry out concreting of the concrete columns using the tie point for Support Bracket VPS.
2. Fit the Support Bracket VPS onto the concrete columns.
3. Place the hammerhead platform on the concrete columns – with a crane.
4. Reinforcement work.
5. Close formwork.
6. Concrete the hammer head.
7. Remove formwork.
8. Lower platform.
9. Separate platform.
10. Set the platform halves down on the ground – with a crane.
11. Connect platform halves.
12. Place the hammerhead platform on the concrete columns – with a crane.

Tightening torques

Unless otherwise indicated, PERI recommends the following guide values for screw connections as "hand-tightened" tightening torques $M_{A,hand\text{-}tightened}$.
These guide values are based on EN 15048 with minimum Safety Factor 3 against breakage.

Quality class	**Quality 4.6**		**Quality 8.8 and 10.9**
Lubrication	**Lightly oiled**	**MoS2**	**Undefined**
Screw M8	8 Nm	6.6 Nm	8 Nm
Screw M10	16 Nm	13.0 Nm	16 Nm
Screw M12	30 Nm	23.0 Nm	30 Nm
Screw M16	65 Nm	54.0 Nm	65 Nm
Screw M20	100 Nm		100 Nm
Screw M24	150 Nm		150 Nm
Screw M30	260 Nm		260 Nm
Screw M36	350 Nm		350 Nm
Tightening torques have been determined for the following components:			
Scaffolding tube coupling	50 Nm		

Tab. 06

Overview of hammerhead formwork

Bolts and nuts used

		ISO bolts						US bolts					
		ISO		Length	Grade	Coat	Quantity	Standard		Length	Grade	Coat	Quantity
IPE 600 3.00 m VARIOKIT	Bolt	4017	M30	100	10.9	VZ	8	UNC	1 1/4"	4"	A325	zinc	8
	Nut	4032	M30	–	10	VZ	8	UNC	1 1/4"	–	A325	zinc	8
Longitudinal Beam VARIOKIT	Bolt	4017	M20	60	8.8	VZ	4	UNC	3/4"	2 1/2"	A325	zinc	4
	Nut	4032	M20	–	8	VZ	4	UNC	3/4"	–	A325	zinc	4
Speed Beam VPS 2.00 m + IPE 600 3.00 m VARIOKIT	Bolt	4017	M24	60	8.8	VZ	4	UNC	1"	2 1/2"	A325	zinc	4
	Nut	4032	M24	–	8	VZ	4	UNC	1"	–	A325	zinc	4
Speed Beam VPS 2.00 m + Longitudinal Beam VARIOKIT	Bolt	4017	M20	60	8.8	VZ	4	UNC	3/4"	2 1/2"	A325	zinc	4
	Nut	4032	M20	–	8	VZ	4	UNC	3/4"	–	A325	zinc	4
End Rail Post Holder VPS	Bolt	4017	M24	50	8.8	VZ	2	UNC	1"	2"	A325	zinc	2
	Nut	4032	M24	–	8	VZ	2	UNC	1"	–	A325	zinc	2
Platform Bracket VPS 1.00 m + Platform Bracket VPS 1.50 m	Bolt	4017	M20	120	8.8	VZ	2	UNC	3/4"	5"	A325	zinc	2
	Nut	4032	M20	–	8	VZ	2	UNC	3/4"	–	A325	zinc	2

Tab.07

Strut Traverse VPS and Strut VARIOKIT

Make sure that the spindle thread of the Strut VARIOKIT (**72**) is at the bottom.

Components

Squared timber 50 x 30
72 Strut VARIOKIT
73 Strut Traverse VPS
80 Fitting Pin Ø26 x 120
81 Cotter Pin 5/1 ga

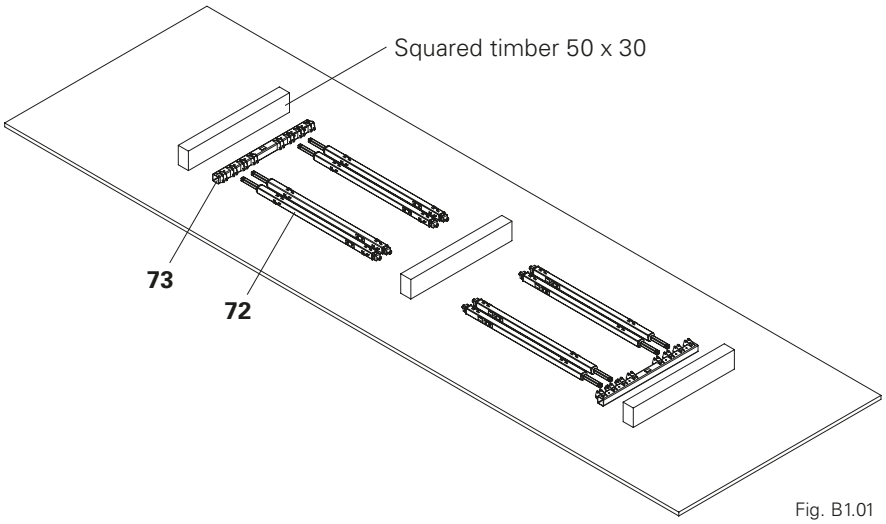


Fig. B1.01

Assembly

1. Lay out squared timbers 50 x 30 on the assembly site.
2. Place the Strut Traverses VPS (**73**) in the specified position.
3. Align Struts VARIOKIT (**72**) with the Strut Traverses VPS (**73**).

(Fig. B1.01)

4. Fit the Struts VARIOKIT (**72**) with fitting pin Ø 26 x 120 (**80**) onto the Strut Traverses VPS (**73**) and secure with Cotter Pins 5/1 ga (**81**).

(Fig. B1.02 + Fig. B1.02a)

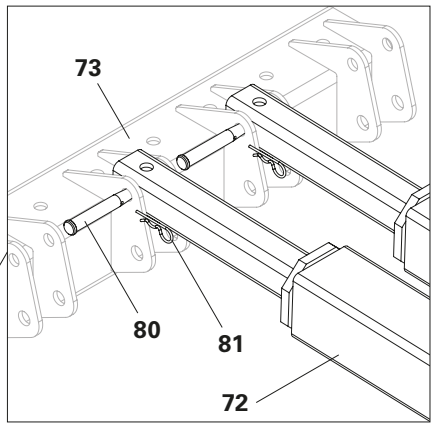


Fig. B1.02a

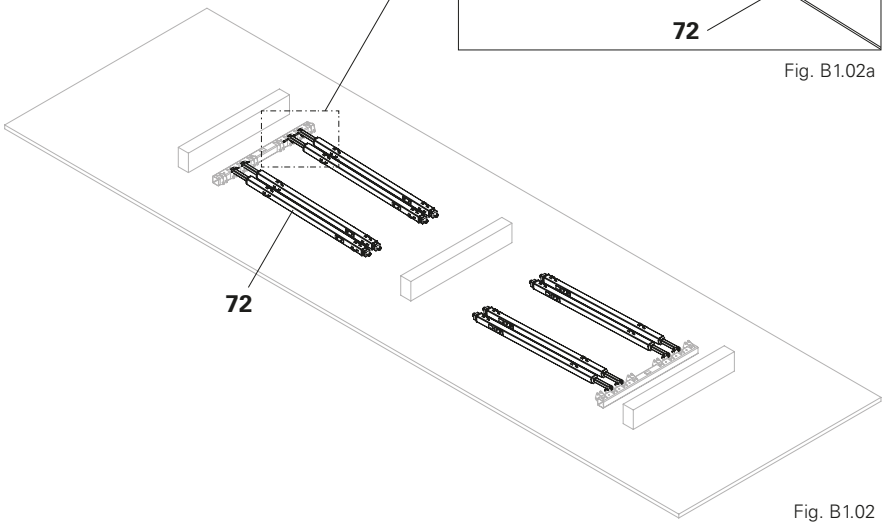


Fig. B1.02

Mounting the girder

Mounting

1. To mount the girder, see section "IPE 600 VARIOKIT" on page 21 or "Longitudinal Beam VARIOKIT" on page 21.
2. Place and position the girder on the squared timbers 50 x 30 with suitable lifting gear.

(Fig. B1.03)

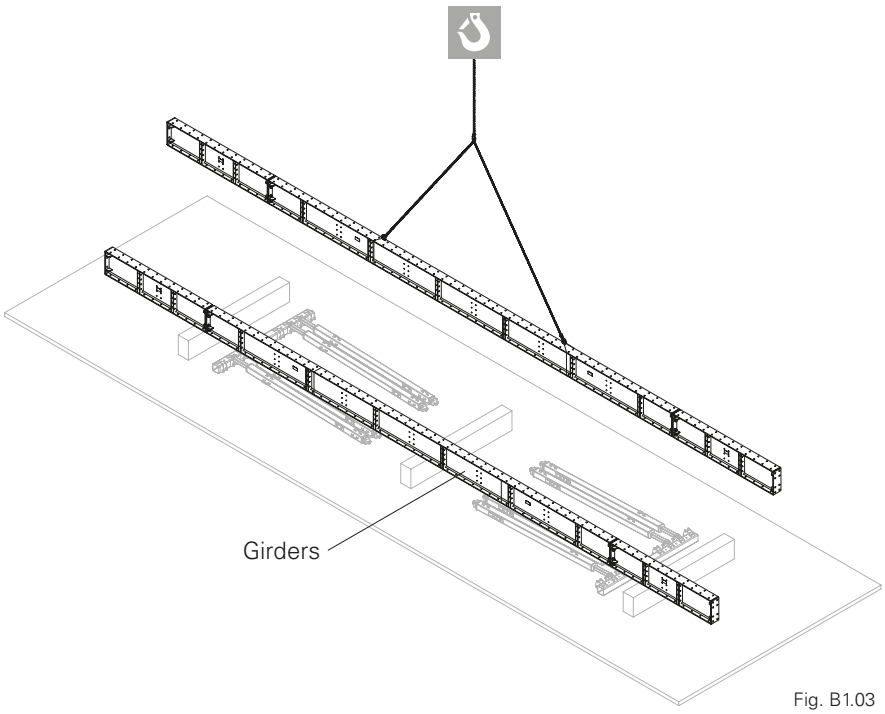


Fig. B1.03

Y-Braces VPS

Components

4 Y-Brace VPS
5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga

Assembly

1. Mount Y-Braces VPS (**4**)See section "Y-Brace VPS" on page 22.

(Fig. B1.04)

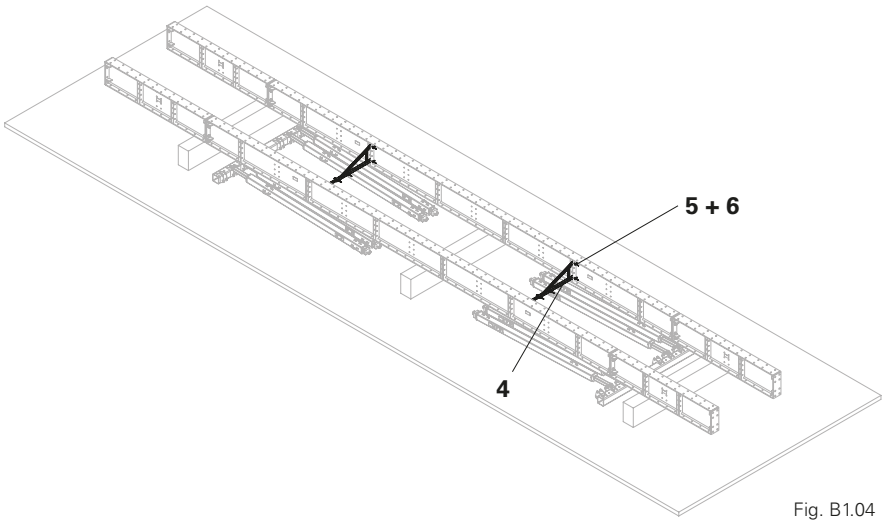


Fig. B1.04

Traverse Connector VPS

Components

14 Bolt ISO 4017 M24 x 60-8.8
15 Hex-Nut ISO 4032-M24-8-ga
74 Traverse Connector VPS

Assembly

1. Fit Traverse Connector VPS (**74**) at the specified position on the girder with 4x bolt ISO 4017 M24 x 60-8.8 (**14**) and Hex-Nut ISO 4032-M24-8-ga (**15**) in each case.
   - Do not tighten the bolts, as this will allow the Strut Traverses VPS (**73**) to be installed more easily.

(Fig. B1.05 + Fig. B1.05a)

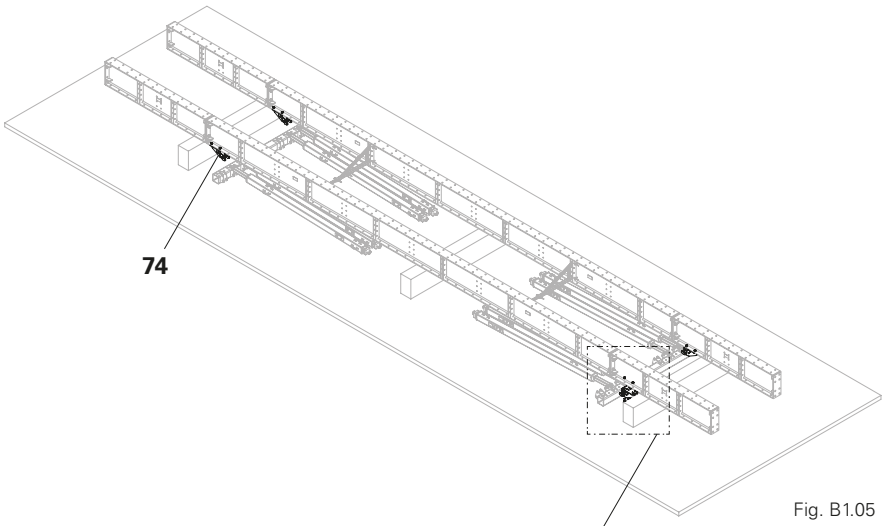


Fig. B1.05

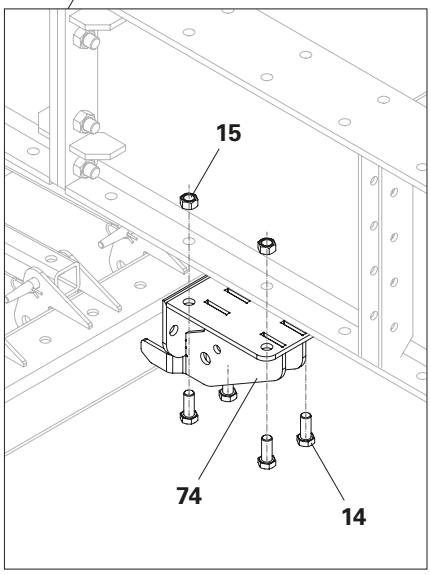


Fig. B1.05a

Attaching the Strut Traverse VPS

Components

89 Screw ISO 4014-M24 x 220-10.9
90 Hex-Nut ISO 4032-M24-10

Assembly

1. Place and position the Strut Traverse VPS (**73**) on the Traverse Connectors VPS (**74**) with suitable lifting gear.
2. Fit Strut Traverse VPS (**73**) onto the Traverse Connectors VPS (**74**) with 2x Screw ISO 4014-M24 x 220-10.9 (**89**) and Hex-Nut ISO 4032-M24-10 (**90**) in each case.
3. Tighten the bolts ISO 4017 M24 x 60-8.8 (**14**) and Hex-Nuts ISO 4032-M24-8-ga (**15**) on the Traverse Connector VPS (**74**).

(Fig. B1.06 – Fig. B1.06c)

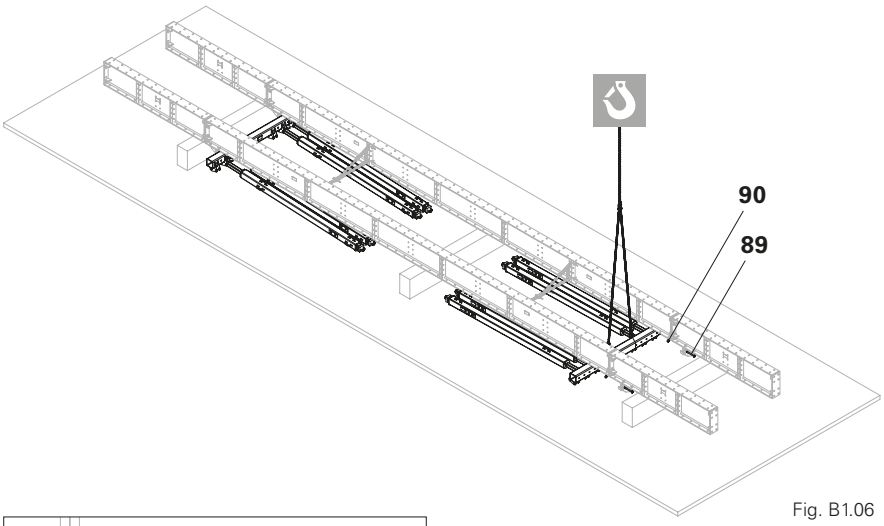


Fig. B1.06

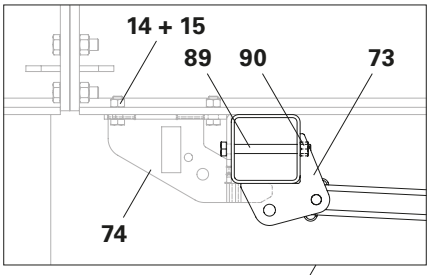


Fig. B1.06c

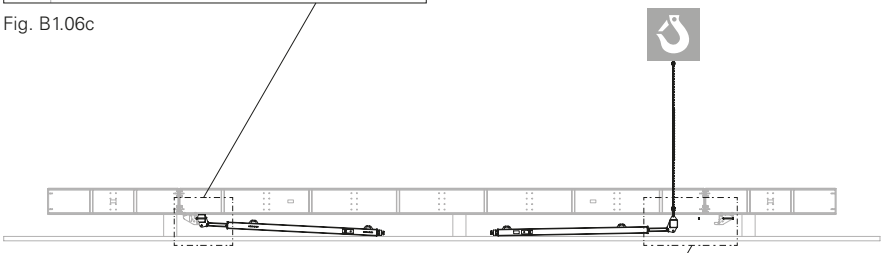


Fig. B1.06a

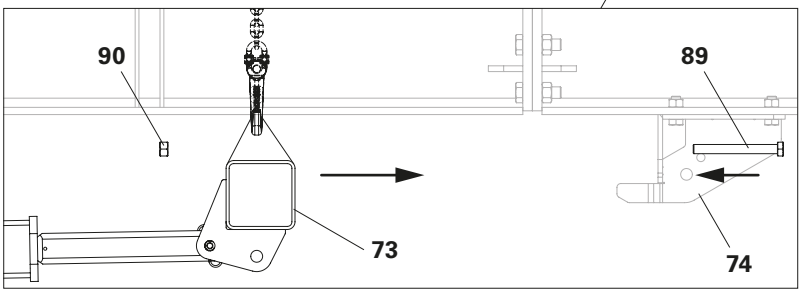


Fig. B1.06b

Mounting the hammerhead platform

The hammerhead platform is mounted in the same way as the platform of the multi-column formwork.

Assembly

1. Mount Speed Beam VPS 2.00 m (**9**)See section “Speed Beam VPS 2.00 m” on page 23.
2. Mount panels VPS (**7**)See section “Fitting the Panel VPS” on page 24.
3. Fit the remaining Speed Beams VPS 2.00 m (**9**)See section “Other Speed Beams VPS 2.00 m” on page 25.
4. Fit the platform console brackets (**10/11**)See section “Platform Bracket VPS” on page 26.
5. Fit the Steel Decks UDG-2 (**21**) See section “Decks” on page 27.
6. Fit the Sideform Holders VPS (**12**) See section “Sideform Holder VPS” on page 28.
7. Fit anti-fall protection, see sections “Prepare the guardrail” on page 29, “Connector VPS-Flex” on page 30, “Guardrail post” on page 31, “Guardrails” on page 32, “Safety Entry Gate UPS 100” on page 33, “Steel Toe Board UPY” on page 33 and “Completing the anti-fall protection” on page 34.
8. Fit the Stopend Connector VPS (**45**) See section “Stopend Connector VPS” on page 36.

(Fig. B1.07)

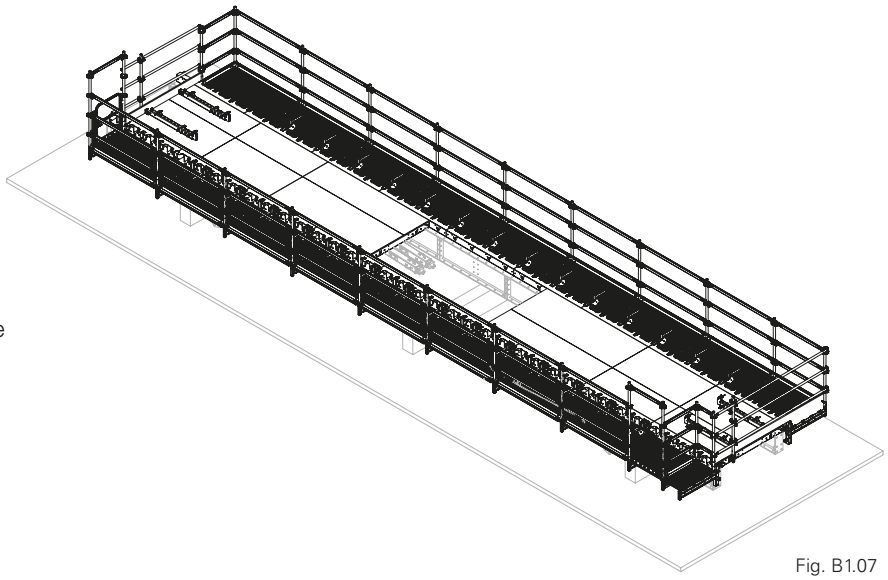


Fig. B1.07

Support Bracket VPS

The Support Bracket VPS (**40**)
- serves as a support for the IPE 600 VARIOKIT (**1**) or the Longitudinal Beam VARIOKIT (**18**).
- is fixed to rectangular or round bridge piers.

Warning

- The load-bearing capacity of the Support Bracket VPS (**40**) is only ensured if the support is positioned in a perpendicular manner and the threaded rod is pretensioned at the concrete pier with the specified tightening torque.
  ⇒ Align Support Bracket VPS (**40**) vertically and fix it with Anchor Bolt SW21 Ø14 x 150 (**41**).
  ⇒ Tightening torque for
  – Threaded rod M48: 1,500 – 2,500 Nm
  – Threaded rod M56: 1,500 – 2,500 Nm
- Moving components!
  Hands are at risk of being crushed when the support is fitted onto the threaded rods.
  ⇒ Wear suitable protective gloves.
  ⇒ Use appropriate tools.

When using a torque multiplier, the threaded rod should not protrude more than 15 mm on the side of the single nut. On the opposite side, the threaded rod must be secured with a nut and locknut. The projection of the thread over the lock nut results from the length of the threaded rod.

Components for four Support Brackets

40	Support Bracket VPS	4x
41	Anchor Bolt SW21 Ø14 x 150	4x
42	Threaded rod M56	2x
43	Nut for M56	6x
44	Washer for M56	4x

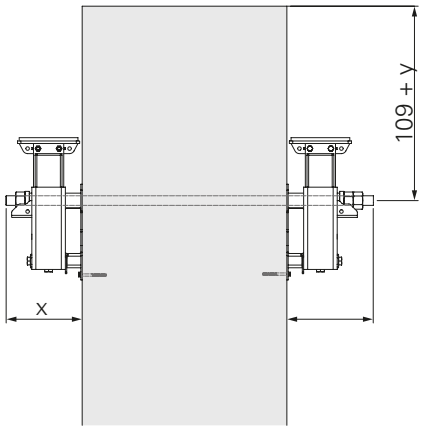
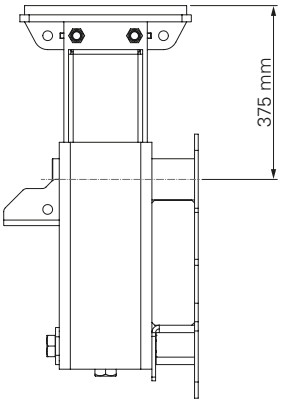


Fig. B2.01c

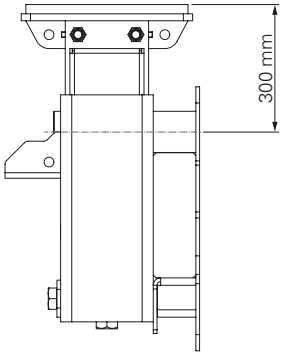
- y = Height inside formwork rafter (**79**)
- "x" depends on the nut used and should be between 38.5 cm and 41.5 cm.

- The minimum extension for deshuttering is 225 mm, which corresponds to a distance of 50 mm for striking operations between the lower edge of the main beam and the upper edge of the support. (Fig. B2.01d – Fig. B2.01f)
- According to static specifications, the following threaded rods can be used:
  – Threaded rod M48,
  – Threaded rod M56.



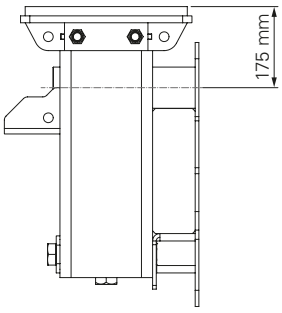
Maximum extension: 375 mm

Fig. B2.01d



Ideal extension: 300 mm

Fig. B2.01e



Attachment point: 175 mm

Fig. B2.01f

B2 Mounting the hammerhead platform

Assembly

1. Insert the threaded rod (**42**) into the intended position on the bridge pier.
2. Check the projections of the threaded rod (**42**) on the pier. (Fig. B2.01c)
3. Using a lifting tool and crane belt, place the Support Bracket VPS (**40**) on the threaded rod (**42**).
4. Place washer (**44**) and nut (**43**) on threaded rod (**42**) and tighten slightly.
5. Vertically align Support Bracket VPS (**40**) and secure it with Anchor Bolt SW21 Ø14 x 150 (**41**).

Unintentional twisting is prevented.

6. Place the opposite Support Bracket VPS (**40**) on the threaded rod (**28**) with a projection of 53 cm.
7. Place the washer (**44**), nut (**43**) and lock nut (**43**) on top and tighten them slightly.
8. Vertically align Support Bracket VPS (**40**) and secure it with Anchor Bolt SW21 Ø14 x 150 (**41**).

Unintentional twisting is prevented.

9. Tighten the nuts (**43**) to required torque on threaded rod (**42**).

Both Support Bracket VPS (**40**) are mounted on the pier and clamped.

10. Turn the central spindle (AF 46).
    → The required height level is set. (Fig. B2.01b)

(Fig. B2.01 + Fig. B2.01a)

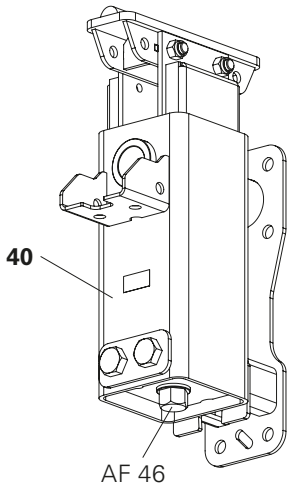


Fig. B2.01b

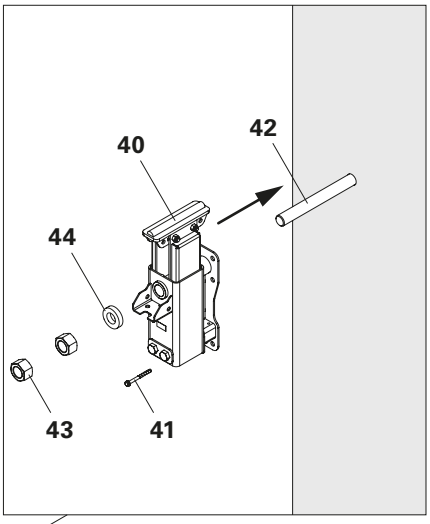


Fig. B2.01a

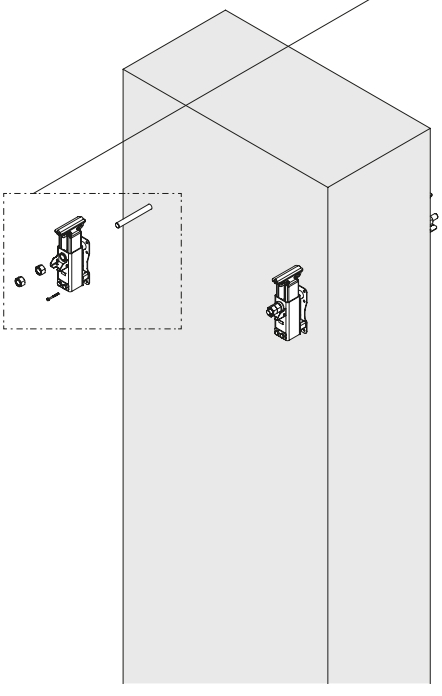


Fig. B2.01

Mounting the platform

Danger

Components may fall off the VPS Platform or the VPS Platform may collapse!
This can lead to serious injuries or even death.

⇒ Remove all loose parts from the VPS Platform before mounting.
⇒ Do not stand under the suspended load.
⇒ Guide the VPS Platform with ropes when moving and mounting it.

- The Fitting Pins Ø21 x 120 (**5**) in the Speed Beam VPS 2.00 m are used as attachments point for the platform.
- Each Fitting Pin Ø21 x 120 (**5**) has an attachment load of 25 kN.
- For higher loads, use double Fitting Pins Ø21 x 120 with a suitable round sling (**46**) as an attachment point for a maximum attachment load of 50 kN. (Fig. B2.02b)

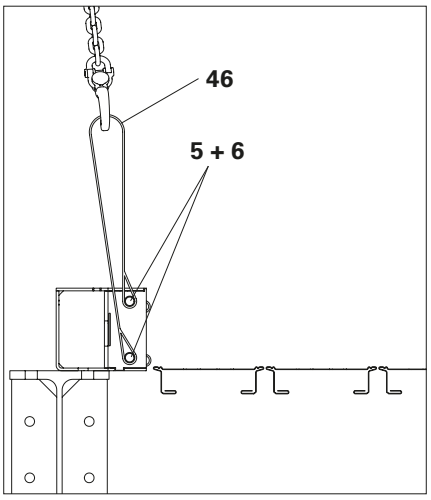


Fig. B2.02b

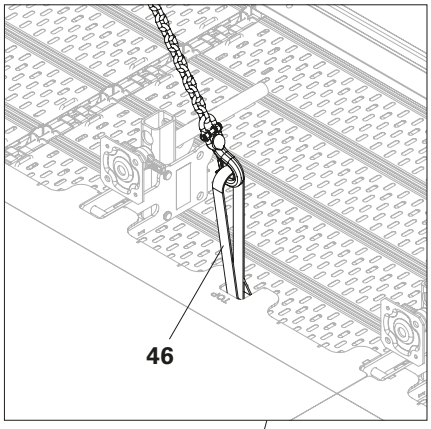


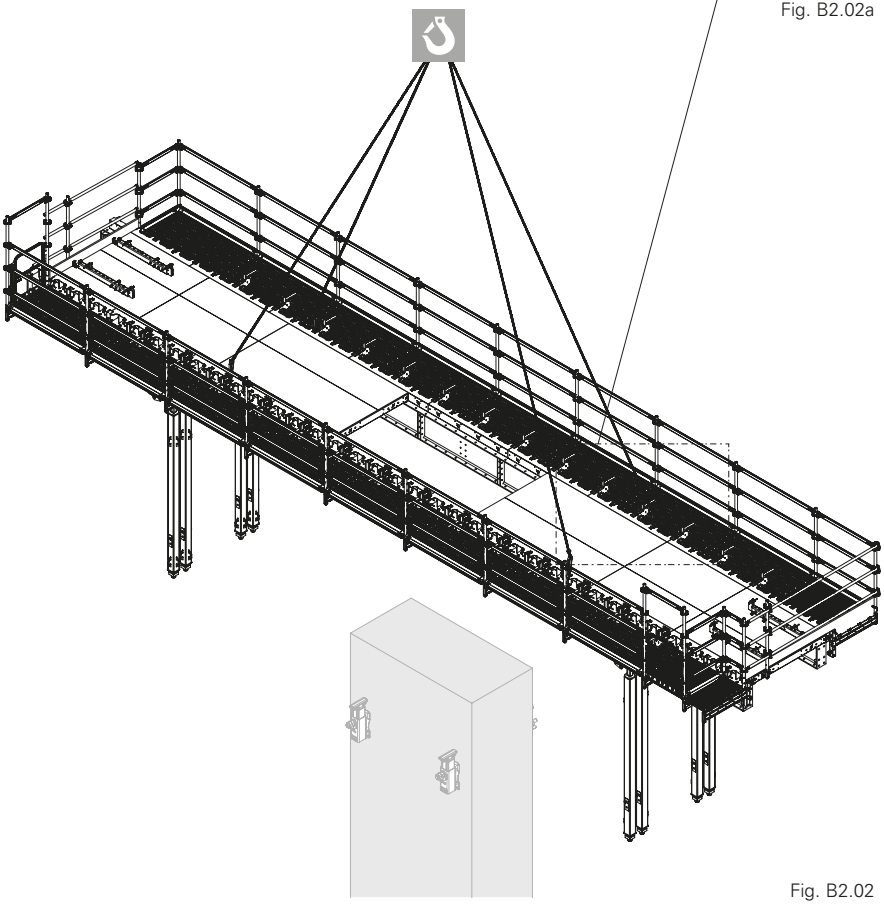
Fig. B2.02a

Mounting

1. Temporarily remove the Sideform Holders VPS (**12**) at the attachment points.
2. Attach the VPS Platform to the crane.
3. Mount the VPS platform on Support Bracket VPS (**40**) with IPE 600 VARIOKIT (**1**).

(Fig. B2.02 + Fig. B2.02a)

Check the position of the VPS Platform.


Fig. B2.02

Securing the hammerhead platform

Fit the components from a safe working position, e.g. man lifter.

Components

92 Tension Belt 2.5 m
93 Eye Bolt M20 x 40
94 Hex-Nut ISO 4032-M20-8-ga

Assembly

1. Fasten the Eye Bolt M20 x 40 (**93**) to the IPE 600 VARIOKIT (**1**) with Hex-Nut ISO 4032-M20-8-ga (**94**).
2. Hook the Tension Belt 2.5 m (**92**) into the Eye Bolts M20 x 40 (**93**).
3. Tighten the Support Bracket VPS (**40**) with a Tension Belt 2.5 m (**92**).

(Fig. B3.01 – Fig. B3.01b)

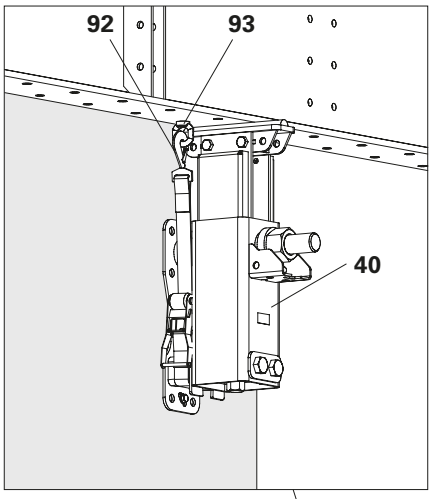


Fig. B3.01b

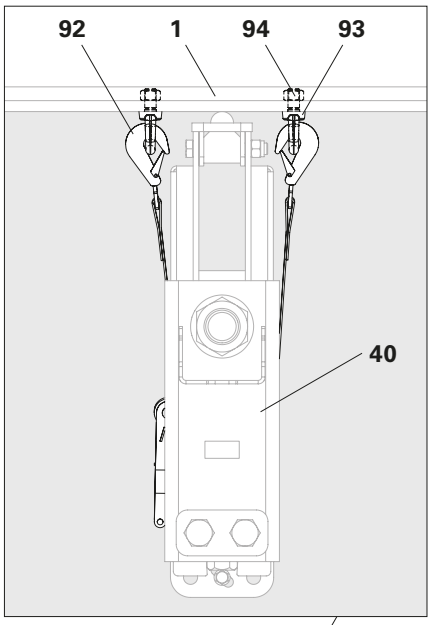


Fig. B3.01a

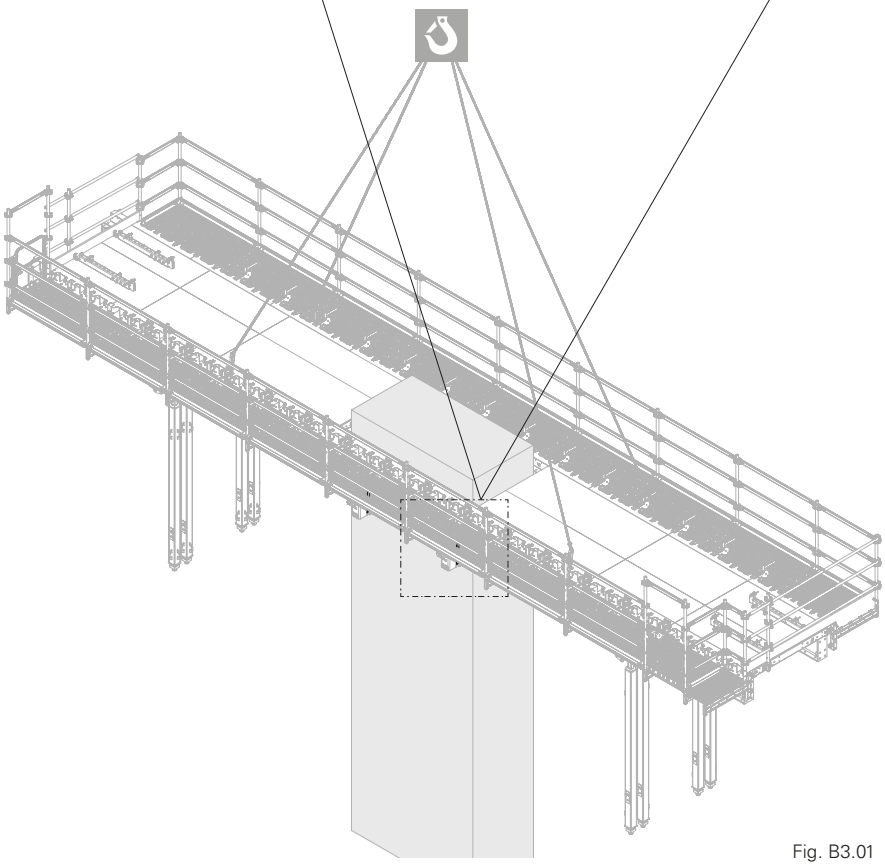


Fig. B3.01

Fitting the support

Project-specific support (**95**) must be statically verified.

Components

95 Project-specific support

Assembly

1. Fit the project-specific support (**95**) onto the pier.

(Fig. B3.02 + Fig. B3.02a)

Check the position of the project-specific support (**95**).
This facilitates further assembly.

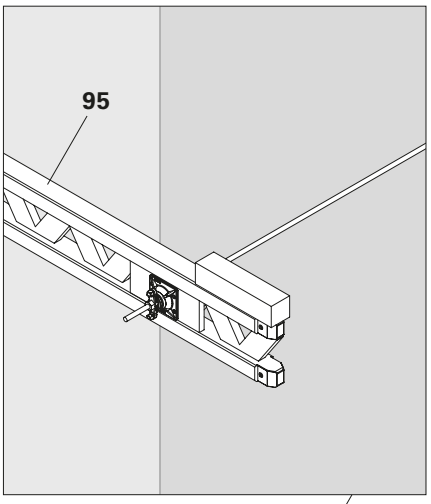


Fig. B3.02a

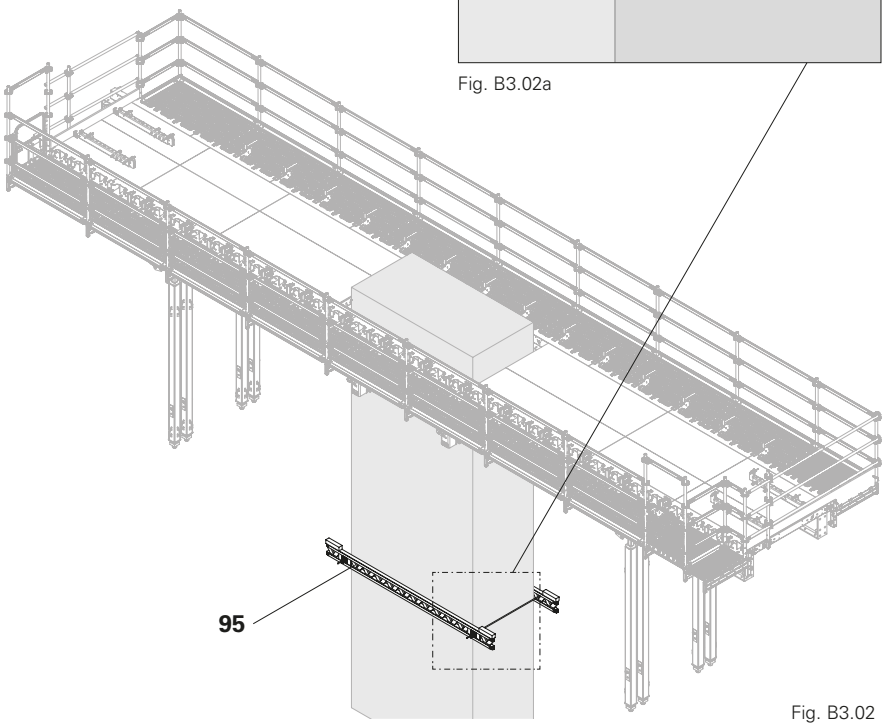


Fig. B3.02

Mounting the Strut Traverse VPS

Components

73 Strut Traverse VPS

Assembly

1. Place and position the Strut Traverse VPS (**73**) on the project-specific support (**95**) with suitable lifting gear.

(Fig. B3.03 + Fig. B3.03a)

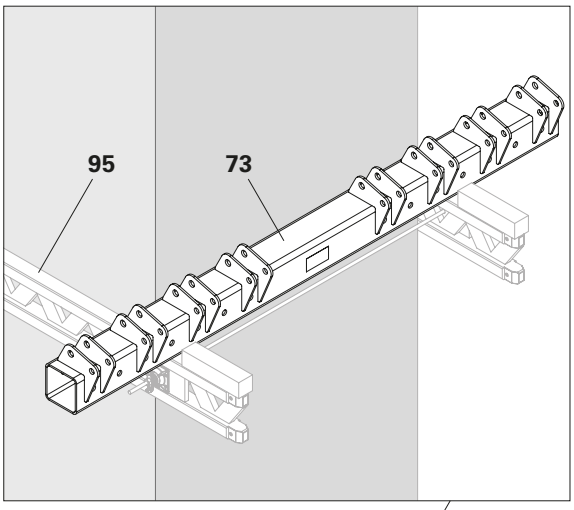


Fig. B3.03a

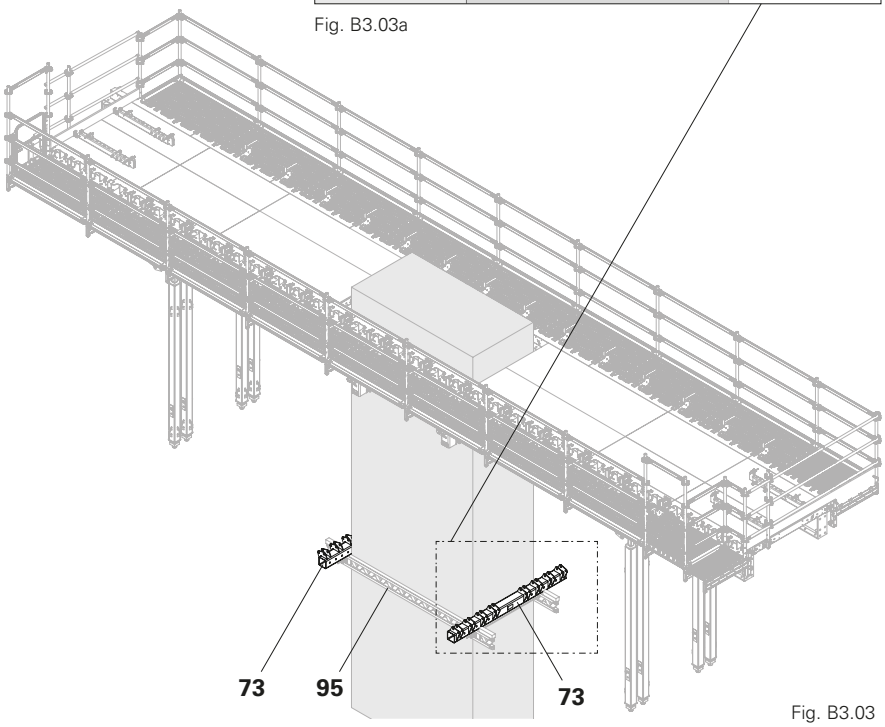


Fig. B3.03

Traverse Connector VPS

Components

74 Traverse Connector VPS
89 Screw ISO 4014-M24 x 220-10.9
90 Hex-Nut ISO 4032-M24-10

Assembly

1. Fit Traverse Connectors VPS (**74**) onto the Strut Traverses VPS (**73**) with 2x Screw ISO 4014-M24 x 220-10.9 (**89**) and Hex-Nut ISO 4032-M24-10 (**90**) in each case.

(Fig. B3.04 – Fig. B3.04b)

The Traverse Connectors VPS (**74**) can also be pre-assembled on the floor and positioned with the Strut Traverse VPS (**73**).

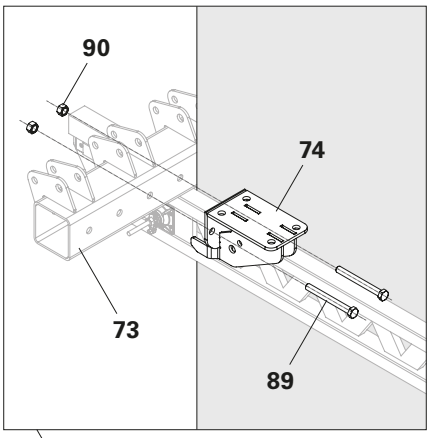


Fig. B3.04a

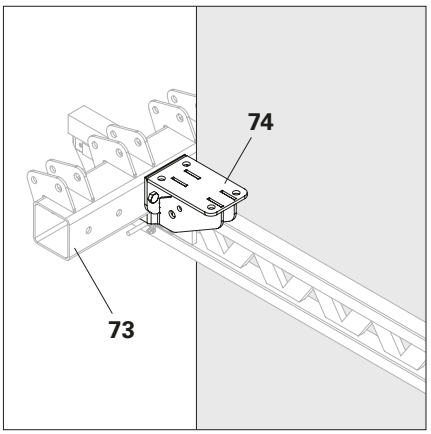


Fig. B3.04b

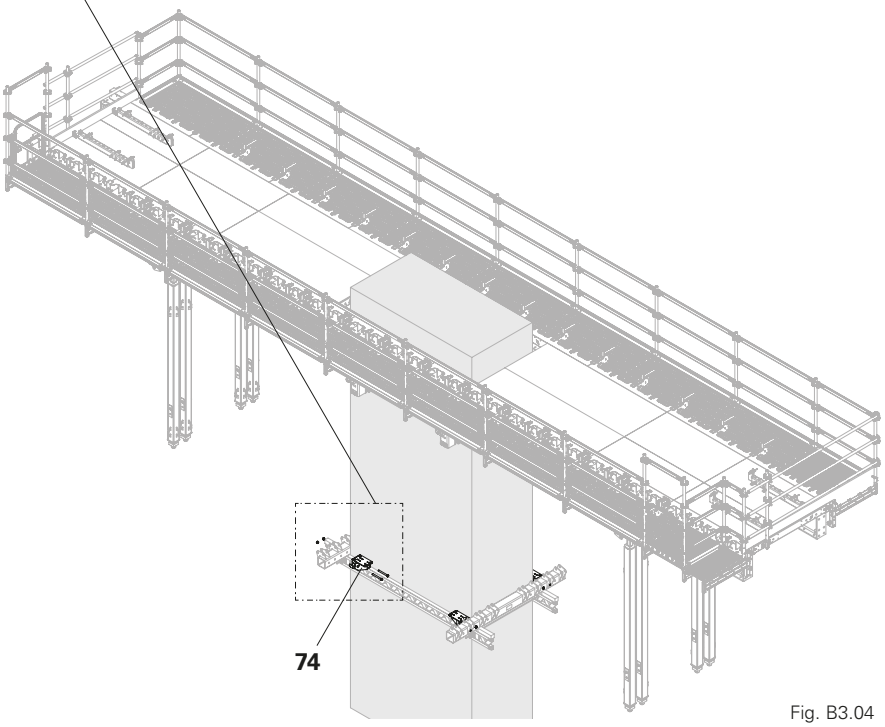


Fig. B3.04

Heavy-Duty Spindle SLS

Components

5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga
91 Heavy-Duty Spindle SLS

Assembly

1. Mount the Heavy-Duty Spindles SLS (**91**) on the Traverse Connector VPS (**74**) with Fitting Pin Ø21 x 120 (**5**) and secure with Cotter Pin 4/1 ga (**6**).
2. Tighten the Heavy-Duty Spindles SLS (**91**) in such a way that the brace Strut Traverses VPS (**73**) are clamped to the concrete columns.

(Fig. B3.05 – Fig. B3.05b)

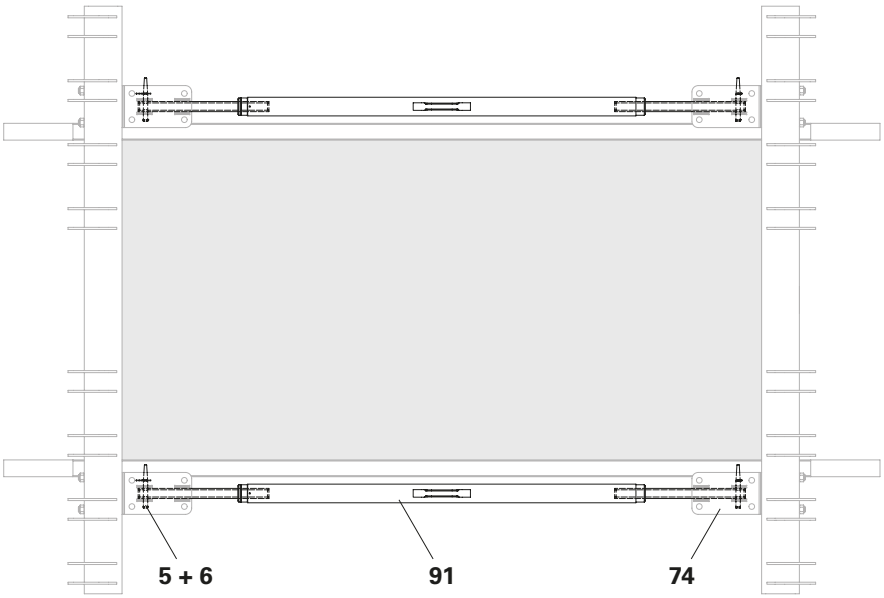


Fig. B3.05b

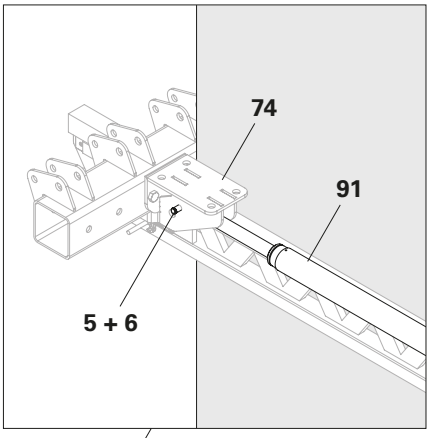


Fig. B3.05a

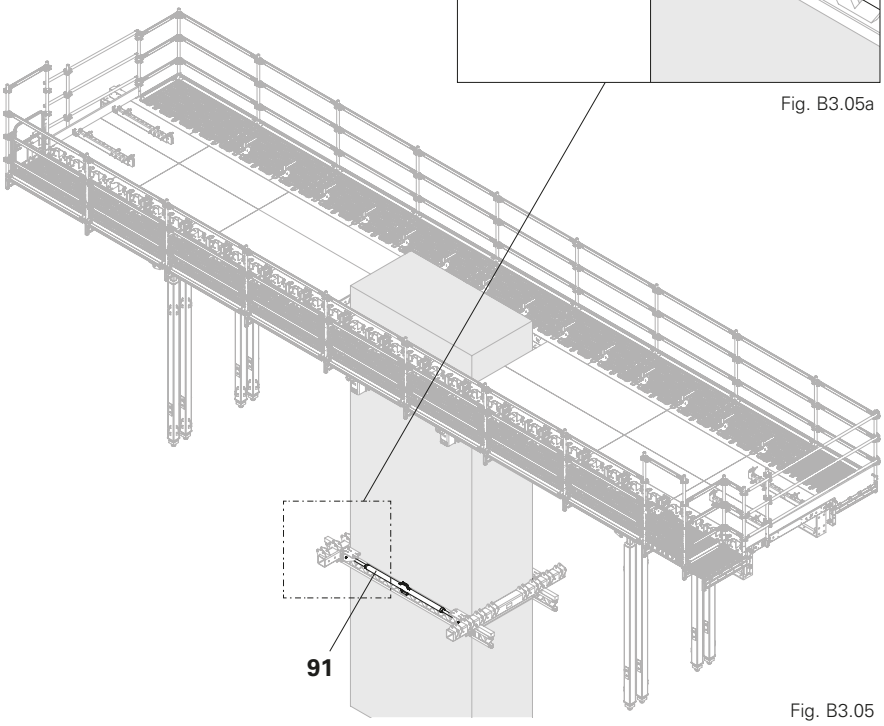


Fig. B3.05

Bracing

Fit the components from a safe working position, e.g. man lifter.

Components

82 Articulated Spanner VRB DW20
83 Tie Rod DW20 spec. Length
84 Hex Nut AF 36/60 DW 20 coat

Assembly

1. Cut Tie Rod DW20 spec. Length (**83**) to the specified length.
2. Fit Articulated Spanner VRB DW20 (**82**) onto Tie Rod DW20 spec. Length (**83**).
3. Screw Hex Nut AF 36/60 DW 20 coat (**84**) onto Tie Rod DW20 spec. Length (**83**).
4. Insert Tie Rod DW20 spec. Length (**83**) into the IPE 600 VARIOKIT (**1**).
5. Screw Hex Nut AF 36/60 DW 20 coat (**84**) onto Tie Rod DW20 spec. Length (**83**) on the IPE 600 VARIOKIT.
6. Fit the Articulated Spanner VRB DW20 (**82**) onto the Strut Traverse VPS (**73**) with fitting pin Ø 30 VRB (**82.1**) and secure with Cotter Pin 4/1 ga (**82.2**).

(Fig. B3.06 – Fig. B3.06b)

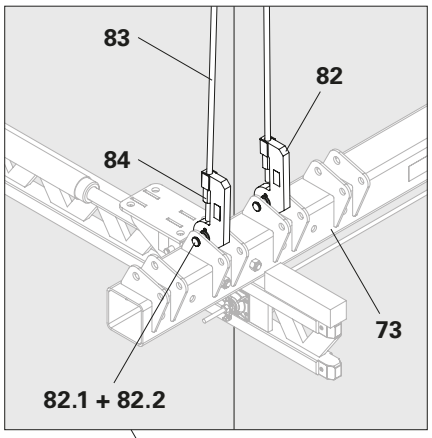


Fig. B3.06a

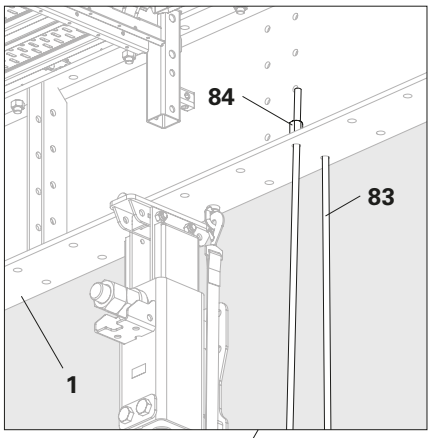


Fig. B3.06b

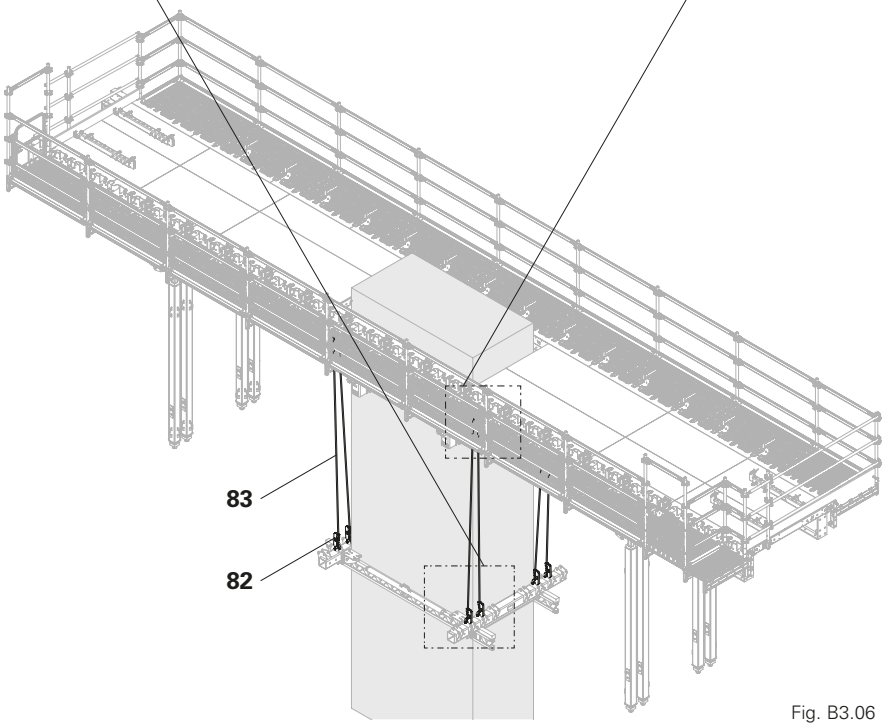


Fig. B3.06

Mounting the Struts VARIOKIT

Components

80 Fitting Pin Ø26 x 120
81 Cotter Pin 5/1 ga

Assembly

1. Spindle out the Struts VARIOKIT (**72**) to the specified length.
2. Swivel the Struts VARIOKIT (**72**) into the Strut Traverse VPS (**73**).
3. Fit the Struts VARIOKIT (**72**) with fitting pin Ø 26 x 120 (**80**) onto the Strut Traverses VPS (**73**) and secure with Cotter Pins 5/1 ga (**81**).

(Fig. B3.07 – Fig. B3.07b)

Move the VARIOKIT struts into position with a lifting block or similar.

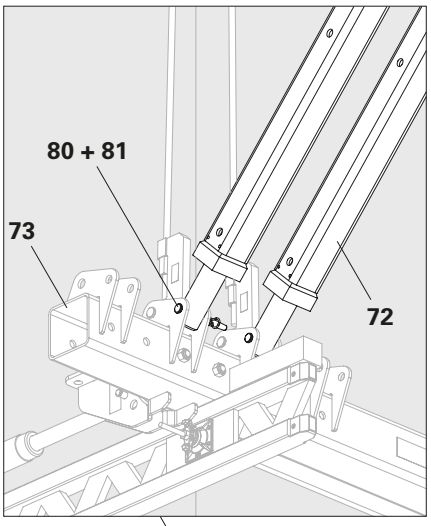


Fig. B3.07a

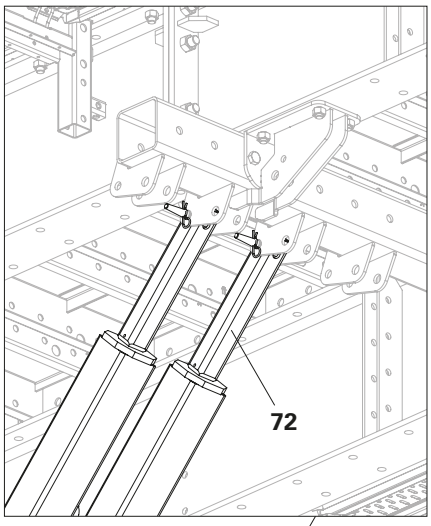


Fig. B3.07b

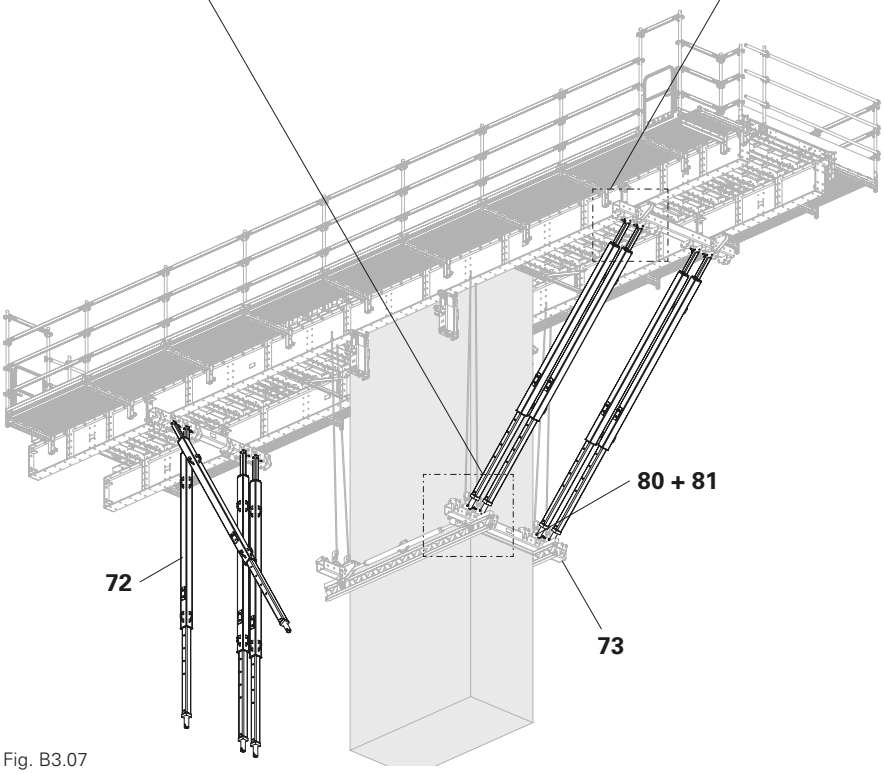


Fig. B3.07

Fitting formwork rafters

Danger

Formwork rafters may fall down during transport!
This can lead to serious injuries or even death.
⇒ Do not stand under the suspended load.
⇒ Guide units with ropes.

Components

79 Formwork rafters
96 Project-specific anchoring

Assembly

1. Attach the formwork rafters (**79**) to the crane.
2. Place the formwork rafters (**79**) at the specified position on the hammerhead platform.
3. Fix the formwork rafters (**79**) to the pier with project-specific anchoring (**96**).

(Fig. B4.01 – Fig. B4.01b)

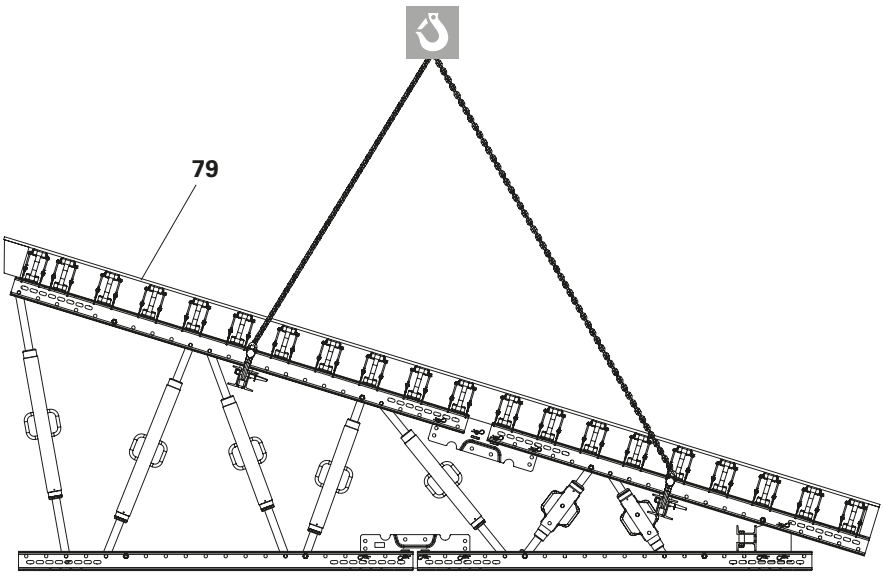


Fig. B4.01b

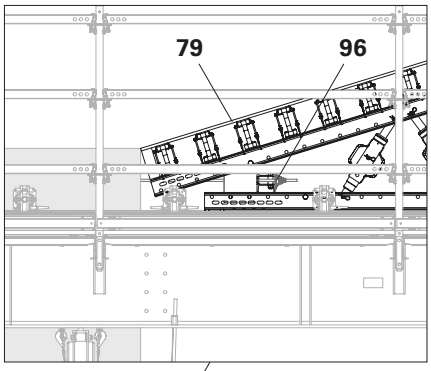


Fig. B4.01a

Fig. B4.01

4. Fit the second set of formwork rafters (**79**) in the same way.
(Fig. B4.02)

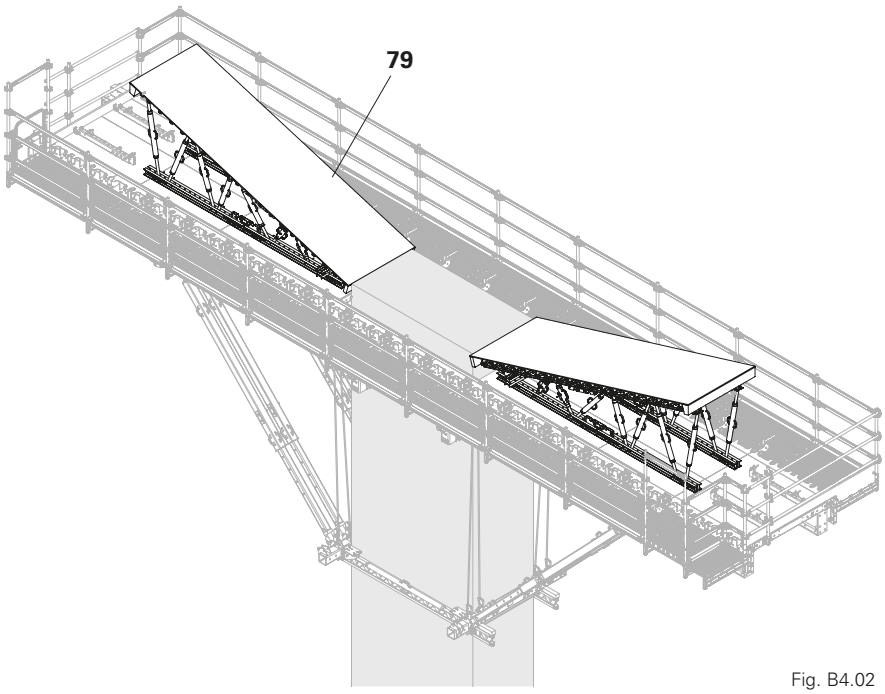


Fig. B4.02

Shuttering the hammerhead

Danger
Formwork units may fall down during transport!
This can lead to serious injuries or even death.
⇒ Do not stand under the suspended load.
⇒ Guide units with ropes.
⇒ Consider the maximum size of the units.

Assembly
1. Mount on the side formwork units- See section "Placing formwork units" on page 52.
2. Connect the formwork units.
(Fig. B4.03)

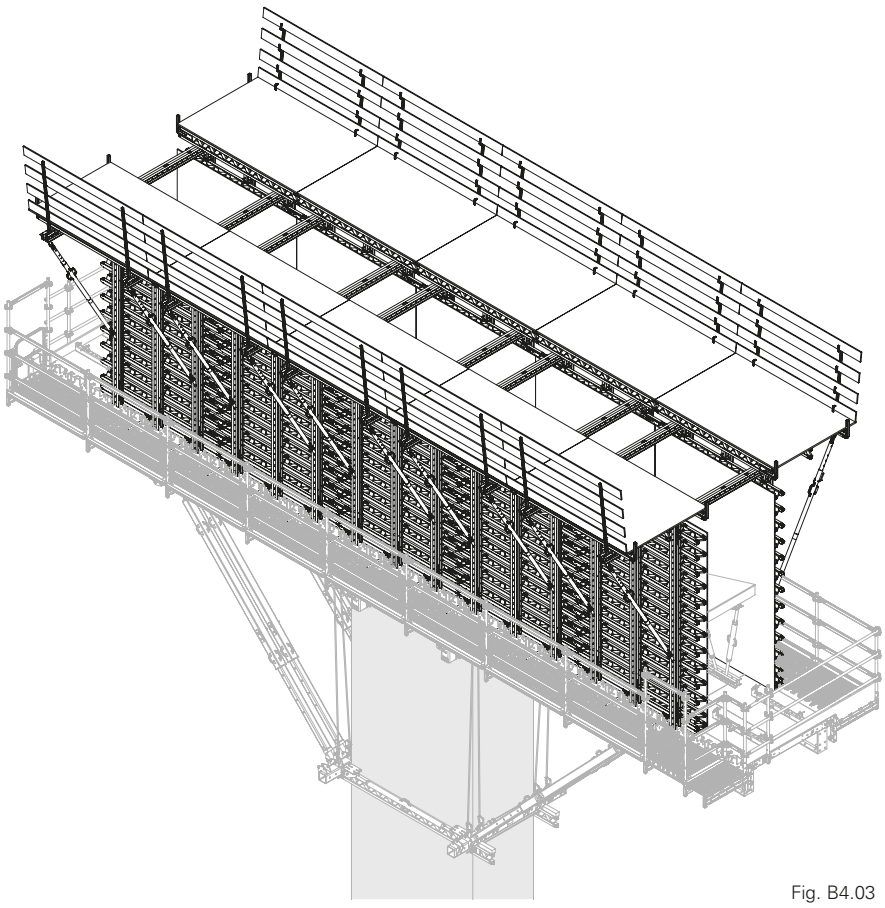


Fig. B4.03

3. Mounting the front formworkSee section “Mounting the front formwork” on page 54.
4. Ensure that the anti-fall protection is complete, if necessary.
5. Fixing the formworkSee section “Fixing the formwork” on page 55.

(Fig. B4.04)

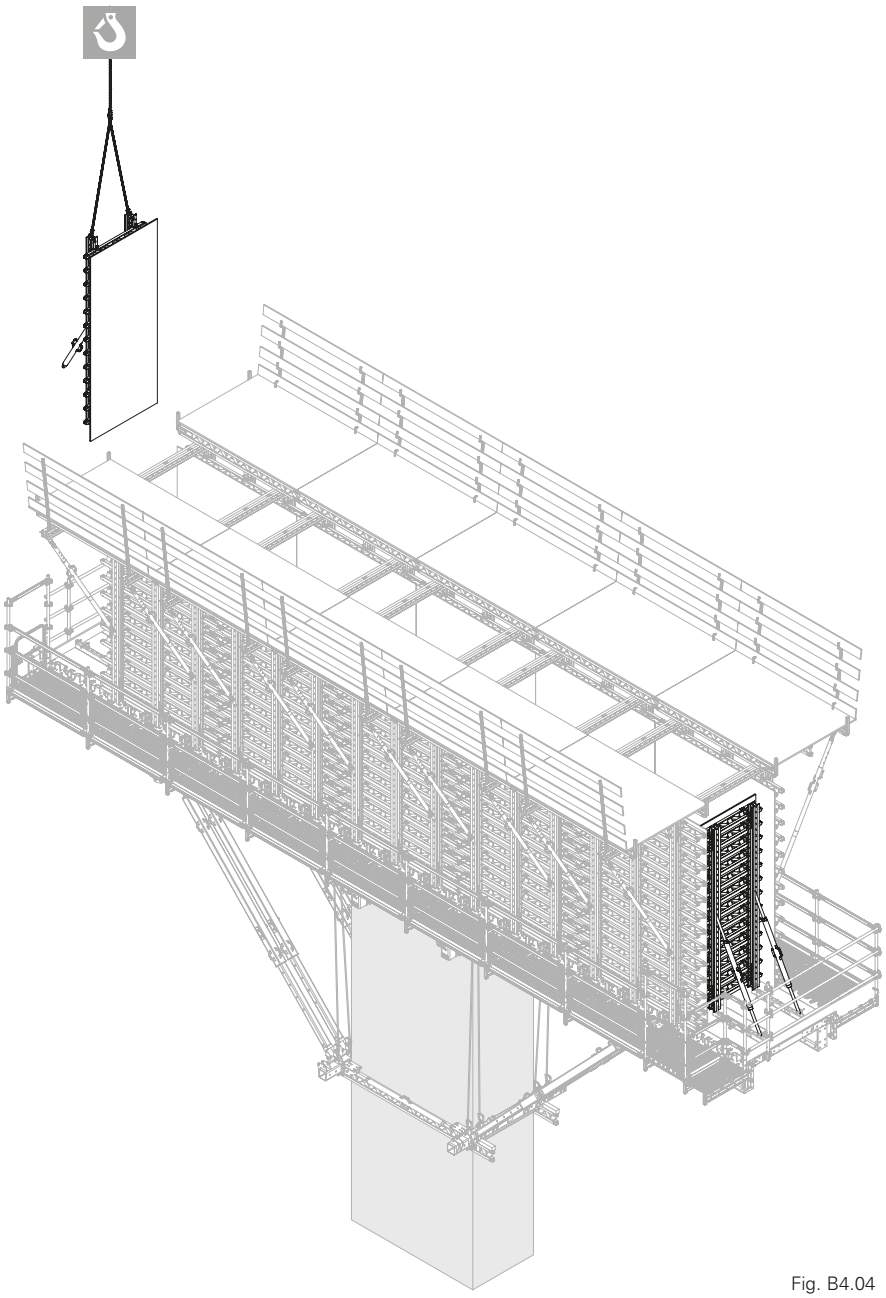


Fig. B4.04

B5 Concreting

- Adhere to the permissible fresh concrete pressure for the formwork.
- For this, observe the permissible rate of rise of the formwork.

The reinforcement must be removed prior to concreting.

Concreting

1. Pour concrete into the formwork from a safe working position.
2. Compact the concrete.
3. Allow concrete to cure until the required load-bearing capacity is achieved.

(Fig. B5.01)

Deshuttering and lowering

1. Disassembling the formworkSee section “A8 Deshuttering” on page 57.
2. Preparing for the lowering process-See section “A9 Preparing for the lowering process” on page 58.
3. Lowering the platformSee section “A10 Lowering the platform” on page 63.

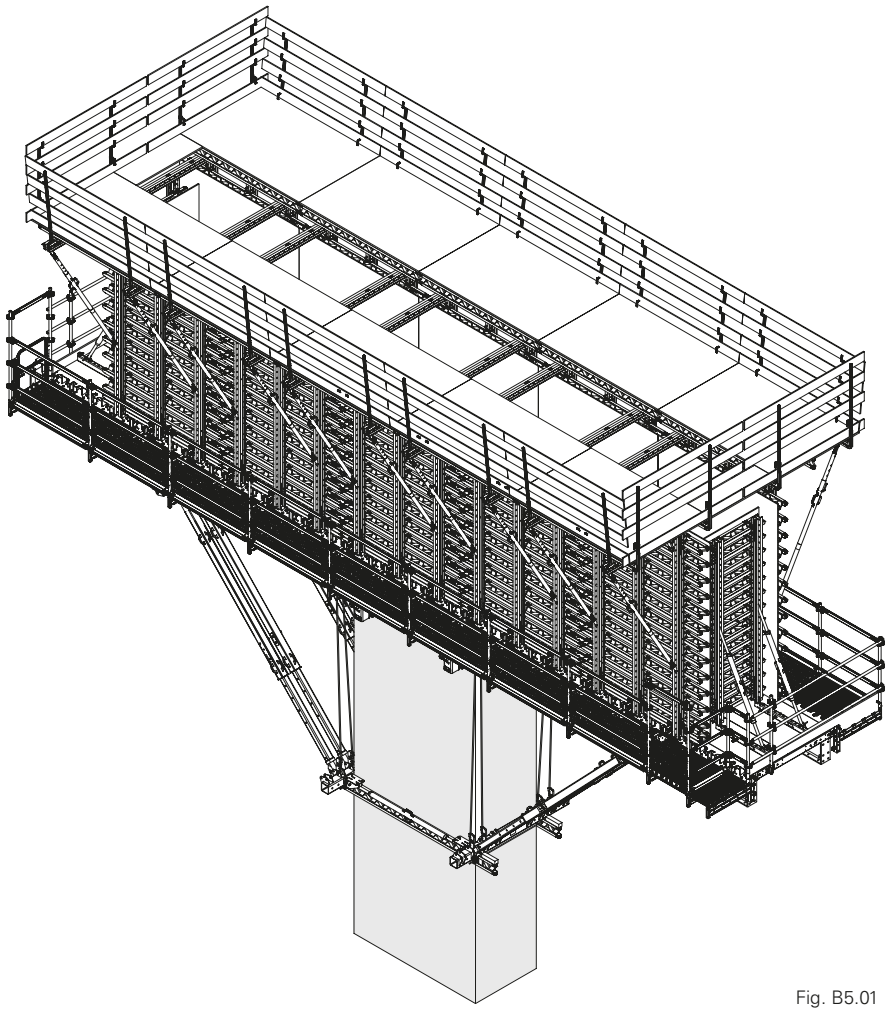


Fig. B5.01

C1 Support Adaptor VPS

- In the case of narrow columns, the Support Bracket VPS (**40**) can be adapted using the Support Adaptor VPS 1" (**100**) or Support Adaptor VPS 2" (**101**).
- Maximum projection from cap to column = 317 mm.

Components

100 Support Adaptor VPS 1"
100.1 Bolt ISO 4017 M24 x 30-10.9
or
101 Support Adaptor VPS 2"
101.1 Bolt ISO 4017 M24 x 30-10.9

Assembly

1. Fit the Support Adaptor VPS (**100/101**) at the top of the Support Bracket VPS (**40**) with 4x bolt ISO 4017 M24 x 30-10.9 (**100.1/101.1**).
2. Fit the Support Adaptor VPS (**100/101**) at the bottom of the Support Bracket VPS (**40**) with 2x bolt ISO 4017 M24 x 30-10.9 (**100.1/101.1**).
3. Fit the Support Bracket, see section "Support Bracket VPS" on page 46 or "Support Bracket VPS" on page 82.

(Fig. C1.01)

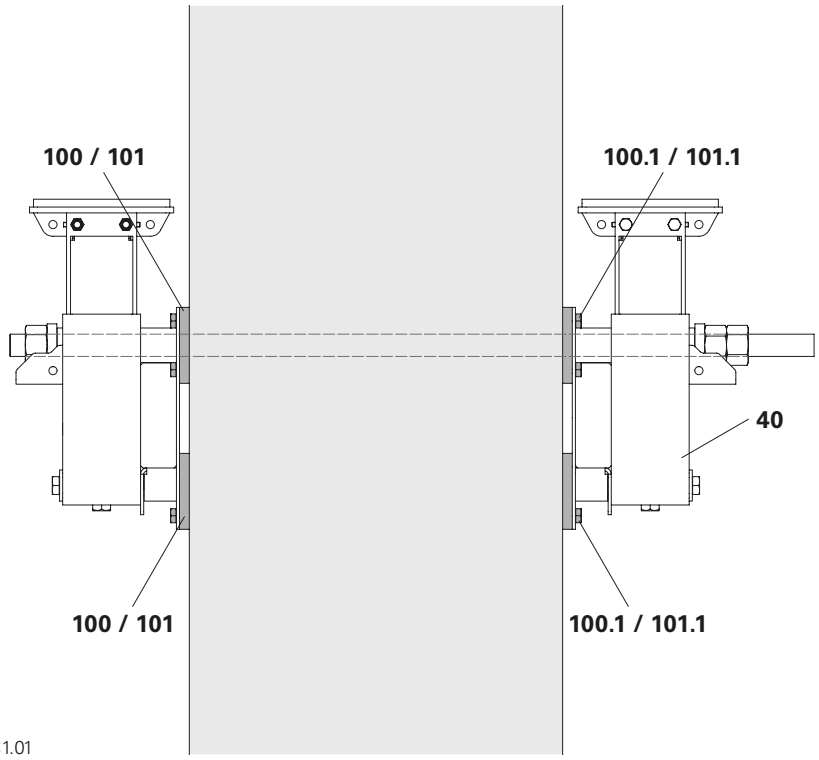


Fig. C1.01

Check that the IPE 600 VARIOKIT (**1**) is fully supported on the Support Bracket VPS (**40**).
(Fig. C1.02)

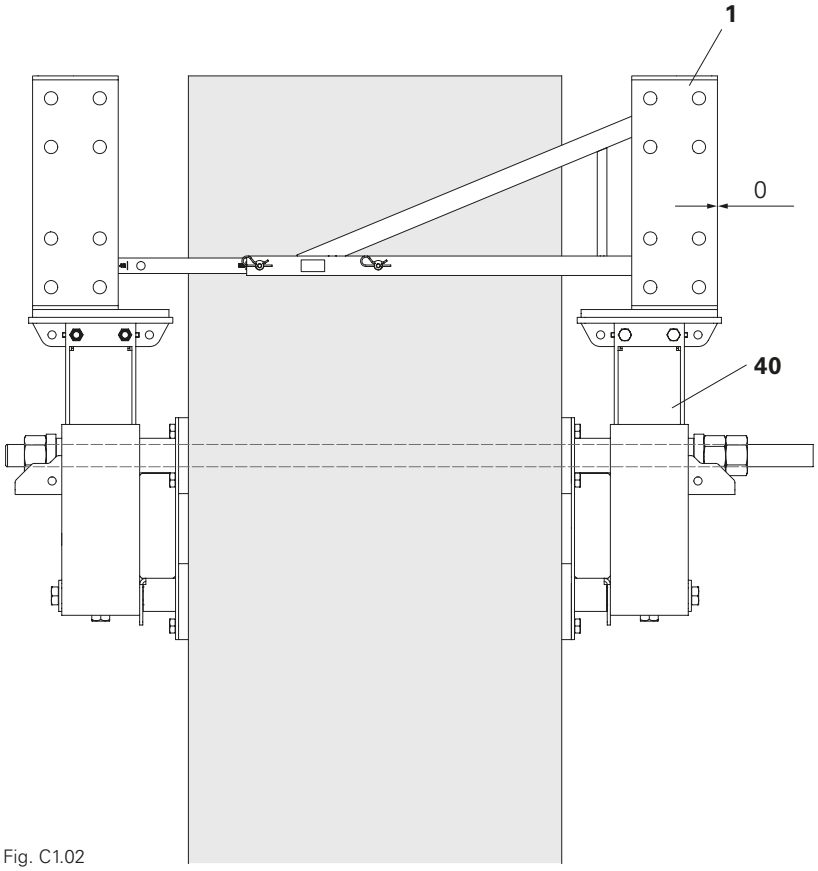


Fig. C1.02

If threaded rods cannot be used or are undesirable, Support Bracket VPSs VPS (**40**) can be mounted on the pier using Heavy Duty Cone DW26 Ø10.8 M36 (**105**), Support Adaptors VPS 1" (**100**) and Climbing Cone Adaptors VPS M36 (**102**).

Components

100	Support Adaptor VPS 1"
100.1	Bolt ISO 4017 M24 x 30-10.9
102	Climbing Cone Adaptor VPS M36
102.1	Bolt ISO 4017 M24 x 30-10.9
105	Heavy Duty Cone DW26 Ø10.8 M36
113	Bolt ISO 4014 M36x 460-8.8
114	Washer M36

Assembly

1. Fit the Climbing Cone Adaptor VPS M36 (**102**) at the top of the Support Bracket VPS (**40**) with 4x bolt ISO 4017 M24 x 30-10.9 (**102.1**).
2. Fit the Support Adaptor VPS 1" (**100**) at the bottom of the Support Bracket VPS (**40**) with 2x bolt ISO 4017 M24 x 30-10.9 (**100.1**).
3. Fit Support Bracket VPS (**40**) onto Heavy Duty Cone DW26 Ø10.8 M36 (**105**) with screw ISO 4014 M36 x 460-8.8 (**113**) and washer M36 (**114**).

(Fig. C2.01)

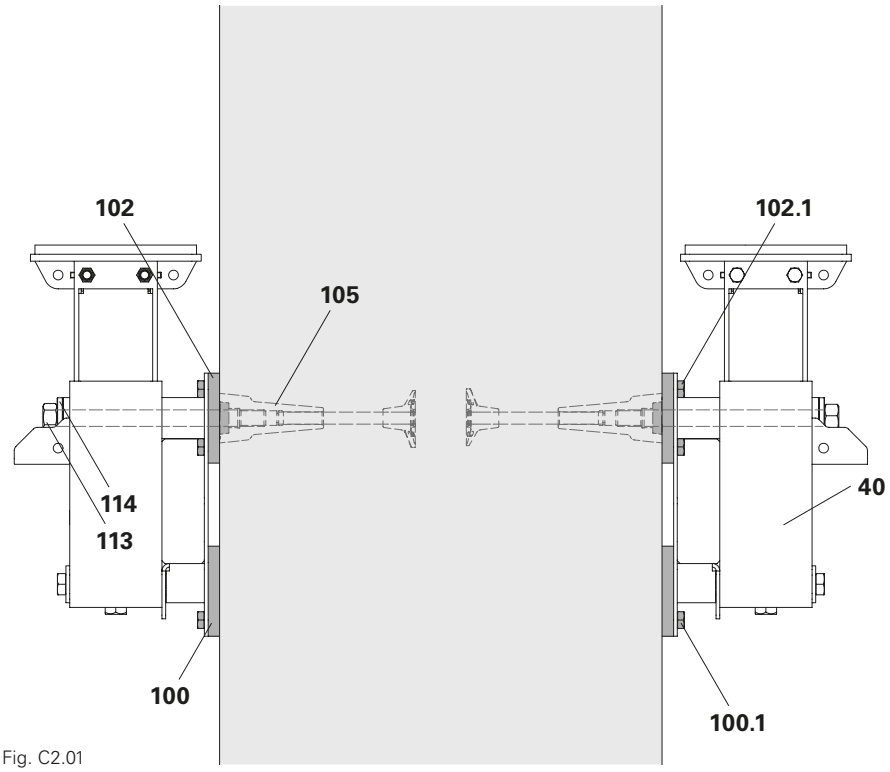


Fig. C2.01

Check that the IPE 600 VARIOKIT (**1**) is fully supported on the Support Bracket VPS (**40**).

(Fig. C2.02)

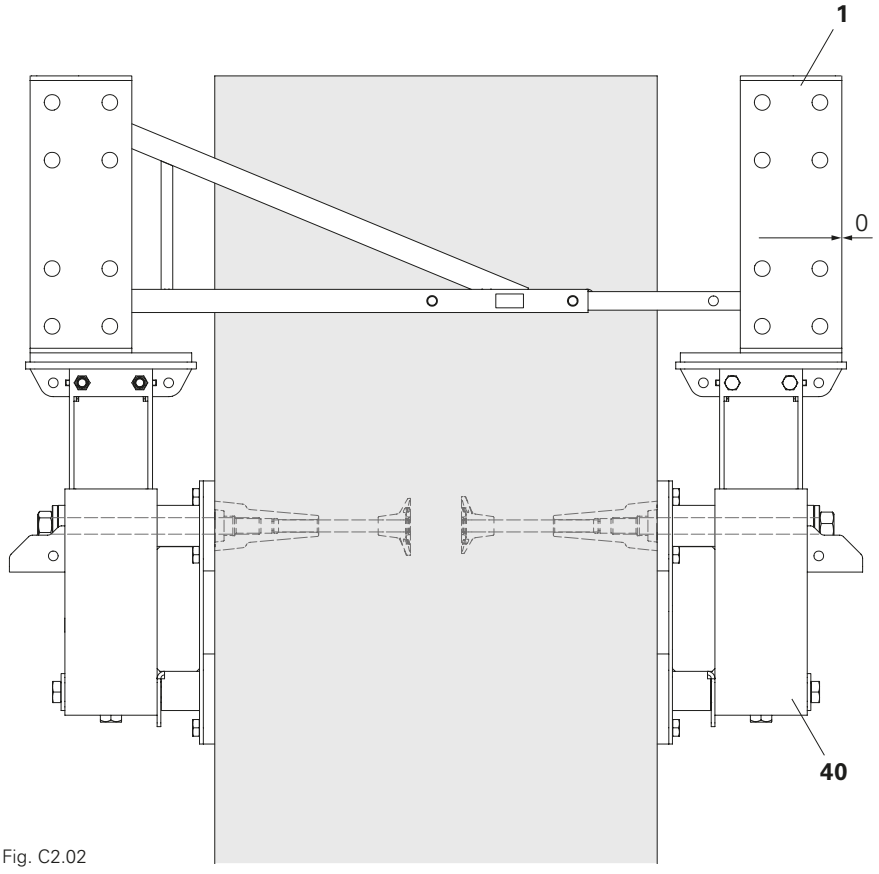


Fig. C2.02

C3 StageStriker VPS 6,600 lb-3,000 kg with cap with inverted T-shape

- **Refer to the assembly plans for the position of the KZ Wedges.**
- **If necessary, support Steel Waler Universal SRU U120 in accordance with the static specifications, e.g. with MULTIPROP MP.**

If a cap with an inverted T-shape is concreted, the StageStriker VPS 6600 lb-3000 kg (**61**) can either be fixed on the cap with an inverted T-shape with the project-specific anchoring, or with Tie Rod DW 15 (**57**), Wingnut Counterplate DW 15 (**58**) and Hex. Nut DW 15 AF 30/50 (**98**).

Assembly with Threaded Anchor Plate DW 15

1. Set Threaded Anchor Plate DW 15 (**58**) and Threaded Rod DW 15 (**57**) in concrete at the specified position.
2. Place StageStriker VPS 6600 lb-3000 kg (**61**) on Threaded Anchor Plate DW 15 (**58**).
3. Screw the Tie Rod DW 15 (**57**) into the Threaded Anchor Plate DW 15 (**58**).
4. Fasten the StageStriker VPS 6,600 lb-3,000 kg (**61**) with the Hex. Nut DW 15 AF 30/50 (**98**).

(Fig. C3.01)

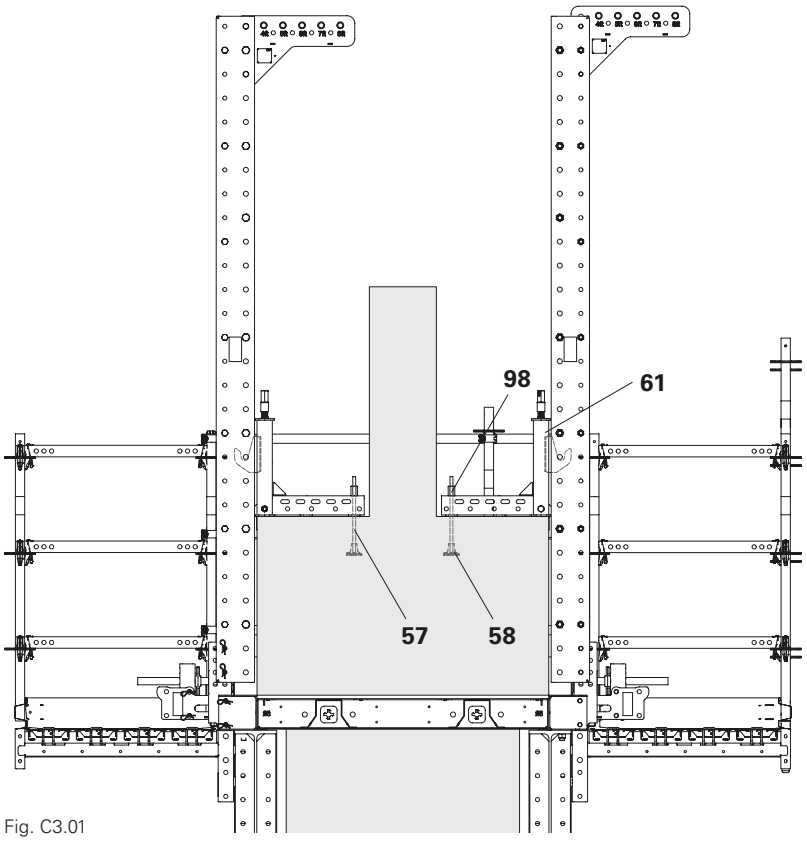


Fig. C3.01

Assembly with Steel Waler Universal SRU U120

1. Connect Steel Waler Universal SRU U120 (**54**) with Waler Fixation SRU (**125**), Fitting Pin Ø21 x 120 (**5**), Cotter Pin 4/1 ga (**6**) and Anchor Bolt SW21 Ø14 x 150 (**41**) to the concrete waler.
2. Slide the StageStriker VPS 6,600 lb-3,000 kg (**61**) into the Steel Walers Universal SRU U120 (**54**).
3. Connect the Steel Waler Universal SRU U120 (**54**) and StageStriker VPS 6,600 lb-3,000 kg (**61**) with Wedges KZ (**97**).

(Fig. C3.02)

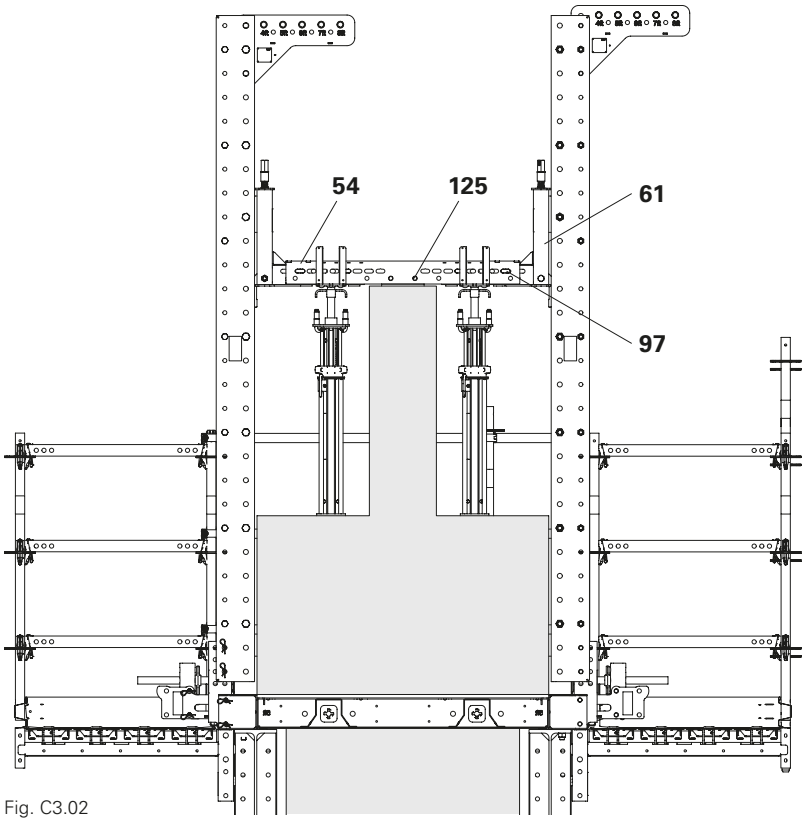


Fig. C3.02

C3 StageStriker VPS 6,600 lb-3,000 kg with cap with inverted T-shape

- The StageStriker VPS 6,600 lb-3,000 kg (**61**) can be fixed to the concrete with a threaded anchor plate DW 15 (**58**) and threaded rod DW 15 (**57**) or a project-specific tie if space is limited.
- If the foot clamp (**61.1**) of the StageStriker VPS 6,600 lb-3,000 kg (**61**) cannot rest against the concrete edge, this gap must be lined with a squared timber.
- Fix the squared timber with Spax Screws TX 30.

(Fig. C3.03 + Fig. C3.03a)

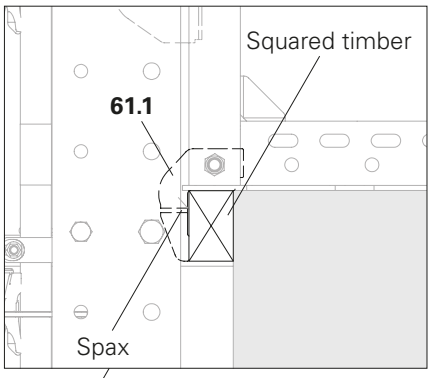


Fig. C3.03a

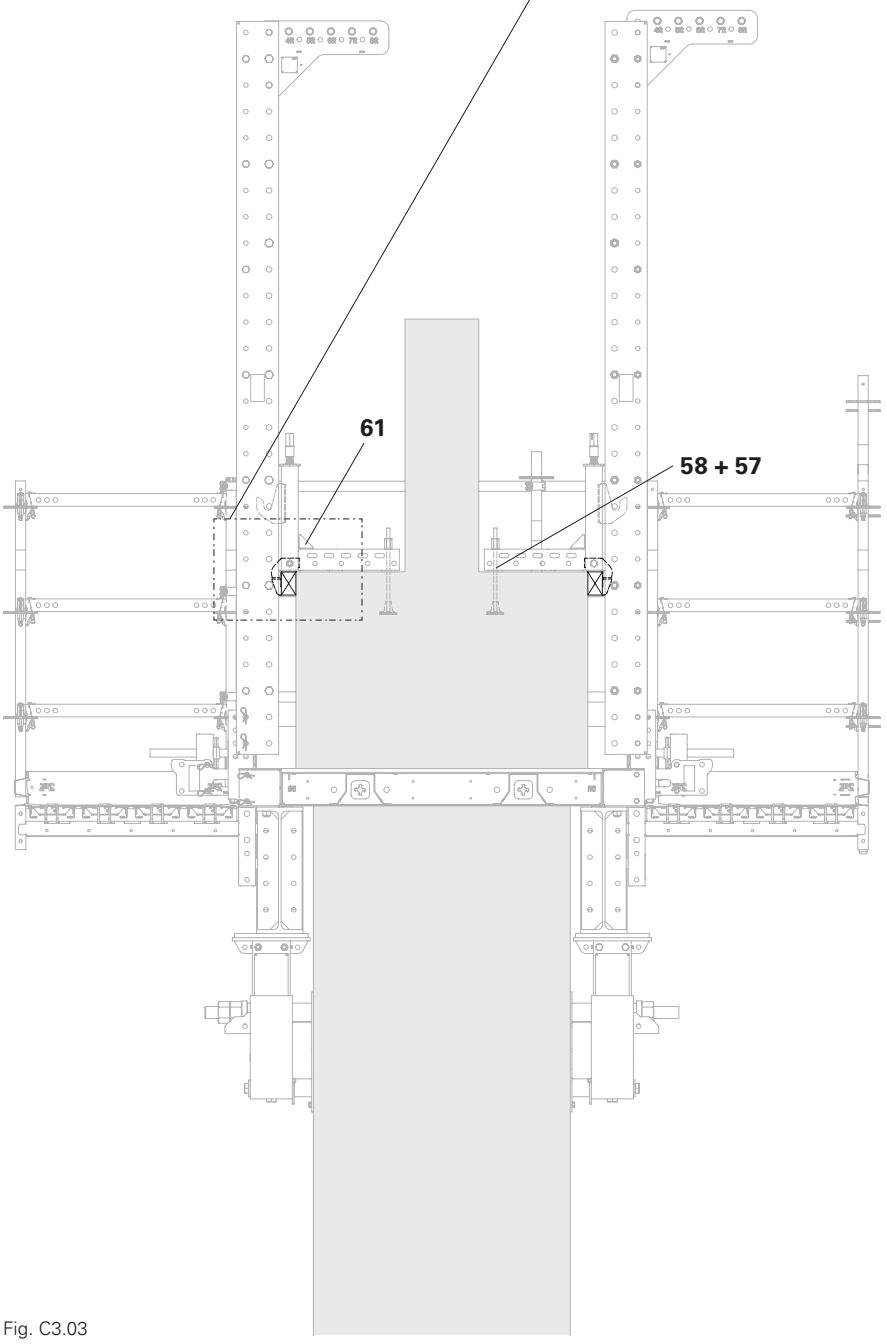


Fig. C3.03

C4 Alternative fixing of steel waler SRU U120

- **Refer to the assembly plans for the position of the KZ Wedges.**
- **When selecting the climbing rail RCS, make sure that there is sufficient space between the gallows and the nut AF 36 of the StageStriker for lowering.**
- **For the position of the gallows, see “Gallows VPS” on page 62.**

Alternatively, the steel waler Universal SRU120 (**54**) can also be anchored project-specifically.

Components

54 Steel Waler Universal SRU U120
61 StageStriker VPS 6,600 lb-3,000 kg
97 Wedge KZ

Assembly

1. Place the StageStriker VPS 6,600 lb-3,000 kg (**61**) on the left and right side of the concrete waler.
2. Insert the StageStriker VPS 6,600 lb-3,000 kg (**61**) between the Climbing Rail RCS (**76**).
3. Place Steel Waler Universal SRU U120 (**54**) on the StageStriker VPS 6,600 lb-3,000 kg (**61**).
4. Connect the Steel Waler Universal SRU U120 (**54**) and StageStriker VPS 6,600 lb-3,000 kg (**61**) with Wedges KZ (**97**).
5. Connect Steel Waler Universal SRU U120 (**54**) to the concrete walers with project-specific anchoring, e.g. Tie Rod DW 15 (**57**) and Wingnut Counterplate DW 15 (**58**).
6. On all StageStrikers VPS 6,600 lb-3,000 kg (**61**), turn the spindle to move the hook right underneath the spacer until there is contact.
   - The red spring must not be compressed in the process.

(Fig. C4.01)

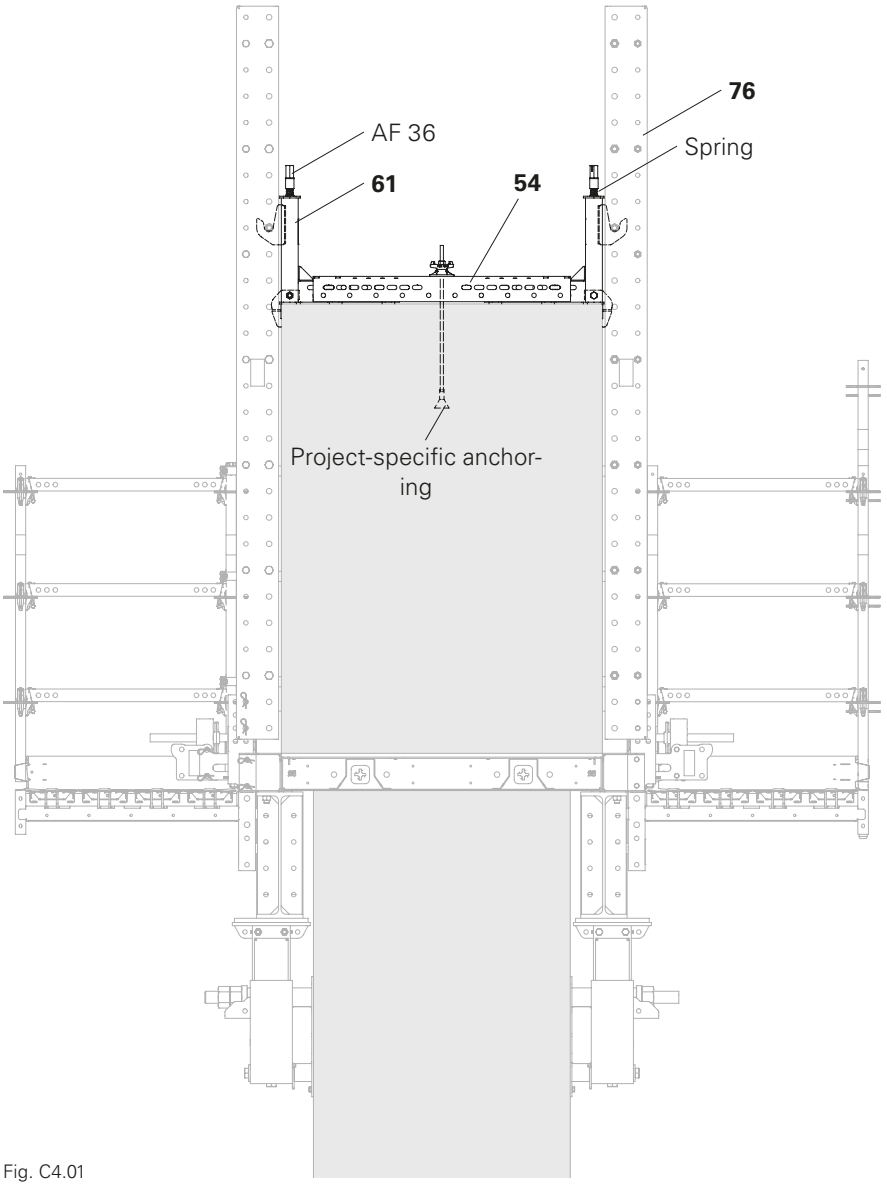


Fig. C4.01

C5 Reinforcement scaffold on the platform

- A reinforcement scaffold (**107**) can be installed on the platform if the anti-fall protection has been installed using PERI UP.
- Follow the Instructions for Assembly and Use for the scaffolding system.
- For assembly, the Top Standards UVH-2 200 needs to be exchanged for Standards UVR-2.

Components

107 Reinforcement scaffold

Assembly

1. Plan the reinforcement scaffolding in a project-specific manner and assemble it in accordance with the applicable Instructions for Assembly and Use.

(Fig. C5.01)

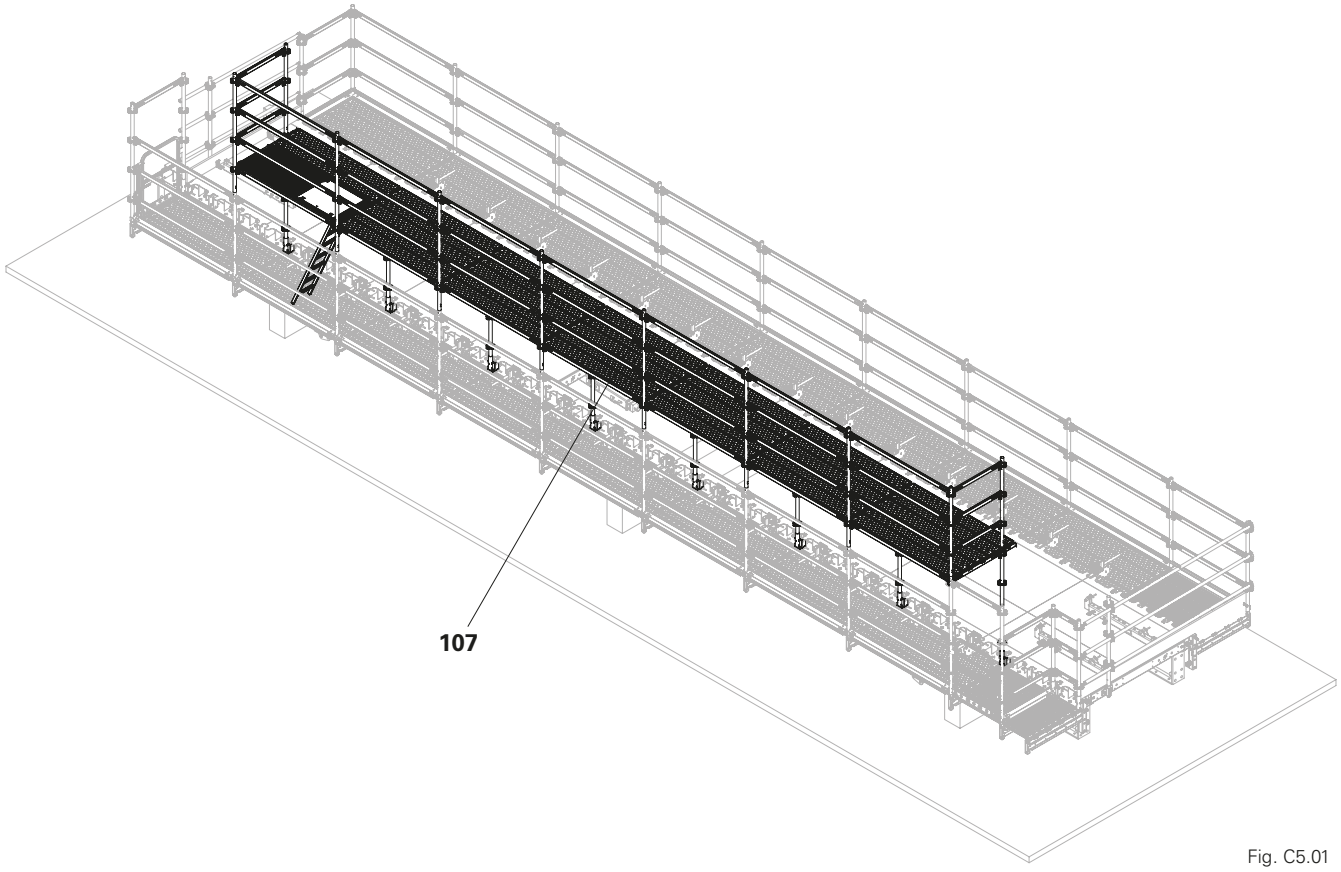


Fig. C5.01

Assembly on Speed Beam VPS 2.00 m

A Tension Belt 2.5 m (**92**) can be fitted as a lift lock. At the Speed Beam VPS 2.00 m (**9**), the Tension Belt 2.5 m (**92**) is hooked onto the Brace Connector-2 (**51**) at the top and onto a Fitting Pin Ø21 x 120 (**5**) at the bottom.

Components

5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga
51 Brace Connector-2
92 Tension Belt 2.5 m

Assembly

1. Place Brace Connector-2 (**51**) on the element strut of Panel MX 330 x 240 (**50**) in such a way that the hook tie engages in a connection hole.
2. Tighten Brace Connector-2 (**51**) with the three-winged nut.
3. Fit the Fitting Pin Ø21 x 120 (**5**) at the specified position on the Speed Beam VPS 2.00 m (**9**) and secure with Cotter Pin 4/1 ga (**6**).
4. Hook the Tension Belt 2.5 m (**92**) into the Brace Connector-2 (**51**) and the Fitting Pin Ø21 x 120 (**5**).
5. Tighten the Tension Belt 2.5 m (**92**).

(Fig. C6.01 – Fig. C6.01b)

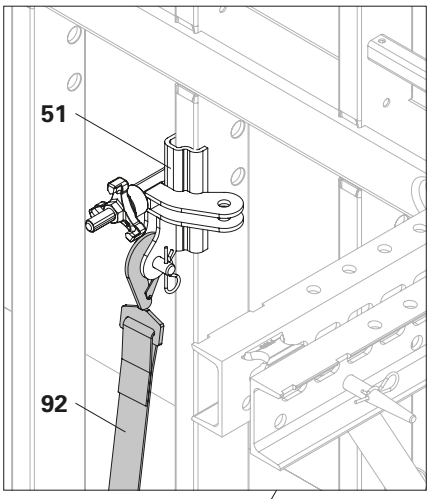


Fig. C6.01a

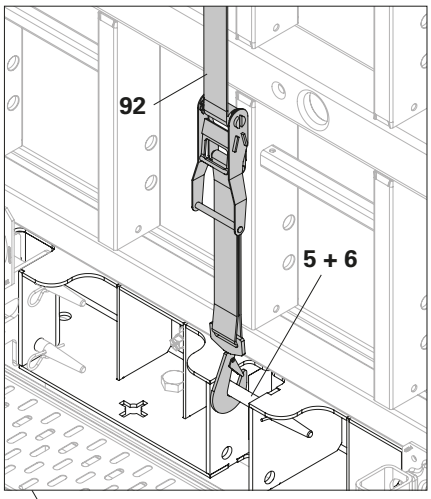


Fig. C6.01b

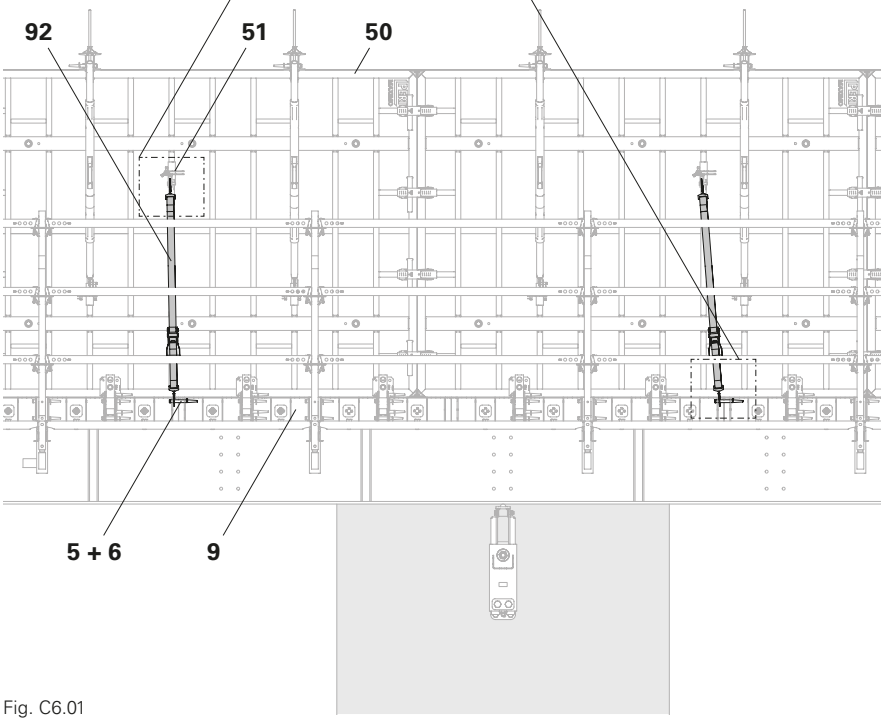


Fig. C6.01

Assembly on Sideform Holder VPS

- A Tension Belt 2.5 m (**92**) can be fitted as a lift lock. If no additional Fitting Pin Ø21 x 120 (**5**) is mounted, the Tension Belt 2.5 m (**92**) is hooked onto the Brace Connector-2 (**51**) at the top and onto the Sideform Holder VPS (**12**) at the bottom.
- Assembly is only possible when using MAXIMO or TRIO.

Components

51 Brace Connector-2
92 Tension Belt 2.5 m

Assembly

1. Place Brace Connector-2 (**51**) on the element strut of Panel MX 330 x 240 (**50**) in such a way that the hook tie engages in a connection hole.
2. Tighten Brace Connector-2 (**51**) with the three-winged nut.
3. Hook the Tension Belt 2.5 m (**92**) into the Brace Connector-2 (**51**) and the Sideform Holder VPS (**12**).
4. Tighten the Tension Belt 2.5 m (**92**).

(Fig. C6.02 – Fig. C6.02b)

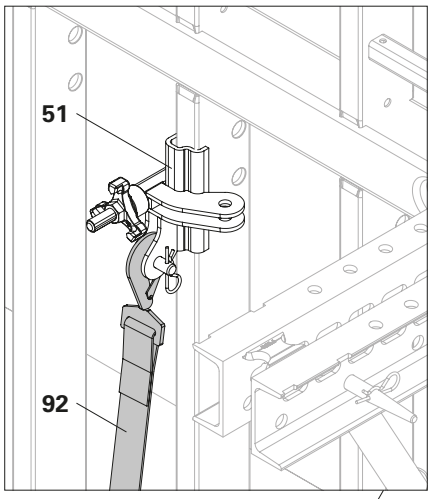


Fig. C6.02a

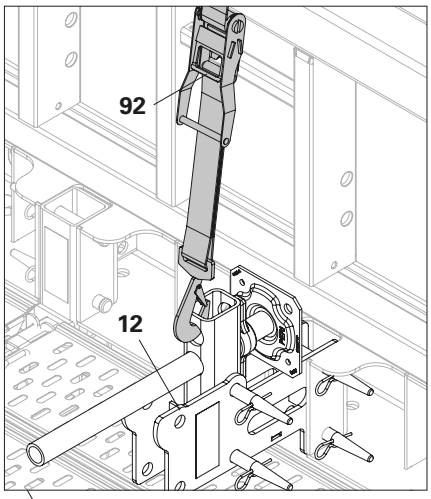


Fig. C6.02b

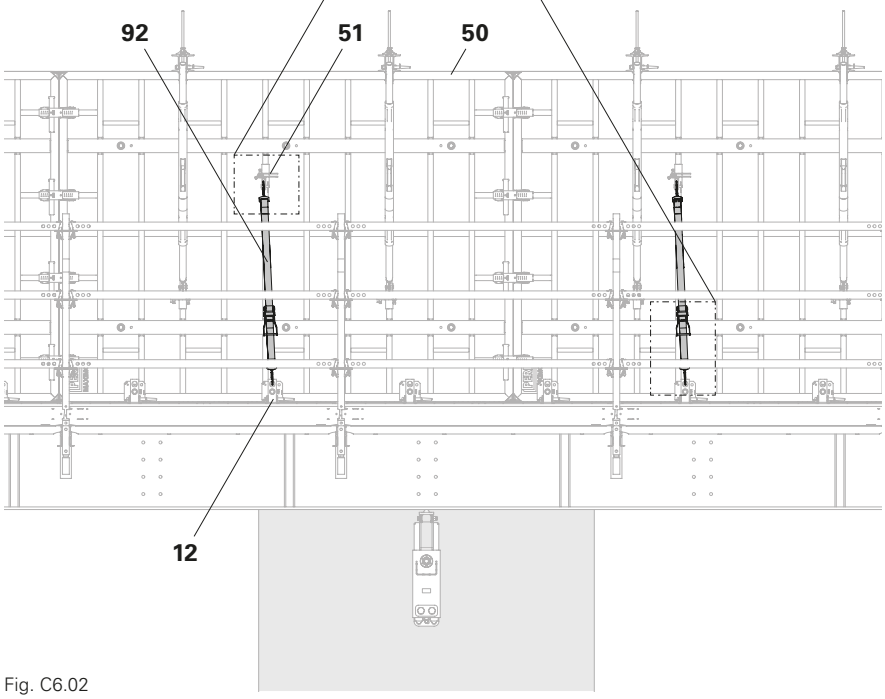


Fig. C6.02

Fitting Push-Pull Prop RS onto the console bracket

If the Push-Pull Prop RS (**52**) is to be attached to the Platform Bracket VPS (**10/11**), then the Base Plate-3 f. RS 210 – 1400 (**55**) is installed with Push-Pull Prop Bolt FB (**106**).

Components

5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga
52 Push-Pull Prop RS
55 Base Plate-3 f. RS 210 – 1400
106 Push-Pull Prop Bolt FB

Assembly

1. Connect Push-Pull Prop RS (**52**) to the formwork.
2. Screw Base Plate-3 f. RS 210 – 1400 (**55**) into Platform Bracket VPS (**10/11**) with Push-Pull Prop Bolt FB (**106**).
3. Bolt Push-Pull Prop RS (**52**) with Fitting Pin Ø21 x 120 (**5**) into Base Plate-3 f. RS 210 – 1400 (**55**) and secure with Cotter Pin 4/1 ga (**6**).

(Fig. C7.01 + Fig. C7.01a)

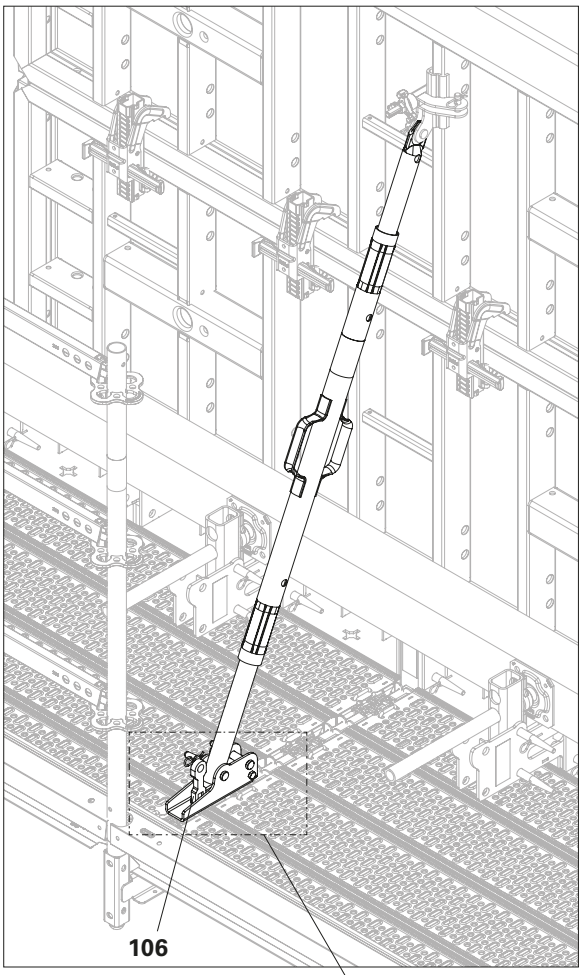


Fig. C7.01

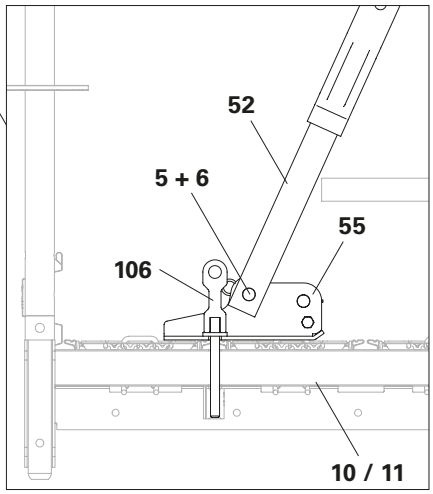


Fig. C7.01a

RS Adaptor Plate VPS

In the case of planking, the RS Adaptor Plate VPS (**71**) is also fitted for improved load distribution.

Components

5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga
52 Push-Pull Prop RS
55 Base Plate-3 f. RS 210 – 1400
71 RS Adaptor Plate VPS
106 Push-Pull Prop Bolt FB

Assembly

1. Connect Push-Pull Prop RS (**52**) to the formwork.
2. Put the RS Adaptor Plate VPS (**71**) over the Platform Bracket VPS (**10/11**) at the specified position.
3. Screw Base Plate-3 f. RS 210 – 1400 (**55**) through the RS Adaptor Plate VPS (**71**) into Platform Bracket VPS (**10/11**) with Push-Pull Prop Bolt FB (**106**).
4. Bolt Push-Pull Prop RS (**52**) with Fitting Pin Ø21 x 120 (**5**) into Base Plate-3 f. RS 210 – 1400 (**55**) and secure with Cotter Pin 4/1 ga (**6**).

(Fig. C7.02 + Fig. C7.02a)

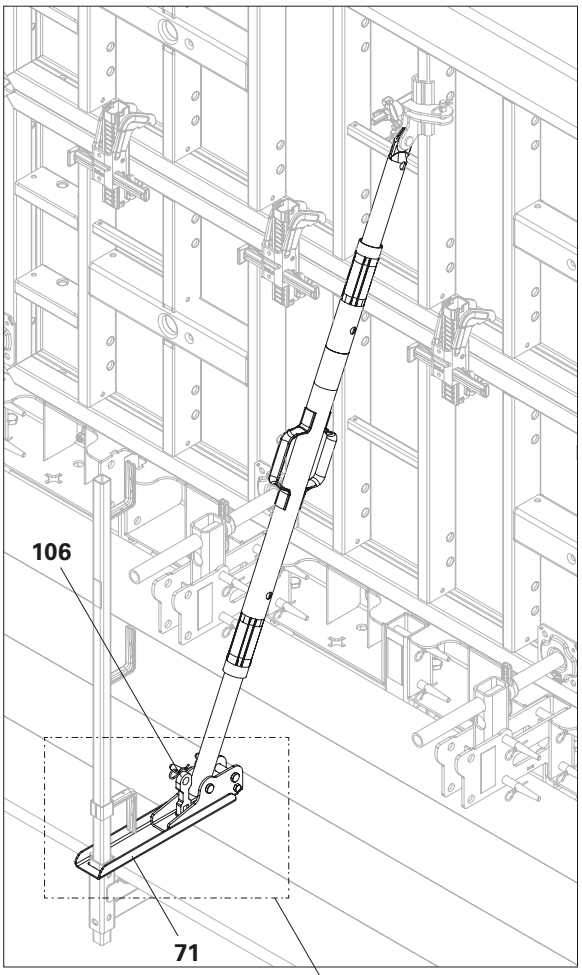


Fig. C7.02

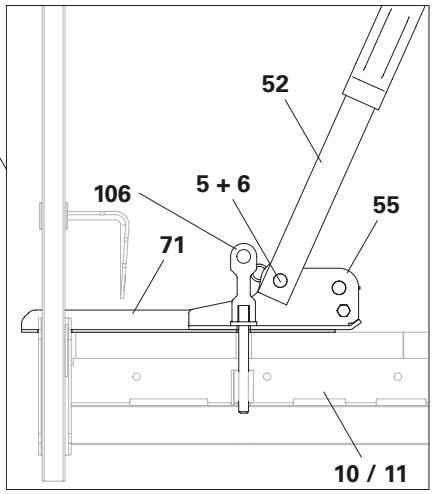


Fig. C7.02a

Decks

Fit the platform brackets (**10/11**) with the planking side facing upwards.
(Fig. C8.01)

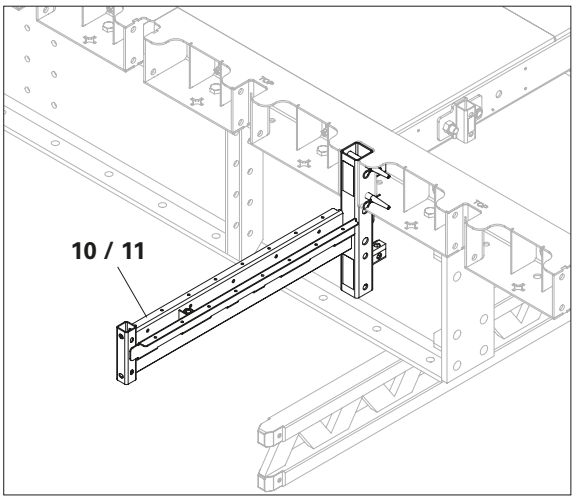


Fig. C8.01

Components

22 Decking boards
23 Spax screw TX 30 6 x 40

Assembly

1. Saw the decking boards (**22**) to the specified length.
2. Place decking boards (**22**) on the Platform Brackets VPS (**10/11**).
3. Fit the decking boards (**22**) onto the Platform Brackets VPS (**10/11**).from below with Spax screw TX 30 6 x 40 (**23**).

(Fig. C8.02 + Fig. C8.02a)

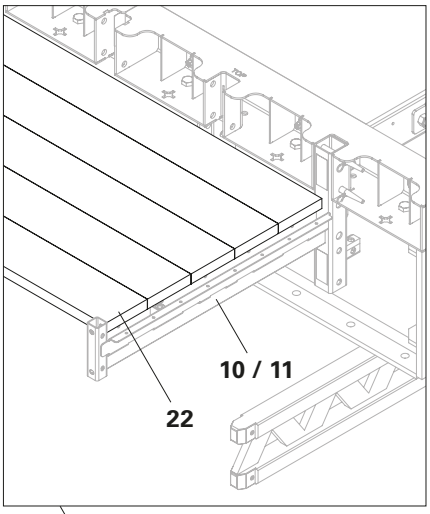


Fig. C8.02a

Fig. C8.02

C9 Guardrail boards

Components

26 Guardrail Post HGSP-2
31 Guardrail boards

Assembly

1. Insert Guardrail Post HSGP-2 (**26**) into the Platform Brackets VPS (**10/11**).
2. Insert guardrail boards (**31**) into Guardrail Posts HSGP-2 (**26**) as anti-fall protection and toe boards.
3. Fasten the guardrail boards (**31**).

(Fig. C9.01 + Fig. C9.01a)

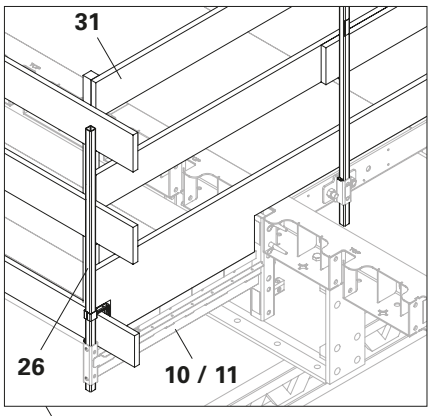


Fig. C9.01a

Fig. C9.01

Guiding the Strut VARIOKIT through the deck

Depending on the assembly sequence, the Struts VARIOKIT (**72**) can be guided through the Steel Deck UDG-2 (**21**).

Guiding

1. Detach the Steel Deck UDG-2 (**21**) above the Strut Traverse VPS (**73**) and lay it on its side.
2. Attach the Strut VARIOKIT (**72**) to the crane.
3. Fit the Strut VARIOKIT (**72**) onto the Strut Traverse VPS (**73**) from a safe working position using the fitting pin Ø 26 x 120 (**80**) and Cotter Pin 5/1 ga (**81**).
4. Reattach the Steel Deck UDG-2 (**21**).

(Fig. C10.01 + Fig. C10.01a)

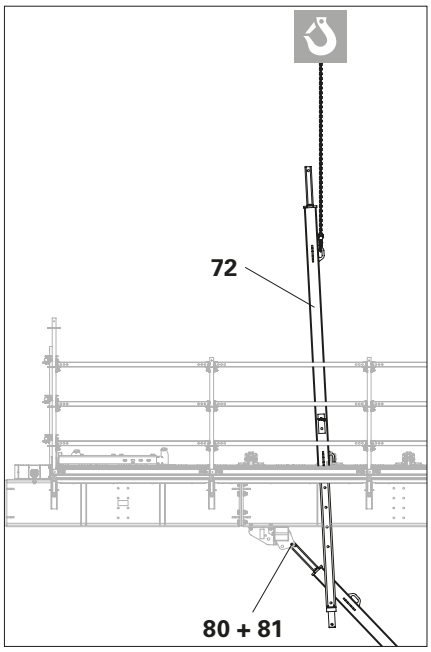


Fig. C10.01a

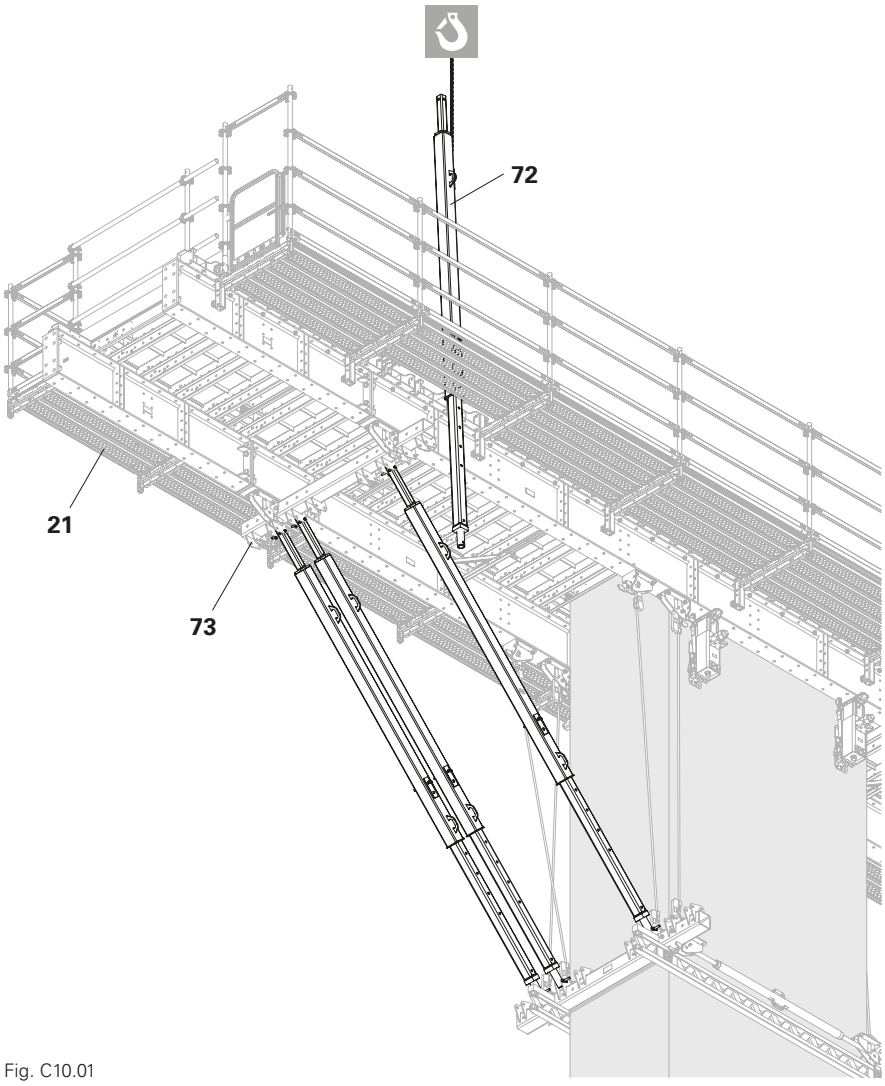


Fig. C10.01

Attaching the Strut Traverse

The Strut Traverse VPS (**73**) can be pre-assembled on the ground and hooked into the Traverse Connectors VPS (**74**) with the climbing beam 9 t (**108**).

Components

14 Bolt ISO 4017 M24 x 60-8.8
15 Hex-Nut ISO 4032-M24-8-ga
72 Strut VARIOKIT
73 Strut Traverse VPS
75 Traverse Extension VPS
80 Fitting Pin Ø26 x 120
81 Cotter Pin 5/1 ga
108 Climbing beam 9 t

Attaching

1. Pre-assemble Strut VARIOKIT (**72**) and Strut Traverse VPS (**73**) on the ground with fitting pin Ø 26 x 120 (**80**) and Cotter Pin 5/1 ga (**81**)See section “Strut Traverse VPS and Strut VARIOKIT” on page 76.
2. Fit Traverse Connectors VPS (**74**) onto the Strut Traverse VPS (**73**)See section “Traverse Connector VPS” on page 88.
3. On each side, fit Traverse Extensions VPS (**75**) onto the Strut Traverse VPS (**73**) with 2x Screw ISO 4014-M24 x 220-10.9 (**89**) and Hex-Nut ISO 4032-M24-10 (**90**) in each case.
4. Attach Traverse Extensions VPS (**75**) to the climbing beam 9 t (**108**).
5. Fit Traverse Connectors VPS (**74**) onto the girderSee section “Traverse Connector VPS” on page 88.
6. Knock out the crane lifting gear from a safe working position.

(Fig. C10.02 + Fig. C10.02a)

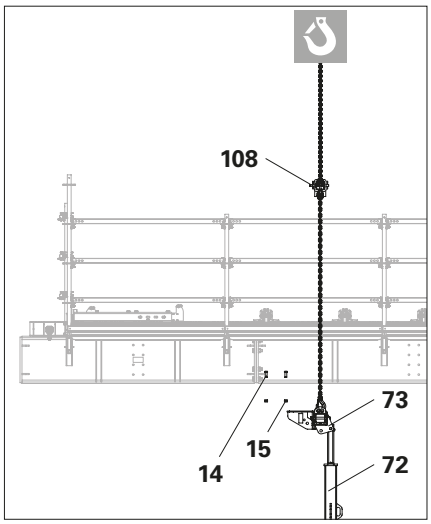


Fig. C10.02a

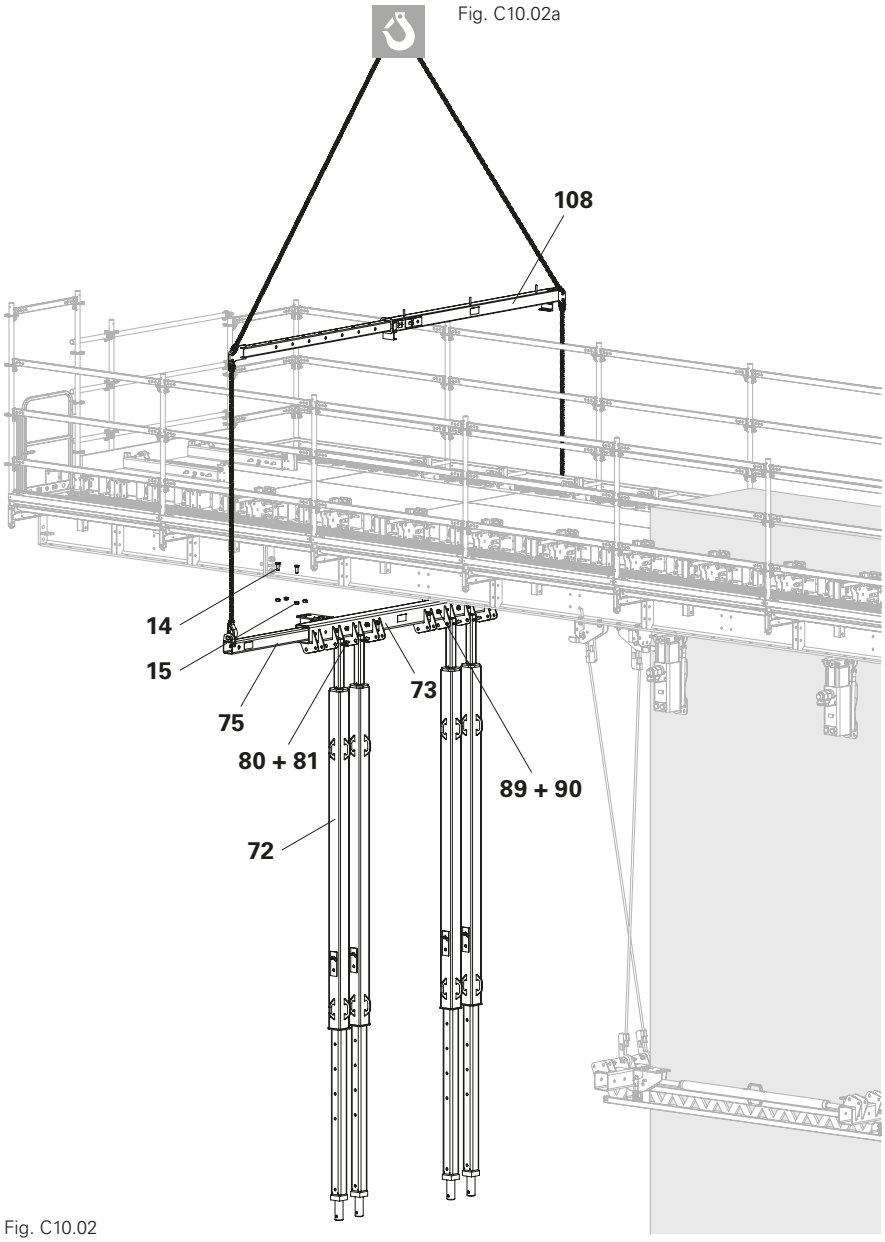


Fig. C10.02

C11 Alternative way to fit bracing

Traverse Connector VPS on IPE 600 VARIOKIT

Depending on the static requirements, the Strut Traverse VPS (**73**) can be braced to the IPE 600 VARIOKIT (**1**) using Traverse Connectors VPS (**74**).

Components

14 Bolt ISO 4017 M24 x 60-8.8
15 Hex-Nut ISO 4032-M24-8-ga
74 Traverse Connector VPS
82 Articulated Spanner VRB DW20
83 Tie Rod DW20 spec. Length
84 Hex Nut AF 36/60 DW 20 coat

Assembly

1. Fit Traverse Connectors VPS (**74**) at the specified position on the girder with 4x bolt ISO 4017 M24 x 60-8.8 (**14**) and Hex-Nut ISO 4032-M24-8-ga (**15**) in each case.
2. Cut Tie Rod DW20 spec. Length (**83**) to the specified length.
3. Fit Articulated Spanner VRB DW20 (**82**) onto Tie Rod DW20 spec. Length (**83**) at the top and bottom.
4. Screw Hex Nut AF 36/60 DW 20 coat (**84**) onto Tie Rod DW20 spec. Length (**83**).
5. Fit the Articulated Spanner VRB DW20 (**82**) onto the Traverse Connector VPS (**74**) with fitting pin Ø 30 VRB (**82.1**) and secure with Cotter Pin 4/1 ga (**82.2**).
6. Fit the Articulated Spanner VRB DW20 (**82**) onto the Strut Traverse VPS (**73**) with fitting pin Ø 30 VRB (**82.1**) and secure with Cotter Pin 4/1 ga (**82.2**).

(Fig. C11.01 – Fig. C11.02b)

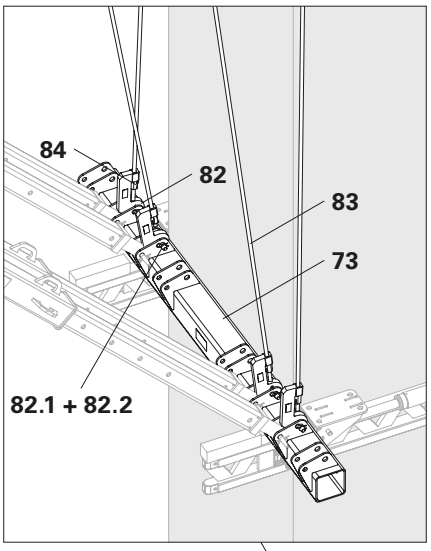


Fig. C11.01a

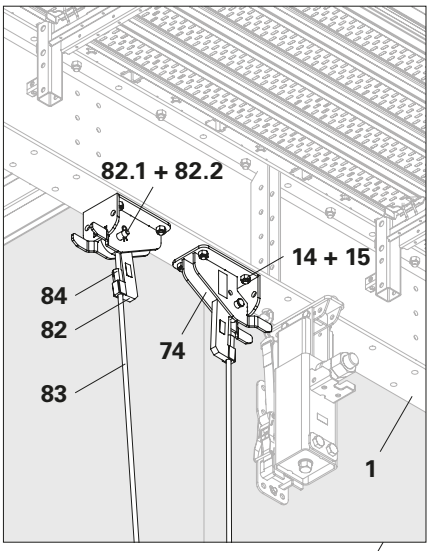


Fig. C11.01b

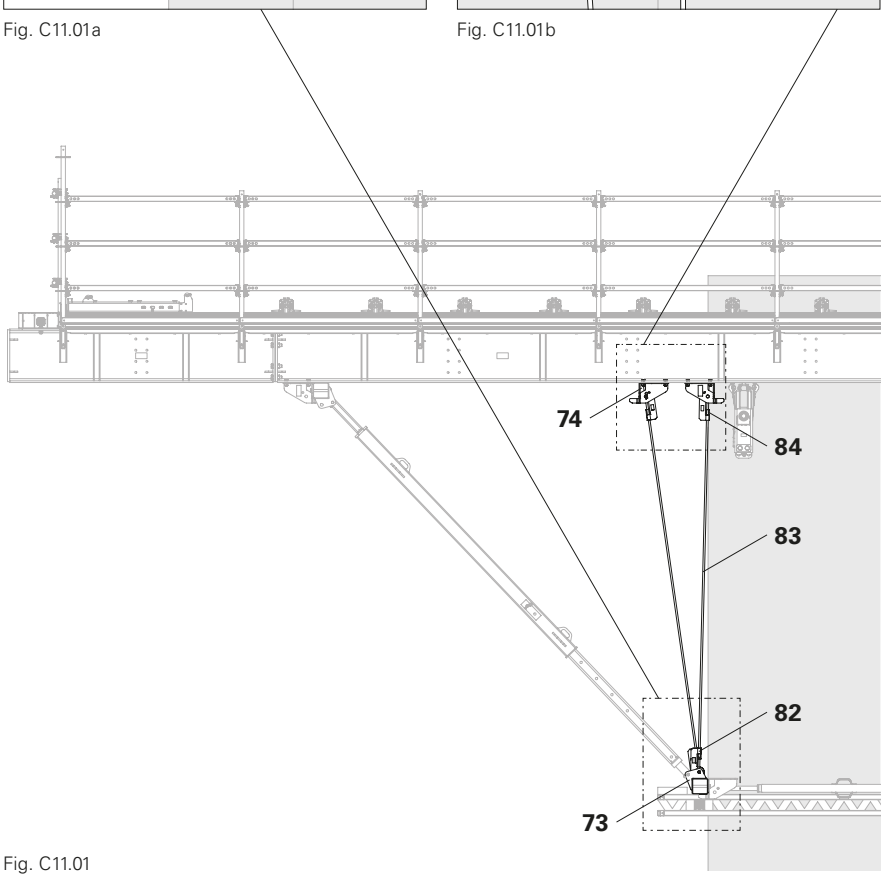


Fig. C11.01

Bracing Shoe SCS M36/ DW 20

- For higher loads, depending on the static requirements, it may be necessary to suspend the vertical load from the Strut Traverse VPS (**73**) back to the concrete column. This reduces the load on the Support Bracket VPS (**40**).
- Climbing cone-2 M36/DW 26 (**86**) must be concreted into the column beforehand.

Components

82 Articulated Spanner VRB DW20
83 Tie Rod DW20 spec. Length
84 Hex Nut AF 36/60 DW 20 coat
85 Bracing Shoe SCS M36/DW 20
86 Climbing Cone-2 M36/DW 26
87 Threaded Anchor Plate DW 26
88 Tie Rod DW26 spec. Length
112 Bolt ISO 4017 M36 x 70-8.8

Assembly

1. Fit the Bracing Shoe SCS M36/ DW 20 (**85**) onto the Climbing Cone-2 M36/DW 26 (**86**) with bolt ISO 4017 M36 x 70-8.8 (**112**).
2. Cut Tie Rod DW20 spec. Length (**83**) to the specified length.
3. Insert Tie Rod DW20 spec. Length (**83**) into Bracing Shoe SCS M36/ DW 20 (**85**).
4. Screw Hex Nut AF 36/60 DW 20 coat (**84**) onto Tie Rod DW20 spec. Length (**83**) on Bracing Shoe SCS M36/DW 20 (**85**).
5. Fit Articulated Spanner VRB DW20 (**82**) onto Tie Rod DW20 spec. Length (**83**).
6. Screw Hex Nut AF 36/60 DW 20 coat (**84**) onto Tie Rod DW20 spec. Length (**83**).
7. Fit the Articulated Spanner VRB DW20 (**82**) onto the Strut Traverse VPS (**73**) with fitting pin Ø 30 VRB (**82.1**) and secure with Cotter Pin 4/1 ga (**82.2**).

(Fig. C11.02 – Fig. C11.02c)

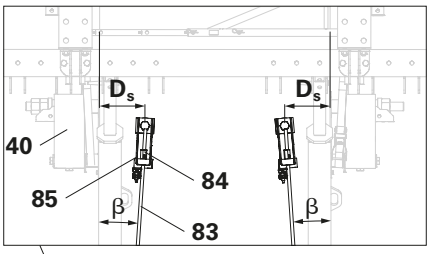


Fig. C11.02a

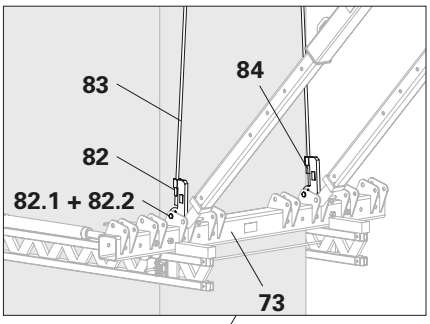


Fig. C11.02b

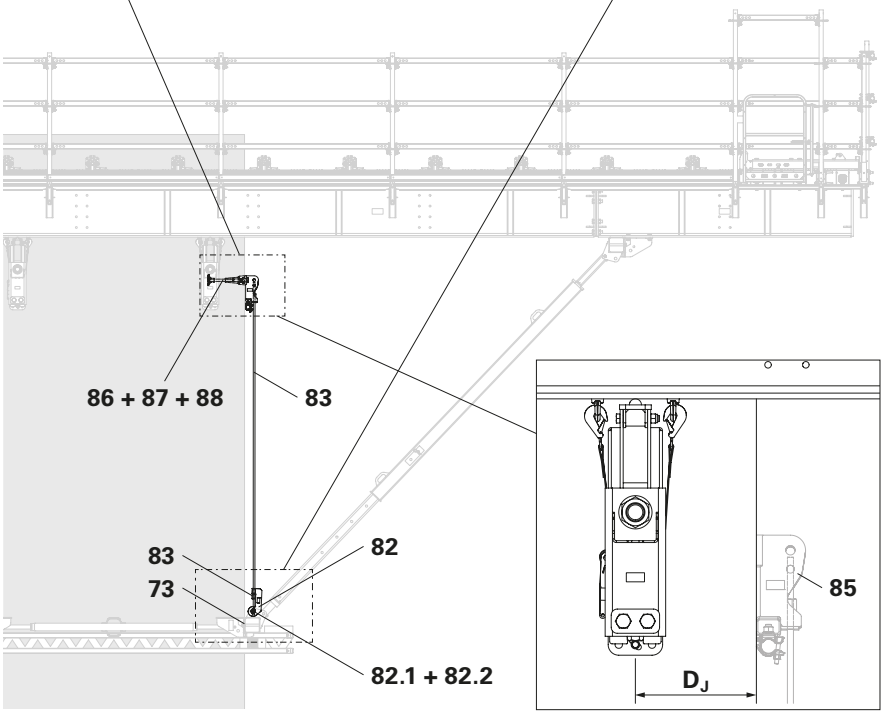


Fig. C11.02

Fig. C11.02c

	Permissible load for Support Bracket VPS and threaded rod M56		
D_J Edge distance	30 cm / 11.8"	35 cm / 13.8"	40 cm / 15.8"
Permissible load	200 kN	300 kN	380 kN

Tab. C11.01

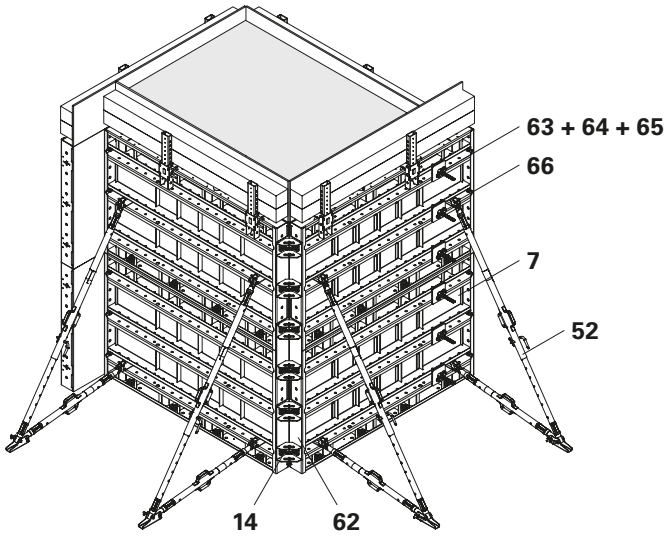
	Edge distance
D_s Bracing Shoe SCS	≥ 12"
Angle β of the Tie Rod DW20	≤ 4.5° (5°)

Tab. C11.02

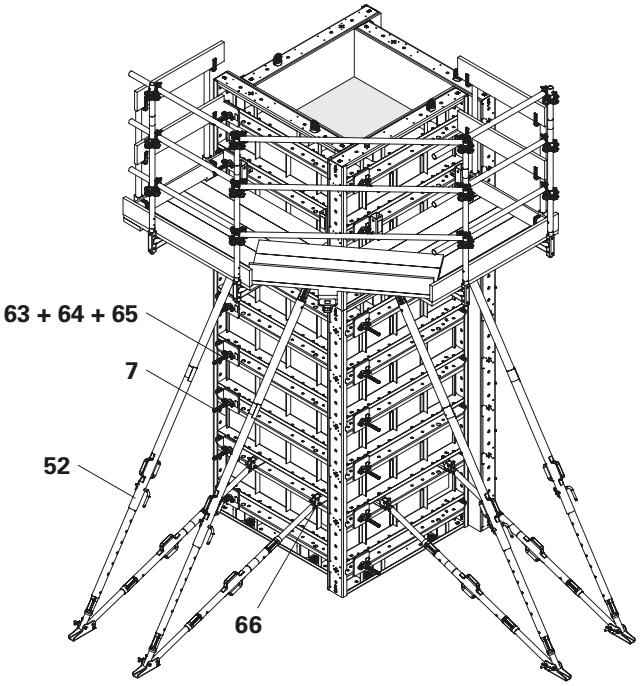
Overview of column formwork

Main components

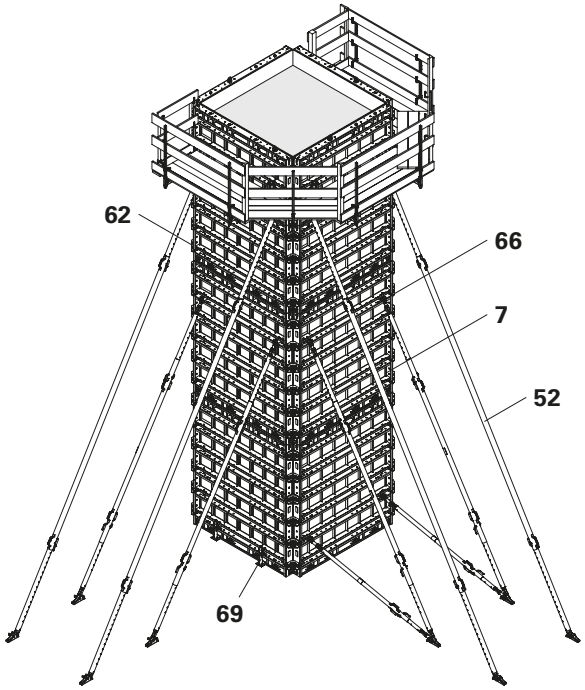
Column with External Corners VPS and windmill configuration



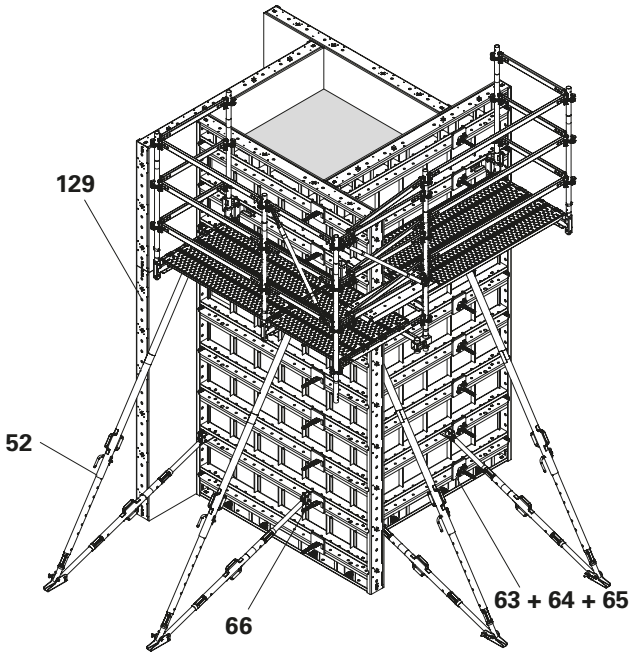
Column with windmill configuration, Panel VPS / Multi Panel VPS and wooden deck



Column with External Corners VPS



Column with windmill configuration, Panel VPS / Multi Panel VPS and steel deck



7 Panel VPS 8 ft x 1.50 m
14 X-Bolt VPS M24 x 70
52 Push-Pull Prop RS
62 External Corner VPS
63 Counterplate VPS DW20
64 T-Bolt VPS DW20 x 415
65 Wingnut DW20 ga
66 Push-Pull Prop Connector VPS
69 Hold-Down Bracket VPS
129 Multi Panel VPS 8ft x 3.00 m

Overview of column formwork

List of components

Pos. no.	Component name	Article no.
5	Fitting Pin Ø21 x 120	104031
6	Cotter Pin 4/1 ga	018060
7	Panel VPS (RAL 2002, Vermilion)	–
10	Platform Bracket VPS 1.00 m	137149
15	Hex-Nut ISO 4032-M24-8-ga	022250
16	X-Bolt VPS M24 x 70	137179
47	Filler Support VPS	137272
52	Push-Pull Prop RS	–
55	Base Plate-3 f. RS 210 – 1400	126666
62	External Corner VPS	137163

Pos. no.	Component name	Article no.
63	Counterplate VPS DW20	136624
64	T-Bolt VPS DW20 x 415	137275
65	Wingnut DW20 ga	030990
66	Push-Pull Prop Connector VPS	137244
67	Eye Nut M24	137464
68	Corner Bracket VPS	137342
69	Hold-Down Bracket VPS	137336
115	Screw ISO 4017-M24 x 60-10.9-ga	137788
129	Multi Panel VPS (RAL 1028, Melon Yellow)	–

Tab. 09

Tightening torques

Unless otherwise indicated, PERI recommends the following guide values for screw connections as "hand-tightened" tightening torques $M_{A,hand\text{-}tightened}$.
These guide values are based on EN 15048 with minimum Safety Factor 3 against breakage.

Quality class	**Quality 4.6**		**Quality 8.8 and 10.9**
Lubrication	**Lightly oiled**	**MoS2**	**Undefined**
Screw M8	8 Nm	6.6 Nm	8 Nm
Screw M10	16 Nm	13.0 Nm	16 Nm
Screw M12	30 Nm	23.0 Nm	30 Nm
Screw M16	65 Nm	54.0 Nm	65 Nm
Screw M20	100 Nm		100 Nm
Screw M24	150 Nm		150 Nm
Screw M30	260 Nm		260 Nm
Screw M36	350 Nm		350 Nm
Tightening torques have been determined for the following components:			
Scaffolding tube coupling		50 Nm	

Tab. 10

Standard work flow

1. Reinforcement work.
2. Install the formwork halves.
3. Place the formwork halves on the reinforcement – with a crane.
4. Close formwork.
5. Concrete the columns.
6. Open formwork halves.
7. Remove formwork halves – with crane.

Overview of column formwork

Intended use

Product description
PERI products have been designed to be used exclusively in industrial and commercial sectors by suitably trained personnel only.

The Column Formwork VPS is used for pouring concrete columns on site.

The Panels VPS are always used without tie holes.

Either working platforms or lifting platforms are used for concreting, or opening or closing the formwork.

The panels are powder-coated in order to make cleaning easier.

The panels can be used for columns ranging from 2'-0" x 2'-0" to 8'-0" x 8'-0" and 0.61 m x 0.61 m to 2.44 m x 2.44 m.
v
In windmill format, increments of 2.0" or 5.0 cm are possible.

Individual panels can be mounted with X-Bolts VPS M24 x 70 in a raised manner.

Sharp-edged or bevelled columns can be produced using triangular strips.

Brackets are not included in this prototype.

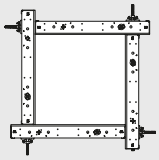
Improper use
- Transport or lifting of persons,
- Transport of other loads,
- Welding work and carrying out flame-cutting work (fire hazard),
- Working with a naked flame (fire hazard),
- Exceeding the permissible load-bearing capacity and load limits,
- Carrying out work in impermissible wind conditions.

Technical data
- Panel heights:
  – 0.5 m (1'-7 11/16")
  – 1.5 m (4'-11 1/16")
  – 2.0 m (6'-6 ¾")
  – 3.0 m (9'-10 1/8")
- Maximum column height 9.0 m

  (~30'-0") for standard applications.

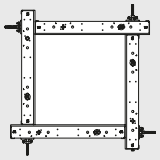
Permissible fresh concrete pressures of the column formwork

Configurations with Panel VPS

External Corner VPS 		Windmill configuration 			
permissible concrete pressure	**Panel width**	**min. – max. column sizes in 2"/5 cm increments**		**permissible concrete pressure with max. column size**	**2,000 psf/95 kN/m² up to**
2,000 psf/96 kN/m²	4 ft/1.22 m	2 ft/0.7 m	3.5 ft/1.05 m	2,000 psf/96 kN/m²	3.5 ft/1.07 m
2,000 psf/96 kN/m²	5 ft/1.52 m	3 ft/1.0 m	4.5 ft/1.35 m	2,000 psf/96 kN/m²	4.5 ft/1.37 m
2,000 psf/96 kN/m²	6 ft/1.83 m	4 ft/1.3 m	5.5 ft/1.65 m	1,600 psf/77 kN/m²	4.5 ft/1.37 m
2,000 psf/96 kN/m²	7 ft/2.13 m	5 ft/1.5 m	6.5 ft/1.95 m	2,000 psf/96 kN/m²	6.5 ft/1.98 m
2,000 psf/96 kN/m²	8 ft/2.44 m	6 ft/1.9 m	7.5 ft/2.25 m	1,750 psf/84 kN/m²	6.5 ft/1.98 m

Tab. 12

Configurations with Multi Panel VPS

External Corner VPS 		Windmill configuration 			
permissible concrete pressure	**Panel width**	**min. – max. column sizes in 2"/5 cm increments**		**permissible concrete pressure with max. column size**	**2,000 psf/95 kN/m² up to**
1,670 psf/80 kN/m²	6 ft/1.83 m	2' - 10" / 0.85 m	5' - 6" / 1.65 m	1,670 psf/80 kN/m²	4' - 6" / 1.37 m
1,670 psf/80 kN/m²	7 ft/2.13 m	3' - 6" / 0.95 m	6' - 6" / 1.95 m	2,000 psf/96 kN/m²	6' - 6" / 1.98 m
1,670 psf/80 kN/m²	8 ft/2.44 m	4' - 0" / 1.10 m	7' - 6" / 2.25 m	1,670 psf/80 kN/m²	6' - 6" / 1.98 m

Tab. 13

Overview of column formwork

Column dimensions with flex deck

Concreting platform with flexible deck with Corner Bracket VPS-Flex (**132**) for panel or multi panel								
	Multi panel				Panel			
	Min.		Max.		Min.		Max.	
6 ft	1.00 m	3' - 4"	1.65 m	5' - 6"	1.30 m	4' - 0"	1.65 m	5' - 6"
7 ft	1.30 m	4' - 4"	1.95 m	6' - 6"	1.50 m	5' - 0"	1.95 m	6' - 6"
8 ft	1.60 m	5' - 4"	2.25 m	7' - 6"	1.90 m	6' - 0"	2.25 m	7' - 6"

Tab. 14

Column height (formwork height) / panel composition

Column height [m]	Column height [ft]	Panel height [m]				Formwork height [ft]	Formwork height [m]
		3	2	1.5	0.5		
6.10	20	2	0	0	1	21.321	6.5
6.40	21	2	0	0	1	21.321	6.5
6.71	22	1	2	0	0	22.960	7
7.01	23	2	0	1	0	24.600	7.5
7.32	24	2	0	1	0	24.600	7.5
7.62	25	2	1	0	0	26.240	8
7.92	26	2	1	0	0	26.240	8
8.23	27	2	1	0	1	27.881	8.5
8.53	28	2	1	0	1* (0.03 m)	27.881	8.5
8.84	29	2	1	1	0	31.160	9.5
9.14	30	2	1	1	0	31.160	9.5
9.45	31	2	1	1	0	31.160	9.5
9.75	32	2	2	0	0	32.800	10
10.06	33	2	1	1	1* (0.06 m)	32.801	10
10.36	34	2	2	0	1	34.441	10.5
10.67	35	2	2	1	0	37.720	11.5

* For the marked column heights, the formlining must be increased by the amount indicated using squared timber.

Tab. 15



The Filler Support VPS can also be used to raise the formwork

D1 Assembly with panel and Multi Panel VPS

Rectangular formwork halves

Components

7 Panel VPS
16 X-Bolt VPS M24 x 70
62 External Corner VPS

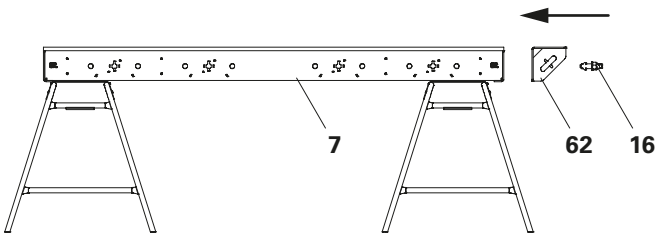


Fig. D1.01

Assembly

1. Place Panel VPS (**7**) on working area.
2. Place External Corner VPS (**62**) at the X-panel position.
3. Insert 2x X-Bolt VPS M24 x 70 (**16**) through the External Corner VPS (**62**) and hand-tighten from the outside (AF 36).

(Fig. D1.01)

4. Fit the External Corner VPS (**62**) at each X-plate (**7.1**) in the same way.
5. Repeat assembly steps 1. – 4 for second Panel VPS (**7**).
6. Attach one formwork half to the crane and place it against the second formwork half.

(Fig. D1.02)

7. Connect formwork halves with X-Bolts VPS M24 x 70 (**16**) and hand-tighten.
8. If necessary, to protect the formlining, mount rubbing boards with 4x bolt ISO 10642 M6 x 55-8.8 and nut ISO 4032 M6-8 on the underside.

(Fig. D1.02)

9. Knock off crane lifting gear.
10. Fit the second lot of formwork in the same way.

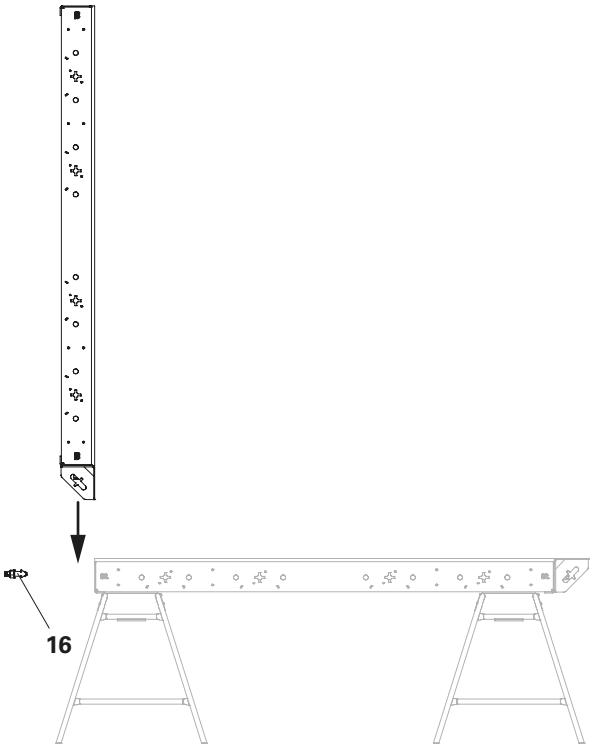


Fig. D1.02

Formwork halves in windmill shape

Components

7 Panel VPS
16 X-Bolt VPS M24 x 70
62 External Corner VPS
63 Counterplate VPS DW20
64 T-Bolt VPS DW20 x 415

Assembly

1. Place Panel VPS (**7a**) on the working area.
2. Fit External Corner VPS (**62**) onto second Panel VPS (**7b**)See section "Rectangular formwork halves" on page 118.
3. Drill through the panel from the rear at the specified position.

(Fig. D1.03a)

4. Use the hole for centring and drill through the formlining with a Forstner bit Ø 51 mm.

(Fig. D1.03b)

5. Place the second Panel VPS (**7b**) in the specified assembly position against the first Panel VPS (**7a**) with the crane.

(Fig. D1.03)

6. Place Counterplate VPS DW20 (**63**) at the assembly position.
7. Screw T-Bolt VPS DW20 x 415 (**64**) through Counterplate VPS DW20 (**63**) and Panel (**7b**) into Panel VPS (**7a**).
8. Secure T-Bolt VPS DW20 x 415 (**64**) and Counterplate VPS DW20 (**63**) with Wingnut DW20 ga (**65**) and hand-tighten.
9. If necessary, to protect the formlining, mount rubbing boards with 4x bolt ISO 10642 M6 x 55-8.8 and nut ISO 4032 M6-8 on the underside.

(Fig. D1.04 + Fig. D1.05)

10. Knock off crane lifting gear.
11. Fit the second lot of formwork in the same way.

The eye nuts M24 (**67**) can be fitted in this assembly step for the erection process.

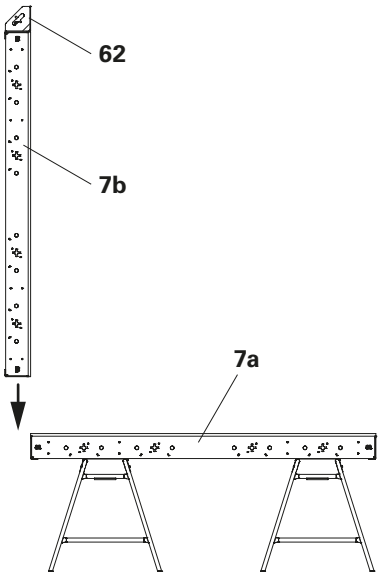


Fig. D1.03

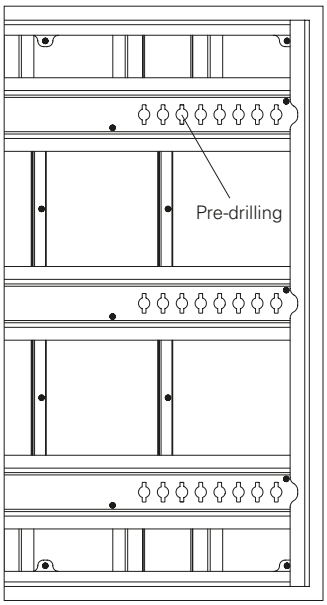


Fig. D1.03a

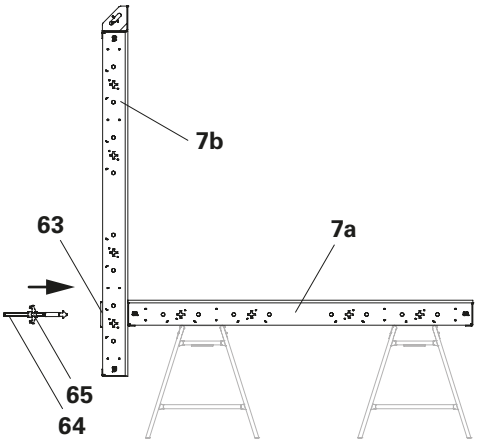


Fig. D1.04

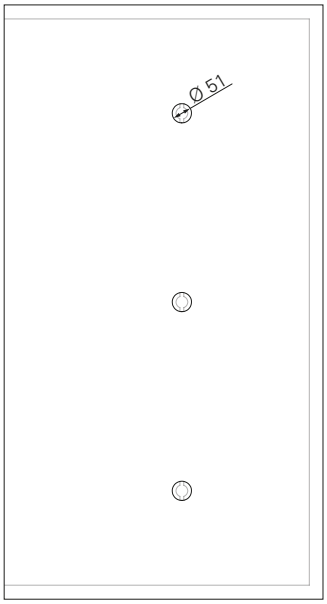


Fig. D1.03b

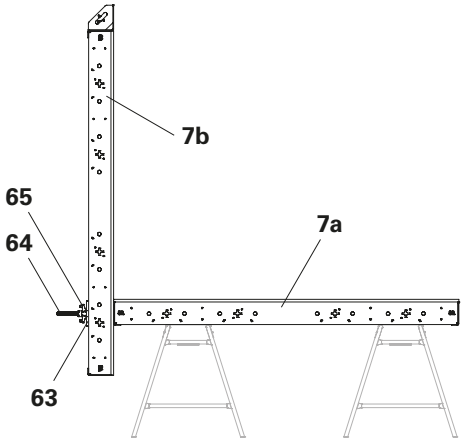


Fig. D1.05

Push-Pull Props RS

For stability, 4 push-pull props and 4 kicker braces must be fitted.

Assembly on the horizontally-positioned formwork half.
8 Push-Pull Prop Connectors VPS (**66**) must be fitted.
(Fig. D1.06)

Components

5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga
52 Push-Pull Prop RS
55 Base Plate-3 f. RS 210 – 1400
66 Push-Pull Prop Connector VPS

Fitting the brace connector
1. Fit 8x Push-Pull Prop Connectors VPS (**66**) onto the Panel VPS (**7**) with Fitting Pins Ø21 x 120 (**5**) and secure with Cotter Pins 4/1 ga (**6**).

(Fig. D1.06 + Fig. D1.06a)

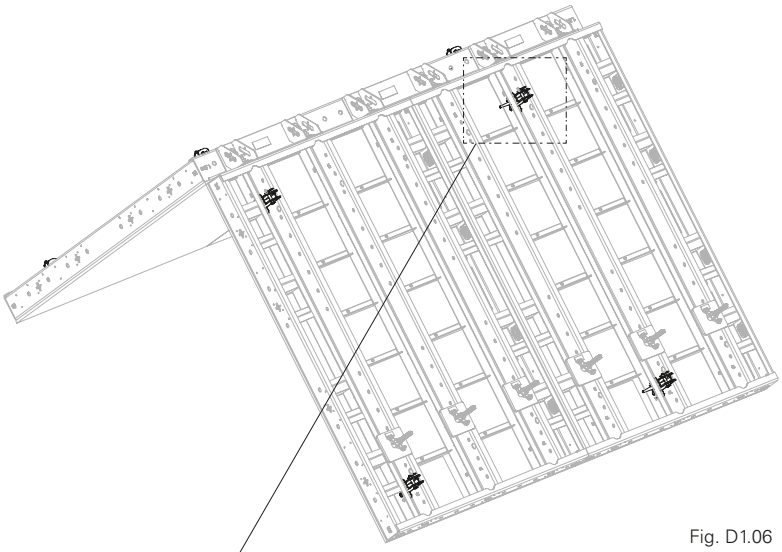


Fig. D1.06

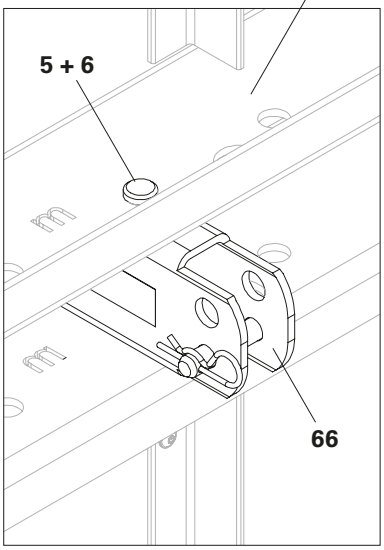


Fig. D1.06a

D1 Assembly with panel and Multi Panel VPS

Fitting the push-pull props

1. Fit the Push-Pull Props RS (**52**) onto the Push-Pull Prop Connector VPS (**66**) with bolts Ø 16 x 70 (**66.1**) and secure with Cotter Pins 4/1 ga (**66.2**). (Fig. D1.07 + Fig. D1.07a)
2. Spindle Push-Pull Props RS (**52**) to the specified length (≤ 60°). (Fig. D1.08)
3. Fit Push-Pull Props RS (**52**) with Fitting Pins Ø21 x 120 (**5**) into Base Plate-3 f. RS 210 – 1400 (**55**) and secure with Cotter Pin 4/1 ga (**6**). (Fig. D1.07b)

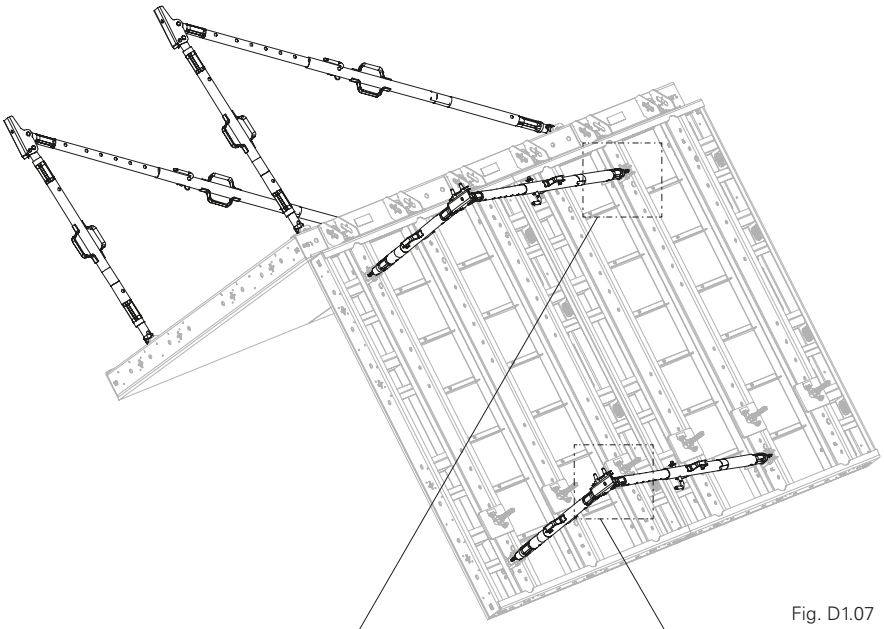


Fig. D1.07

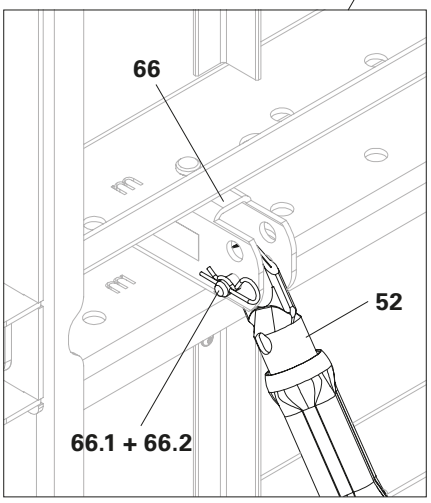


Fig. D1.07a

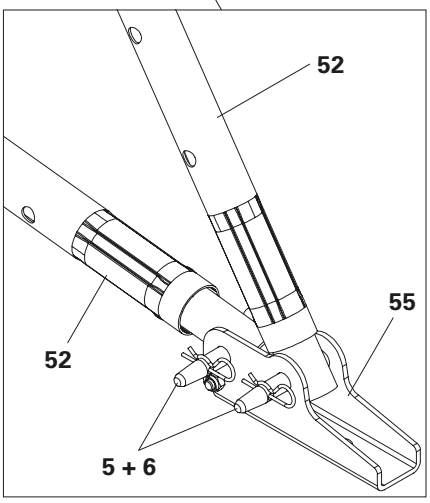


Fig. D1.07b

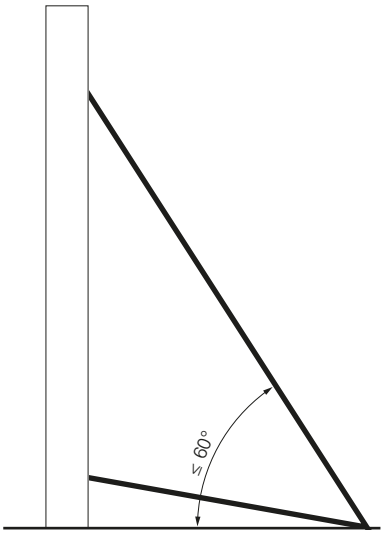


Fig. D1.08

Filler Support VPS as height compensation

Components

16 X-Bolt VPS M24 x 70
47 Filler Support VPS

Assembly

1. Determine the length of the cantilever.
2. Fit the tube (**47.1**) at the resulting position in the Filler Support VPS (**47**) with 2x Fitting Pins Ø21 x 120 (**47.2**) and secure with Cotter Pins 4/1 ga (**47.3**).
3. Fit the Filler Support VPS (**47**) onto the Panel VPS (**7**) with X-Bolt VPS M24 x 70 (**16**).
4. Fit the squared timbers and the formlining onto the Filler Supports VPS (**47**).

(Fig. D1.09 + Fig. D1.09a)

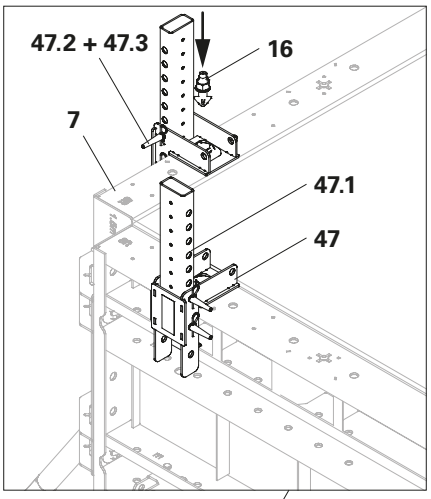


Fig. D1.09a

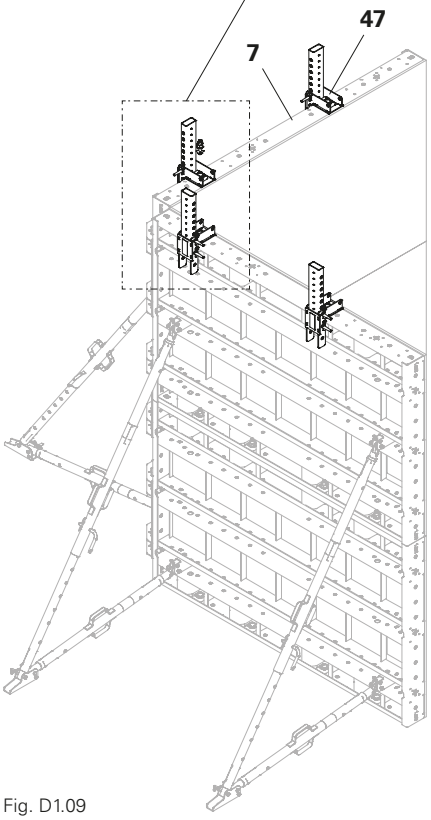


Fig. D1.09

Positioning the formwork

Use eye nuts M24 (**67**) as attachment points.
Only fit the eye nut at the position of an X-plate

All Panels VPS (**7**) are equipped with attachment points for PPE.

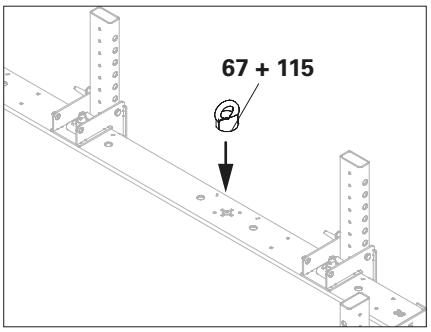


Fig. D1.10a

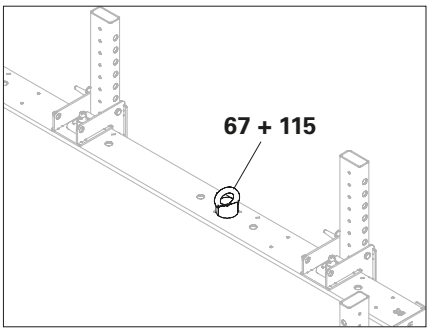


Fig. D1.10b

Components

67	Eye Nut M24
115	Screw ISO 4017-M24 x 60-10.9-ga

Positioning the formwork

1. Fit 2x Eye Nuts M24 (**67**) into the X-hole on both formwork halves with Screw ISO 4017-M24 x 60-10.9-ga (**115**). (Fig. D1.10a + Fig. D1.10b)
2. Attach the first formwork half to the Eye Nuts M24 (**67**) on the crane.
3. Place the first formwork half at the concreting position.
4. Anchor Base Plate-3 f. RS 210 – 1400 (**55**) to the floor.
5. Attach the second formwork half to the eye nuts M24 (**67**) on the crane.
6. Position the second formwork half on the first formwork half.

(Fig. D1.10)

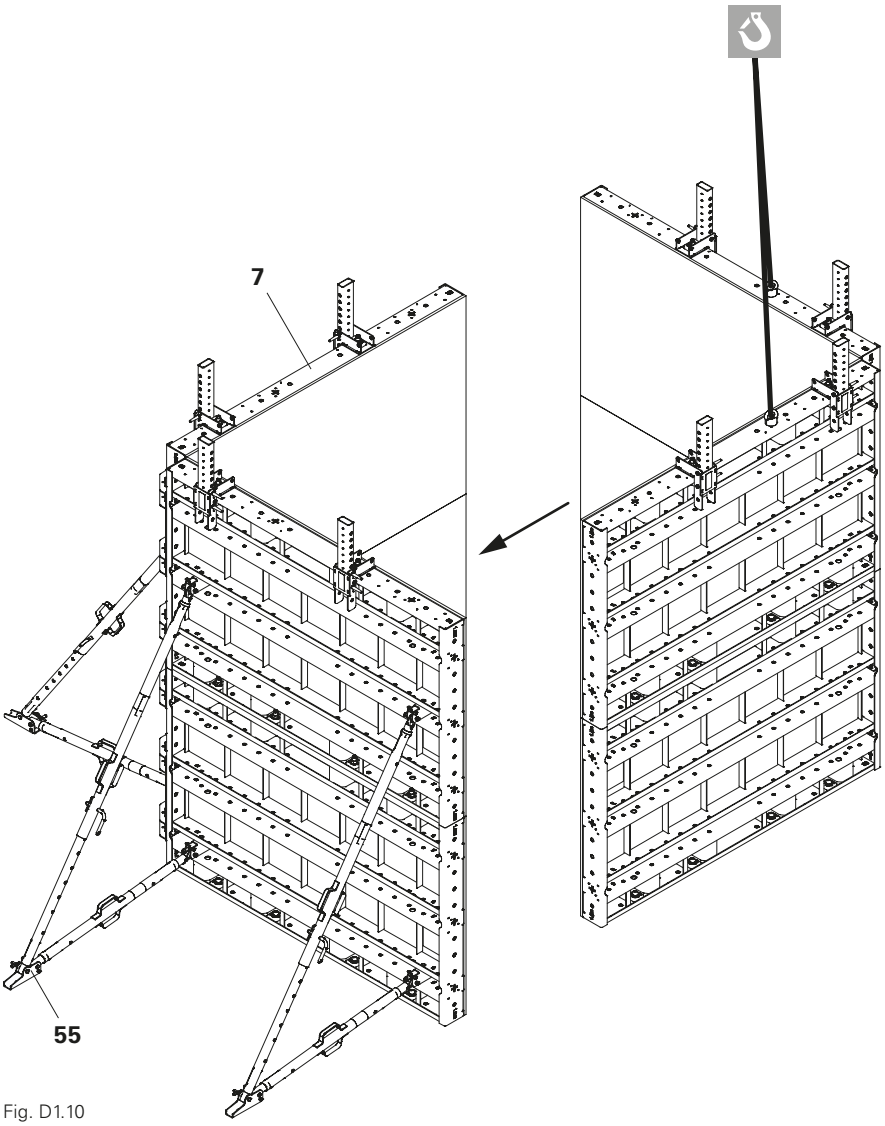


Fig. D1.10

Closing the Formwork

- Connect the formwork from bottom to top with T-Bolt VPS DW20x415 (**64**) or X-Bolt VPS M24 x 70 (**16**).
- You must drill through the formlining if you are carrying out the assembly process in windmill form. Repair on the formliningSee section "D4 Formlining repair" on page 141.

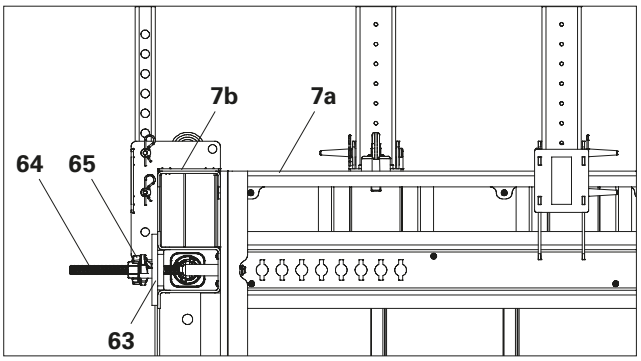


Fig. D1.11a

Fitting the External Corner VPS

1. Connect formwork halves with X-Bolts VPS M24 x 70 (**16**) and hand-tighten.
2. Knock off crane lifting gear.

(not shown)

Assembling the windmill

1. Pre-drill the formlining of the Panel VPS (**7b**) at the specified position.
2. Screw T-Bolt VPS DW20 x 415 (**64**) through Counterplate VPS DW20 (**63**) and Panel VPS (**7b**) into Panel VPS (**7a**).
3. Secure T-Bolt VPS DW20 x 415 (**64**) and Counterplate VPS DW20 (**63**) with Wingnut DW20 ga (**65**) and hand-tighten.
4. Knock off crane lifting gear.

(Fig. D1.11 + Fig. D1.11a)

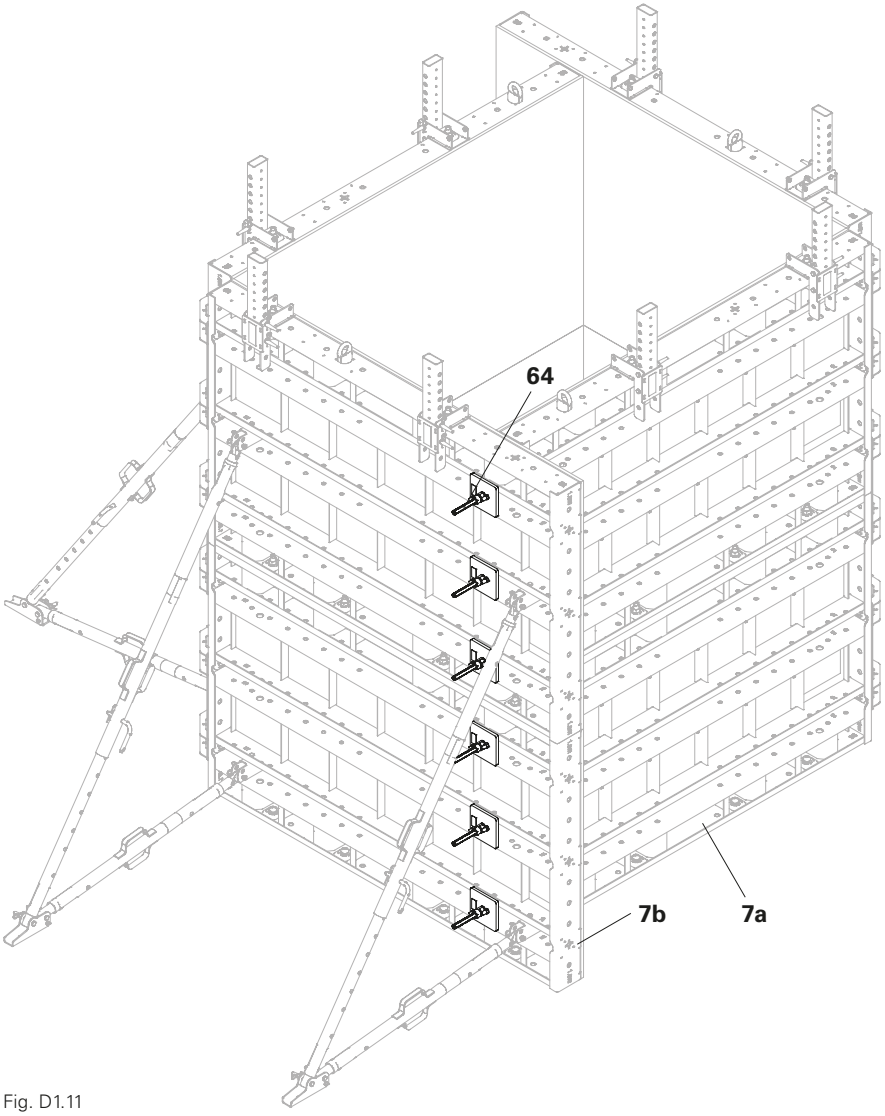


Fig. D1.11

Hold-Down Bracket VPS

- The Hold-Down Bracket VPS (**69**) is used to attach the Panels VPS (**7**) to the floor.
- The hole matrix in the Hold-Down Bracket VPS (**69**) is 50 mm apart.
- If rubbing boards have been fitted to the panels, the Hold-Down Bracket VPS (**69**) must be lined accordingly.

Components

5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga
66 Brace Connector VPS
69 Hold-Down Bracket VPS

Assembly

1. Position the formwork.
2. Fit Push-Pull Prop Connector VPS (**66**) onto the Panel VPS (**7**) with Fitting Pins Ø21 x 120 (**5**) and secure with Cotter Pins 4/1 ga (**6**).
3. Fit the Hold-Down Bracket VPS (**69**) onto the Push-Pull Prop Connector VPS (**66**) with Fitting Pin Ø21 x 120 (**5**) and secure with Cotter Pin 4/1 ga (**6**).
4. Anchor the Hold-Down Bracket VPS (**69**) to the ground, e.g. with PERI Anchor Bolt 14/20 x 130 (**41**).

(Fig. D1.12 + Fig. D1.12a)

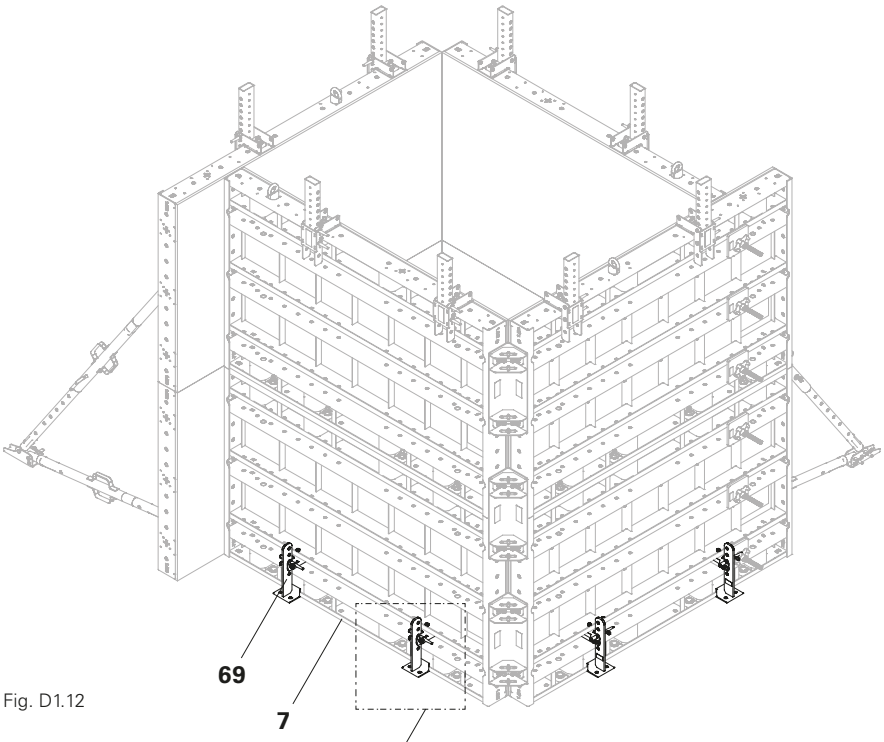


Fig. D1.12

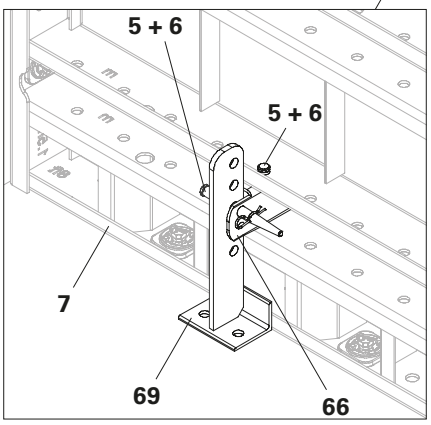
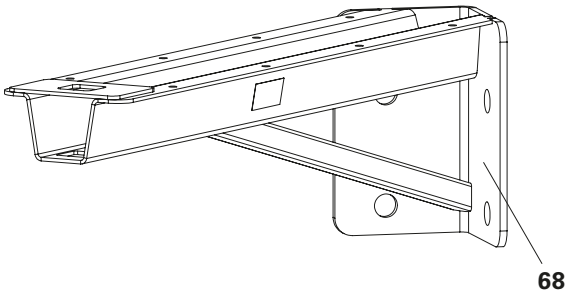


Fig. D1.12a

Mounting the work platform

In the case of higher column formwork, a work platform can be mounted using the Platform Bracket VPS 1.00 m (**10**) and the Corner Bracket VPS (**68**).



Components

5 Fitting Pin Ø21 x 120
6 Cotter Pin 4/1 ga
10 Platform Bracket VPS 1.00 m
14 Screw ISO 4017-M24 x 60-8.8-ga
15 Hex-Nut ISO 4032-M24-8-ga
22 Decking boards
24 Spigot w. Spacer Tube URE 4/42
28 Top Standards UVH-2 x 150
31 Guardrail boards
37 Steel scaffolding tube Ø 48.3 x 3.2
38 Standard Couplers RA 48/48
68 Corner Bracket VPS

Assembly

1. Insert the Platform Bracket VPS 1.00 m (**10**) with the upper short rectangular tube into the Panel VPS (**7**).
2. Fit Platform Bracket VPS (**10**) with fitting pins (**5**) and secure with Cotter Pins 4/1 ga (**6**).

(Fig. D1.13)

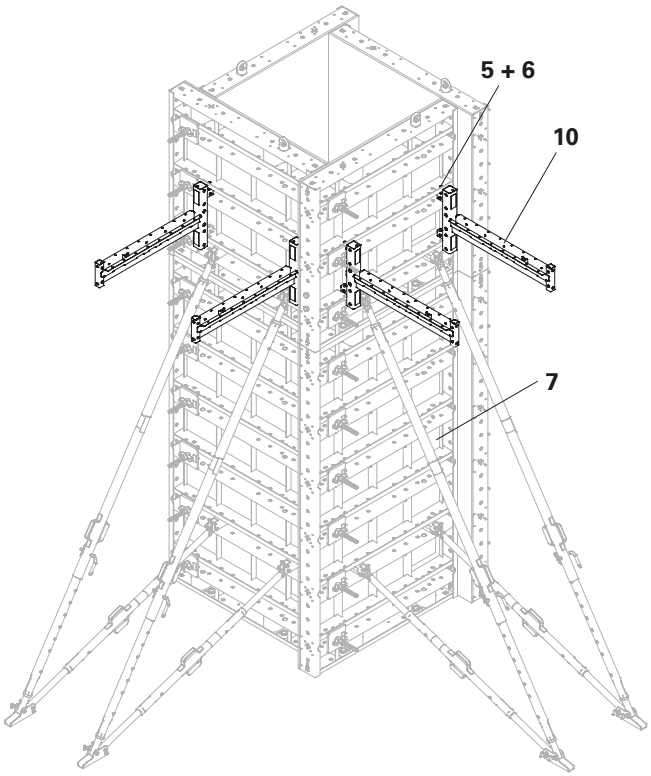


Fig. D1.13

D1 Assembly with panel and Multi Panel VPS

3. Place Corner Bracket VPS (**68**) against projecting Panel VPS (**7**).
4. Fit Corner Bracket VPS (**68**) using 2x bolts ISO 4017 M24 x 60-8.8 (**14**) and Hex-Nuts ISO 4032-M24-8-ga (**15**).
5. Screw the compensation board (**110**) onto the Corner Bracket VPS (**68**).
6. Insert pin with Spacer Tube URE 4/42 (**24**) into the outer square tube of Platform Bracket VPS 1.00 m (**10**).
7. If necessary, secure the pin and Spacer Tube URE 4/42 (**24**) with screw M10 x 70 and nut M10 to prevent lifting.
8. Fit the Top Standards UVH-2 150 (**28**) into the spigots with the Spacer Tubes URE 4/42 (**24**).
9. Use steel scaffolding tubes Ø 48.3 x 3.2 (**37**) and Standard Couplers RA 48/48 (**38**) or guardrail boards (**31**) to install anti-fall protection.

(Fig. D1.14 + Fig. D1.14a)

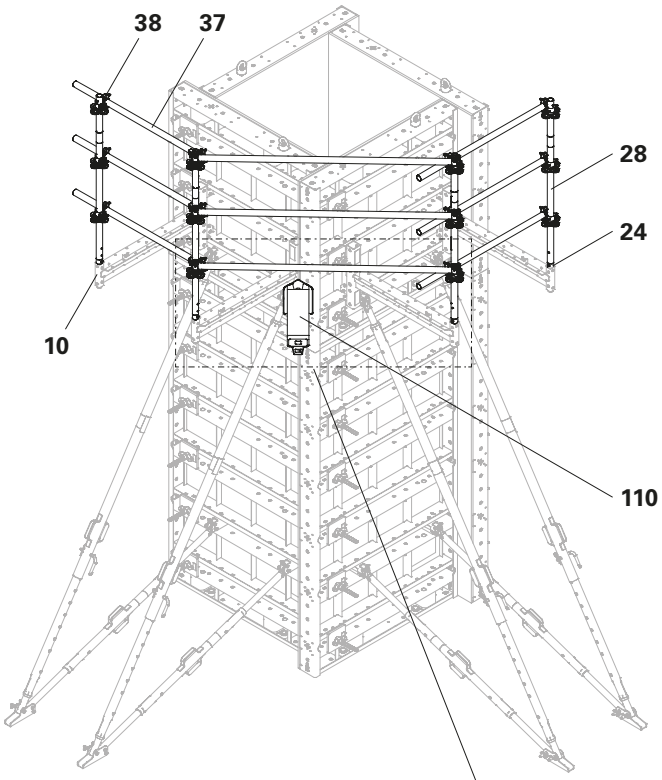


Fig. D1.14

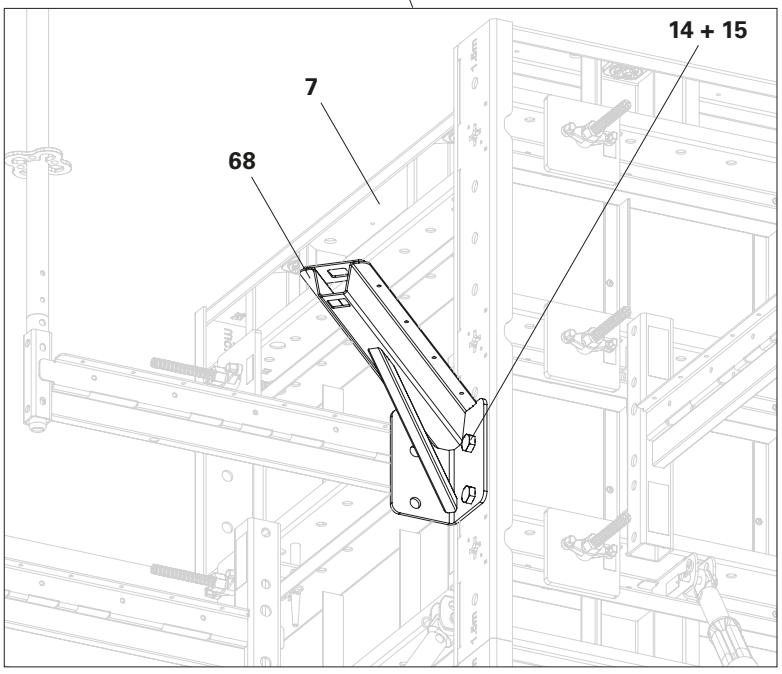


Fig. D1.14a

Install deck

1. Saw the decking boards (**22**) to the specified length.
2. Place decking boards (**22**) on the Platform Brackets VPS 1.00 m (**10**) and Corner Brackets VPS (**68**).
3. Fasten the decking boards (**22**).
4. Fit guardrail boards (**31**) as anti-fall protection and toe boards.

(Fig. D1.15)

The work platform can also be installed during the assembly of the Push-Pull Props RS on the ground if no safe working places are available for the assembly after erection.

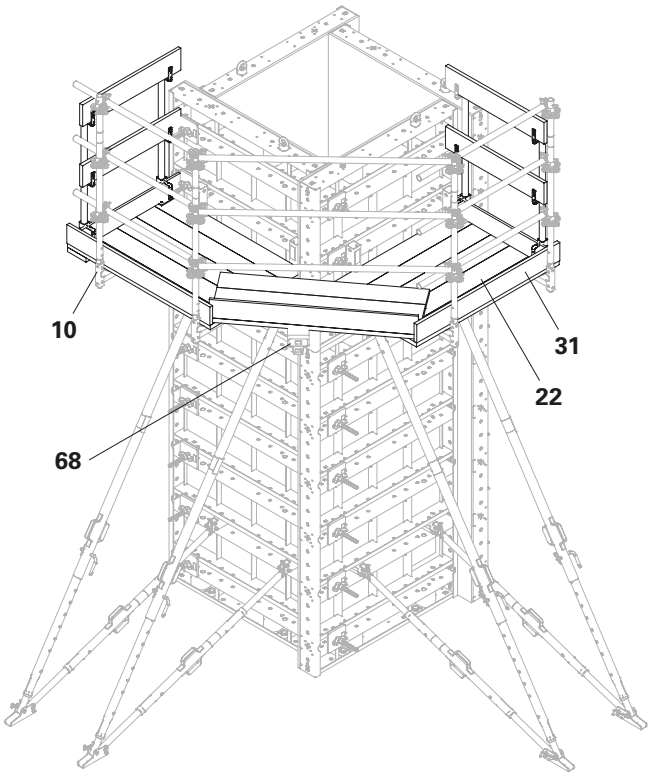


Fig. D1.15

Corner Bracket VPS at columns with External Corners VPS

For columns with External Corners VPS, the Corner Bracket VPS (**68**) is installed between the External Corners VPS (**62**).
The rest of the work platform is installed in the same waySee section "Mounting the work platform" on page 126.

Fitting rectangular formwork halves

1. Place the Corner Bracket VPS (**68**) between the External Corners VPS (**62**).
2. Fit Corner Bracket VPS (**68**) using 2x bolts ISO 4017 M24 x 60-8.8 (**14**) and Hex-Nuts ISO 4032-M24-8-ga (**15**).

(Fig. D1.16 + Fig. D1.16a)

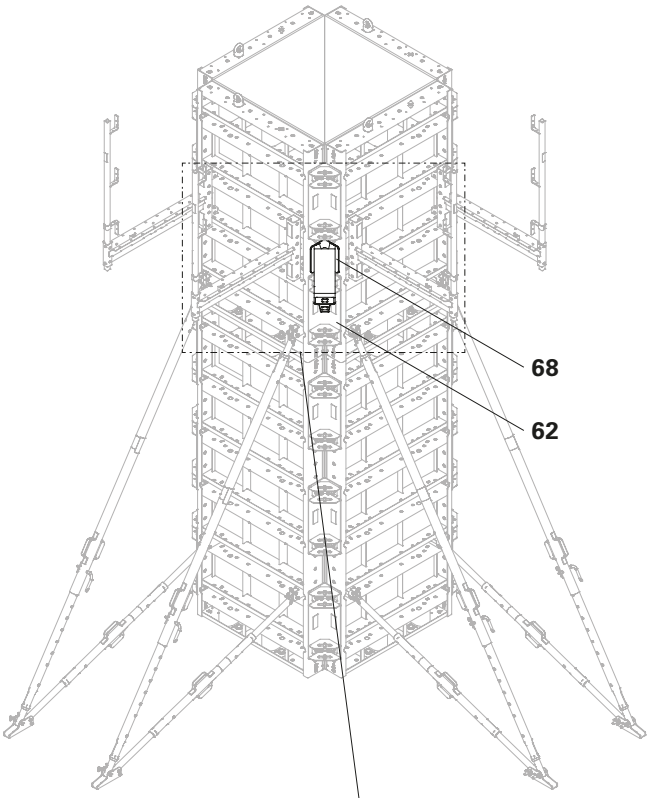


Fig. D1.16

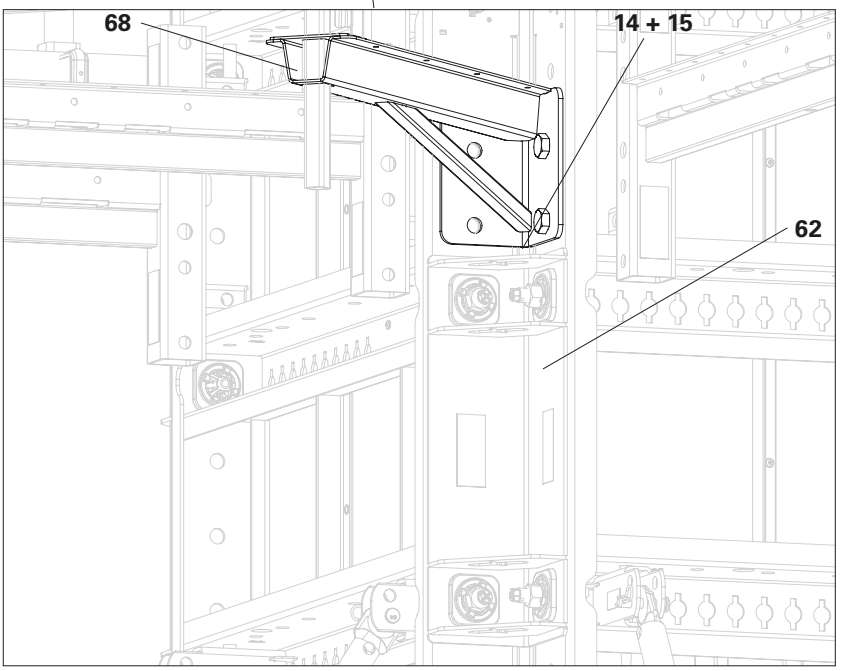


Fig. D1.16a

D2 Mounting a PERI UP FLEX work platform on a Multi Panel VPS or Panel VPS

Mounting the work platform, upright assembly

In the case of higher column formwork, a work platform can be mounted using the Platform Bracket VPS 1.00 m (**10**) and the Corner Bracket VPS-Flex (**132**).

Components

5	Fitting Pin Ø21 x 120
6	Cotter Pin 4/1 ga
10	Platform Bracket VPS 1.00 m
15	Hex-Nut ISO 4032-M24-8-ga
22	Decking boards
24	Spigot w. Spacer Tube URE 4/42
28	Top Standard UVH-2 150
31	Guardrail boards
37	Steel scaffolding tube Ø 48.3 x 3.2
128	Toe Board Compensation UPY-L
129	Multi Panel VPS
131	Locking pin Ø 48/57
132	Corner Bracket VPS 1.00 m
133	Column Adapter VPS-FLEX
134	Cover Plate UDB-S 20 x 100
135	Ledger-to-Ledger Coupler UHA Half
136	Node Brace UBK-2 125/100
137	Ledger Brace UBL-2 100/100
138	Screw ISO 4017-M24 x 60-8.8-ga
139	Washer ISO 7090-24-200HV
140	Screw ISO 4014-M10x070-8.8-ga

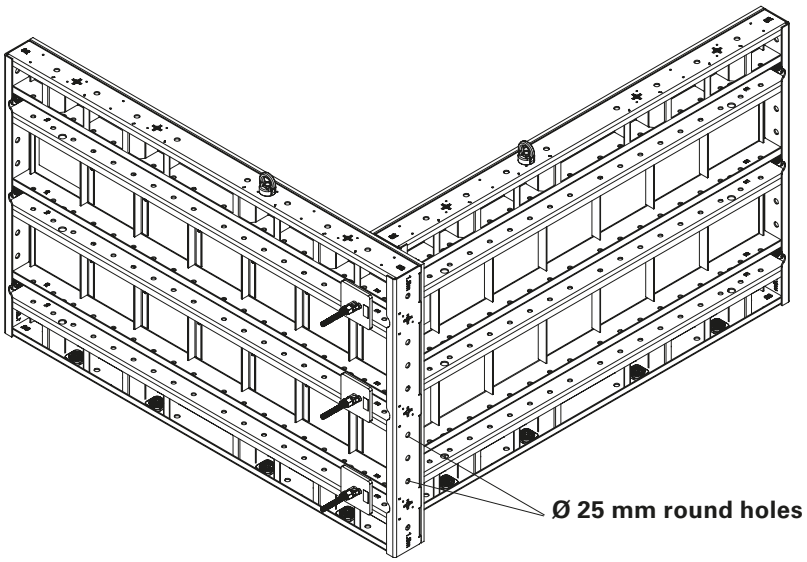


Fig. D2.01

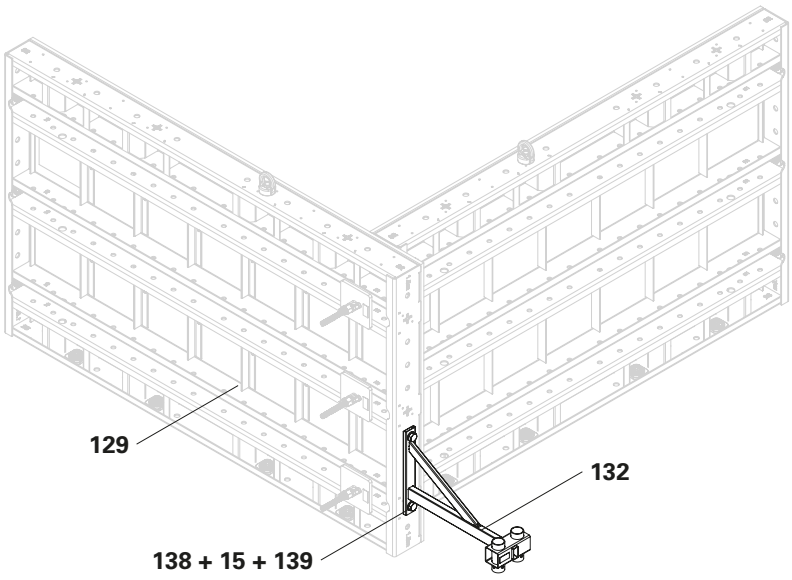


Fig. D2.02

Secure Multi Panels VPS to prevent them from toppling.

Assembly

1. Connect formwork Multi Panels VPS in a windmill shape. (Fig. D2.01)
2. Place Corner Bracket VPS 1.00 m (**132**) at the end face of an overhanging Multi Panel VPS (**129**) element. (Fig. D2.02) Use the round holes provided in the profile for this. (Fig. D2.01) (DO NOT use the X-Bolt hole.)
3. Fit Corner Bracket VPS (**132**) using 2x bolts ISO 4017 M24 x 70-8.8 (**138**) and Hex-Nuts ISO 4032-M24-8-ga (**15**) (hand-tighten the bolts). (Fig. D2.02)

D2 Mounting a PERI UP FLEX work platform on a Multi Panel VPS or Panel VPS

4. Insert the Platform Bracket VPS 1.00 m (**10.1**) with the upper short rectangular tube into the Multi Panel VPS (**129**) at the 3rd strut hole of the Corner Bracket VPS-Flex (**132**). The distance from the outer edge of the element to the 3rd hole is 375 mm.

   (Fig. D2.03)
5. Fit Platform Bracket VPS 1.00 m (**10.2**) at the first possible position in the Multi Panel VPS and as close as possible to the Corner Bracket VPS-Flex 1.0 m (**132**).
   (Fig. D2.04)
   → This minimises the distance between the Steel Decks UDG.

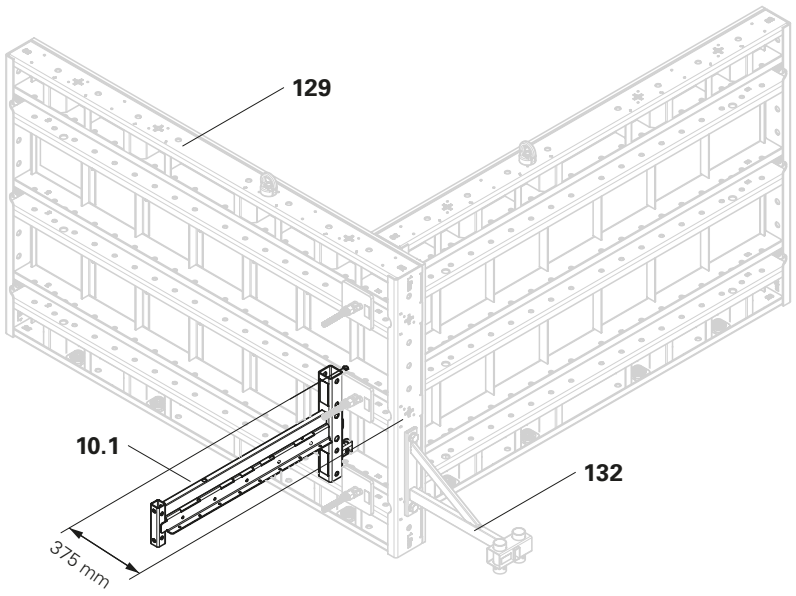


Fig. D2.03

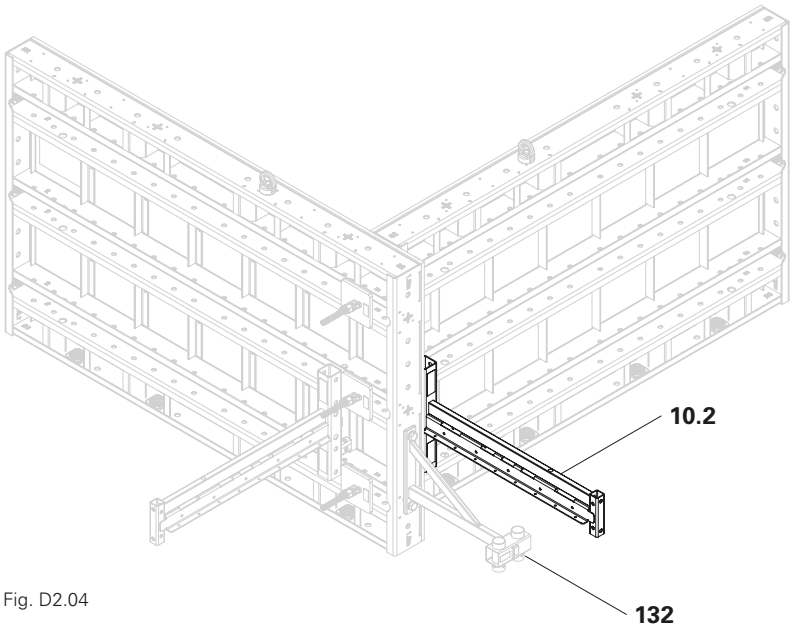


Fig. D2.04

D2 Mounting a PERI UP FLEX work platform on a Multi Panel VPS or Panel VPS

6. Mark the required position of the Column Adapter VPS-FLEX (**133**) on the multi panel according to the length of the steel deck. Fit the Column Adapter VPS-FLEX (**133**) at the marking on the Panel VPS using 2 bolts Ø 21 x 120. The Column Adapter VPS-FLEX (**133**) can be moved to a limited extent. (Fig. D2.05 + Fig. D2.05a)
7. Fit Platform Bracket VPS 1.00 m (**10.3**) and (**10.4**) in the top hole with fitting pins. Attach the Platform Bracket VPS to the Column Adapter VPS. The platform bracket is secured against lifting using a second fitting pin in the hole underneath. Secure the fitting pin with a Cotter Pin 4/1 ga.
8. Position the VPS-FLEX connection (**27**) on the vertical profile of the platform brackets and secure with Fitting Pin Ø21 x 120 (**5a**) and Cotter Pin 4/1 ga (**6a**)See section "Connector VPS-Flex" on page 30. (Fig. D2.06 + Fig. D2.06a)

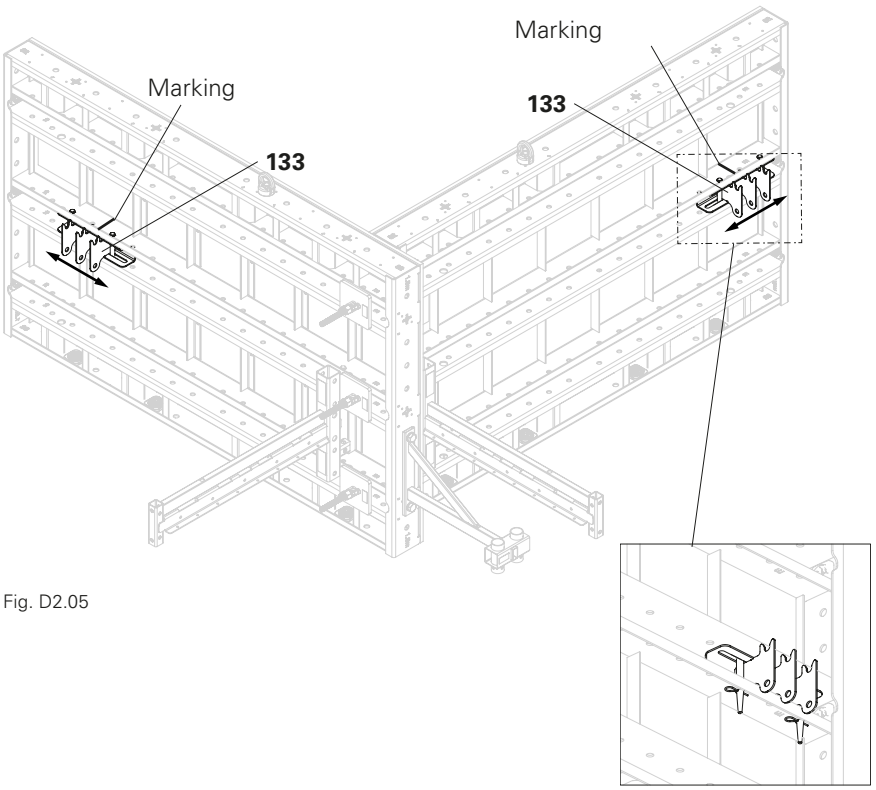


Fig. D2.05

Fig. D2.05a

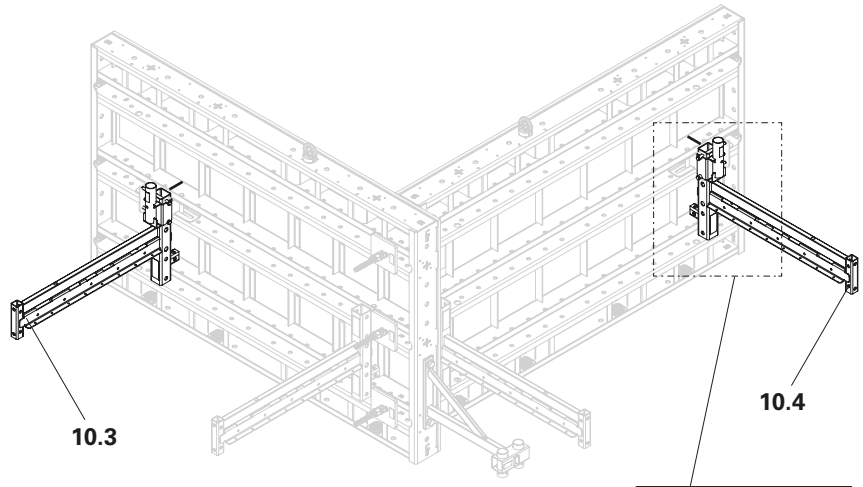


Fig. D2.06

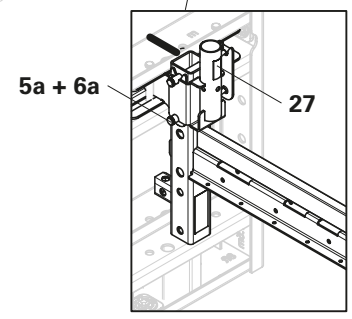


Fig. D2.06a

D2 Mounting a PERI UP FLEX work platform on a Multi Panel VPS or Panel VPS

9. Insert Steel Decks UDG (**21**) of the required length.
   (Fig. D2.07)
10. Insert the spigot with the Spacer Tube URE 4/42 (**24**) into the Platform Brackets VPS. Secure against lifting with bolt M10x70 and nut M10 (**126**)
    (Fig. D2.08 + Fig. D2.08a)

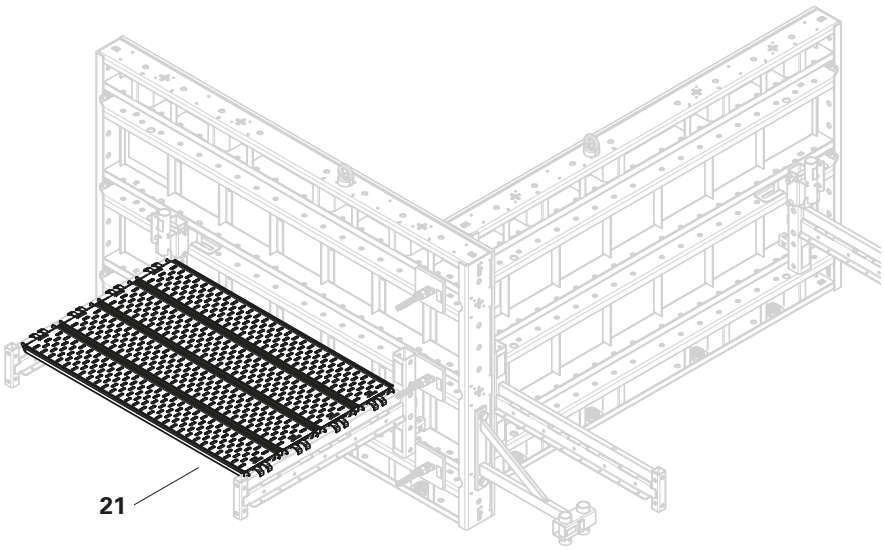


Fig. D2.07

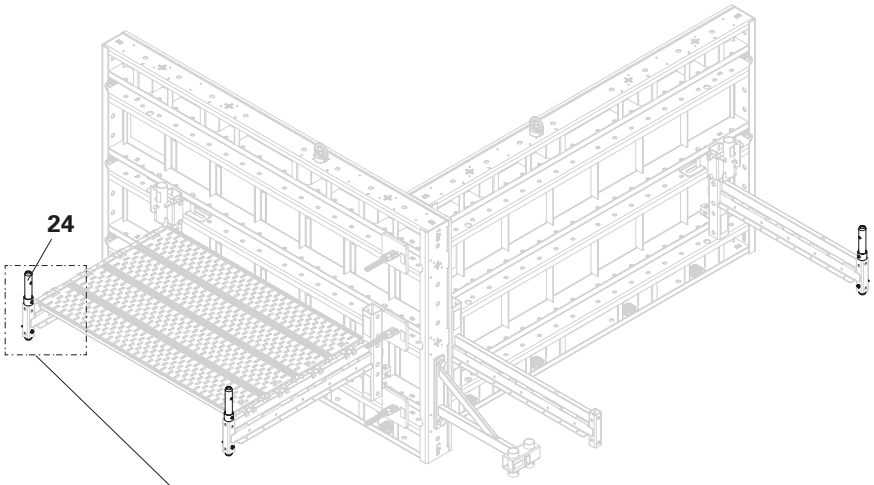


Fig. D2.08

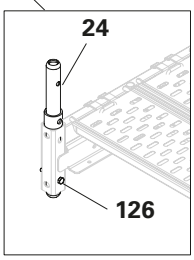


Fig. D2.08a

D2 Mounting a PERI UP FLEX work platform on a Multi Panel VPS or Panel VPS

11. Place the Top Standards UVH 150 (**28**) on the spigots with spacer tubes (**24**). Prevent the top standard and spigot from lifting with bolt M10x70 8.8 and nut (**140**). The Connector VPS Flex (**27**) must be used for attaching the top standards to the Multi Panel VPS. (Fig. D2.09 + Fig. D2.09a)
12. Insert Top Standard UVH 200 (**29**) into Corner Bracket VPS-FLEX 1.0 m (**132**) and secure against lifting with locking pin D48/D57 (**131**). (Fig. D2.10 + Fig. D2.10a)

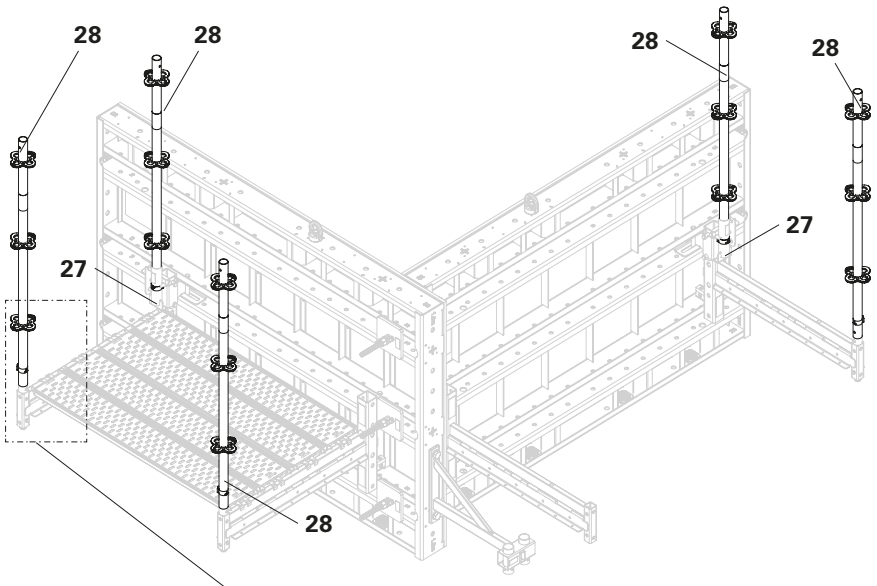


Fig. D2.09

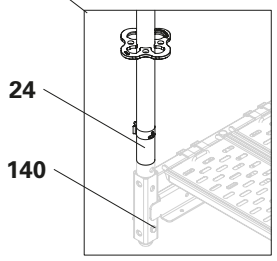


Fig. D2.09a

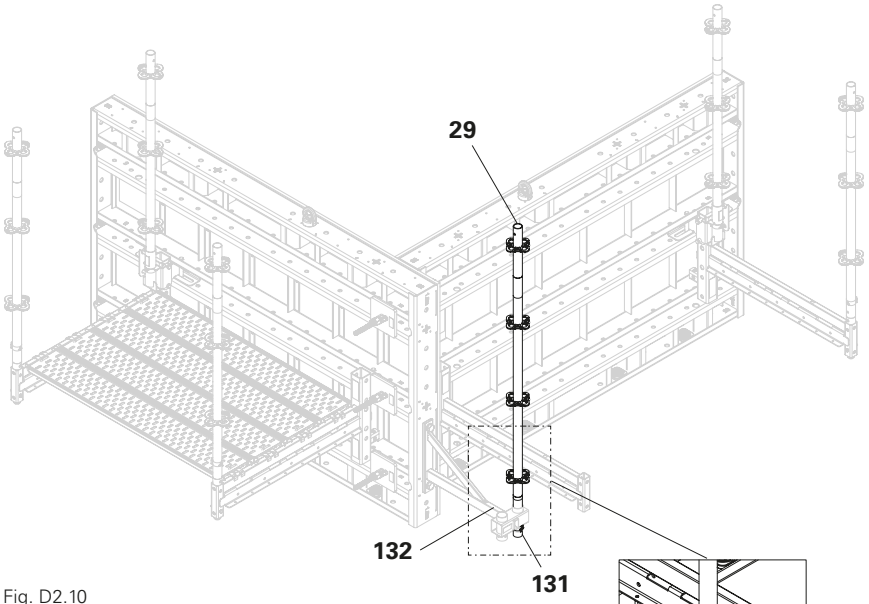


Fig. D2.10

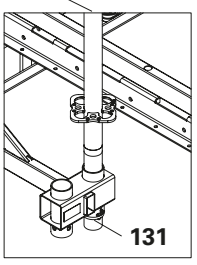


Fig. D2.10a

D2 Mounting a PERI UP FLEX work platform on a Multi Panel VPS or Panel VPS

13. The Top Standard UVH 200 (**29**) in the corner of the platform is initially held in position with the Horizontal Ledgers UH-2 125 (**30.1**) and UH-2 100 (**30**). (Fig. D2.11 + Fig. D2.11a)
14. Insert Steel Decks UDG-2 25x100 (**21.1**) and UDG-2 25 (**21**) and complete the side guardrails with Horizontal Ledger UH-2 (**30**). (Fig. D2.12)

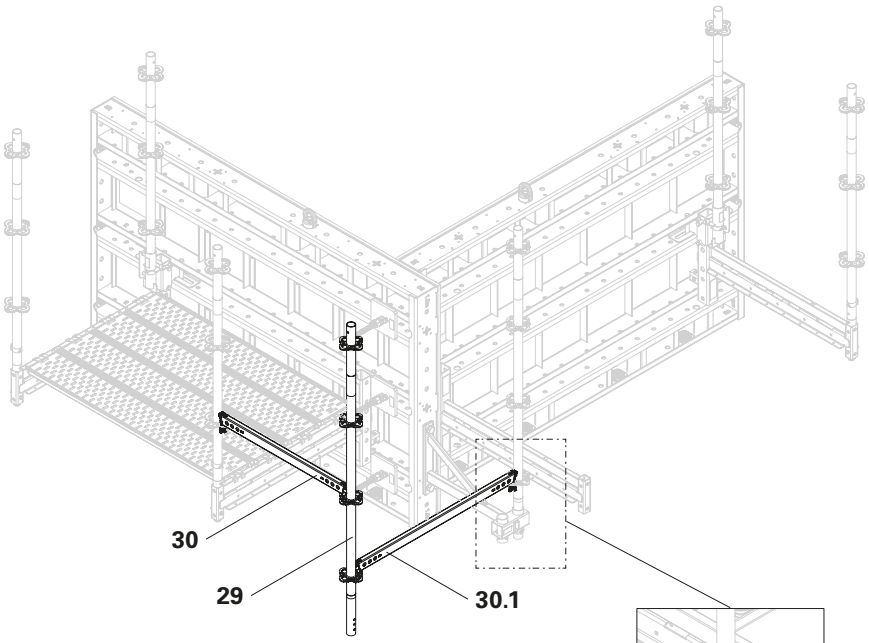


Fig. D2.11

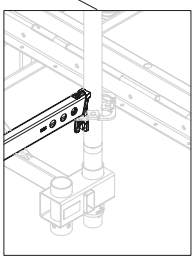


Fig. D2.11a

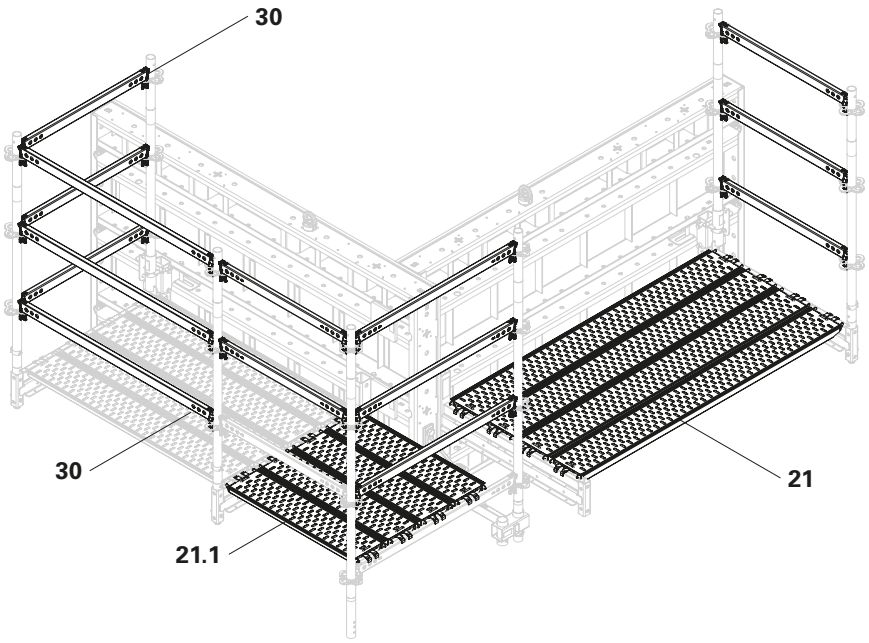


Fig. D2.12

D2 Mounting a PERI UP FLEX work platform on a Multi Panel VPS or Panel VPS

15. Secure and brace
    Corner Top Standard UVH-2 200 with Ledger Brace UBL-2 100/100 (**137**) and Node Brace UBK-2 125/100 (**136**).
    (Fig. D2.13)
16. Fit the Ledger-to-Ledger Coupler UHA-HALF (**135**) to the Horizontal Ledger UH-2 125 (**30.1**) and Horizontal Ledger UH-2 (project-specific length) to close the lateral protection completely.
    (Fig. D2.14 + Fig. D2.14a)
17. Close the transition between the decks with
    Cover Plate UDB-S 20x100 (**134**)
    (Fig. D2.14 + Fig. D2.14a)

Danger
Cover plate may move!

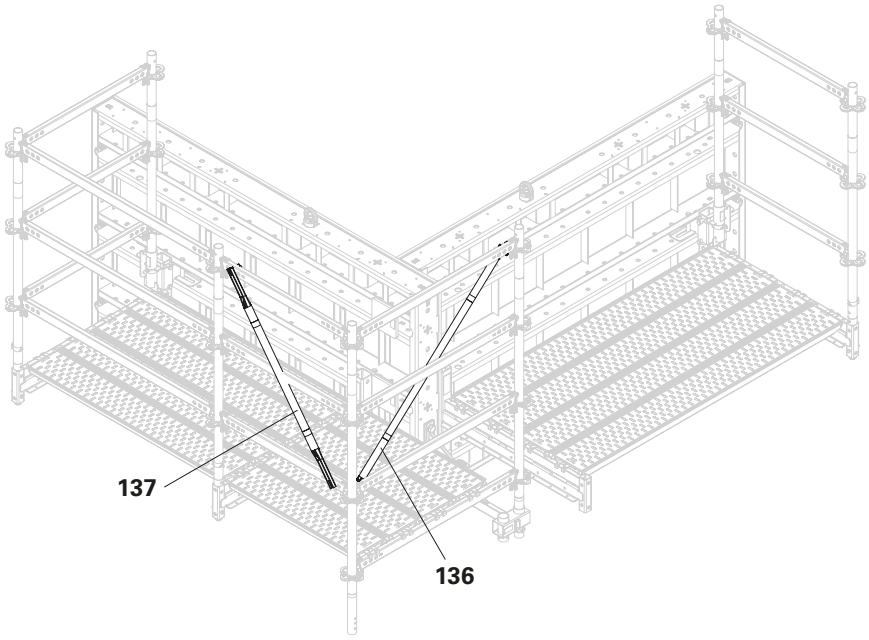


Fig. D2.13

If necessary, fit the cover plates to the Steel Deck UDG with M10x70 screws to prevent unintentional movement.

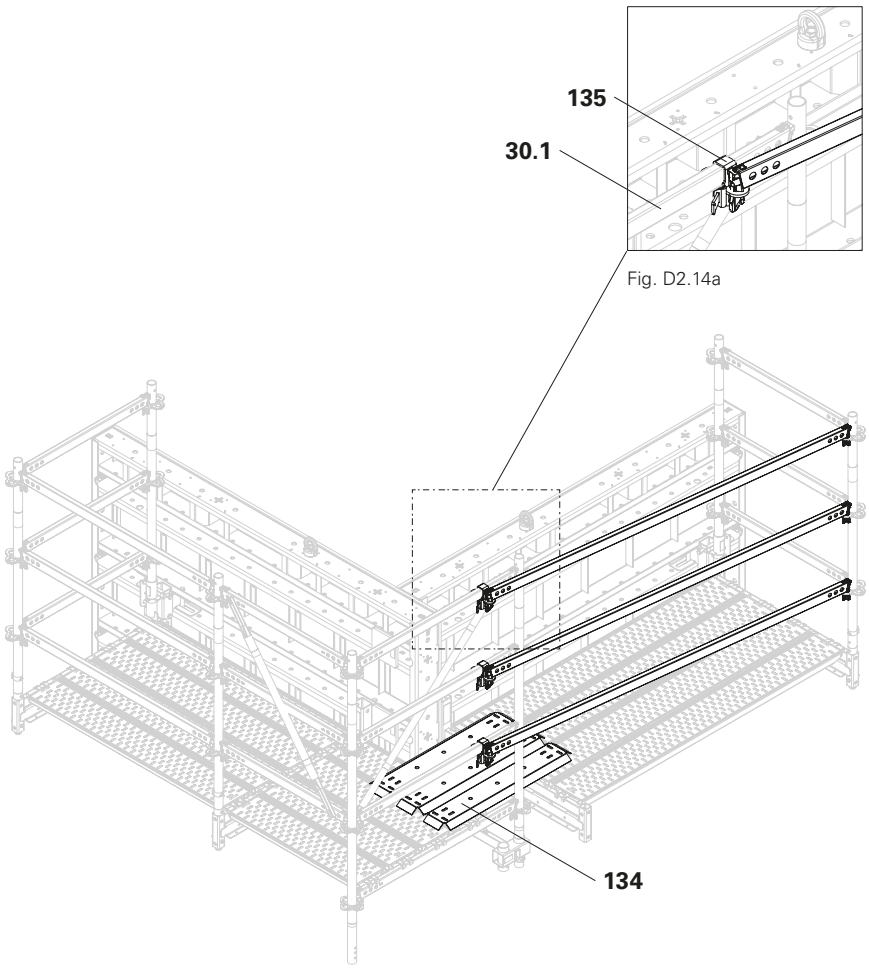


Fig. D2.14a

Fig. D2.14

D2 Mounting a PERI UP FLEX work platform on a Multi Panel VPS or Panel VPS

18. Fit the Toe Boards UPY (**33**); at the front and in the compensation area with Toeboard Compensation UPY-L (**128**).
    (Fig. D2.15 + Fig. D2.15a)
    → The concreting platform is installed
19. Position column formwork with concreting platform and secure to prevent tipping.
20. Fit the column formwork together with the second half.
    → Column formwork ready for concreting

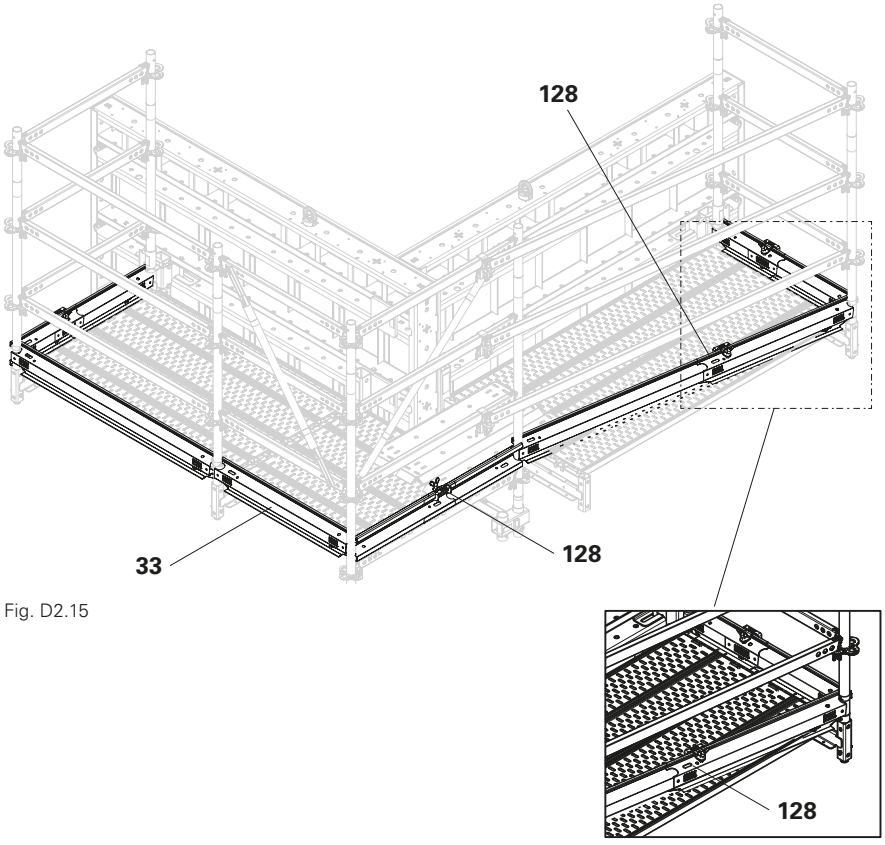


Fig. D2.15

Fig. D2.15a

D2 Mounting a PERI UP FLEX work platform on a Multi Panel VPS or Panel VPS

Mounting the work platform, horizontal assembly

If it is not possible to mount the concreting platform in an upright position, it can also be mounted on horizontal formwork.
(Fig. D2.16)

The mounting sequence for the console brackets and decks is the same as the sequence used for upright assemblySee section “Mounting the work platform, upright assembly” on page 130.

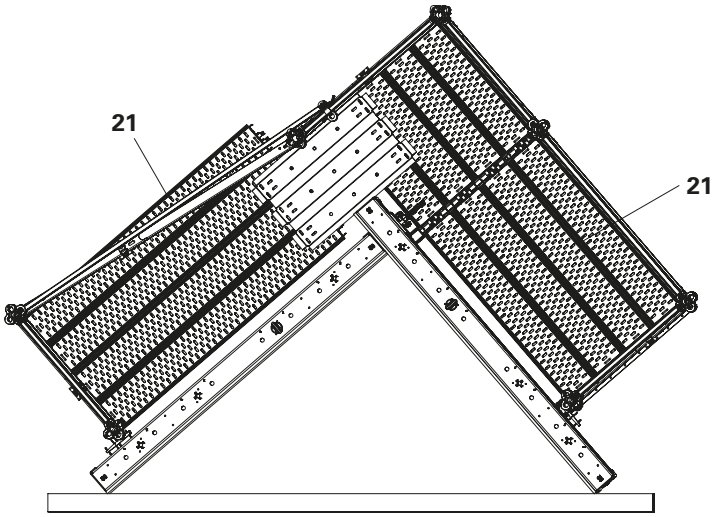


Fig. D2.16

Assembly

1. Secure scaffold decks (**21**) with binding wire or similar to prevent them from falling out. (Fig. D2.16)
2. Do not install the top guardrail level yet as the top level of the Horizontal Ledgers UH-2 can be damaged by the oblique pull action of the crane chains.
3. Attach the first prepared formwork half to the lifting eyes and lift it to the desired formwork position. (Fig. D2.17 + Fig. D2.17a)

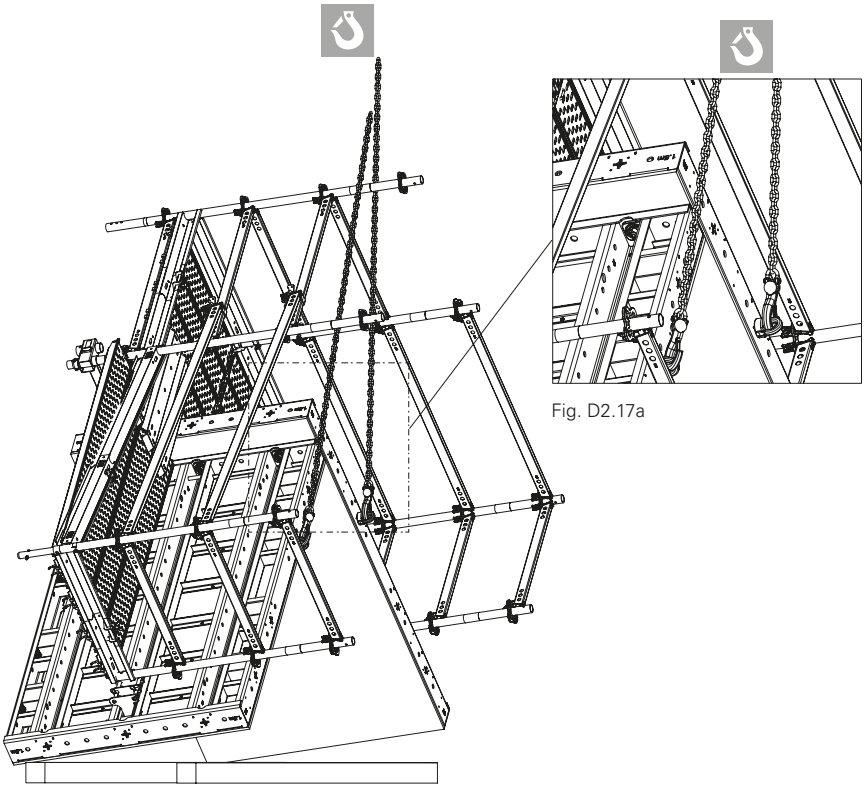

Fig. D2.17a

Fig. D2.17

D2 Mounting a PERI UP FLEX work platform on a Multi Panel VPS or Panel VPS

4. Then install the top guardrail level and complete the guardrail.
   The person carrying out the work must be secured to prevent them from falling.
   (For example, use PPE).
   (Fig. D2.18 + Fig. D2.19)
5. Attach the second prepared formwork half to the lifting eyes as well and lift it to the desired formwork position. (Fig. D2.17 + Fig. D2.17a)
6. Close formwork.
   → Column formwork ready for concreting

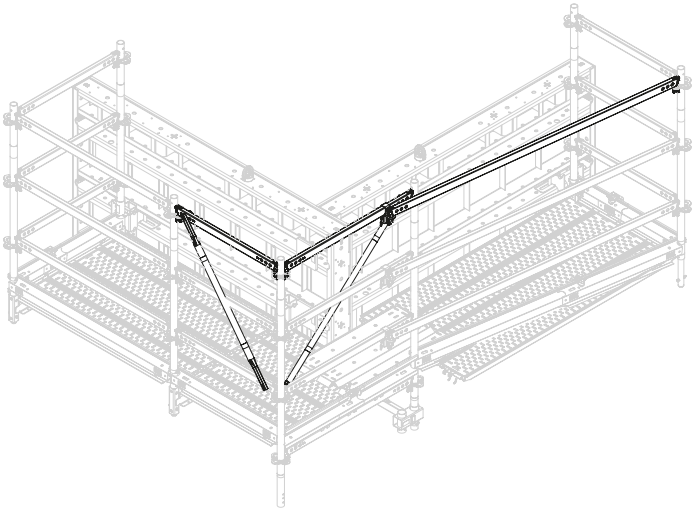


Fig. D2.18

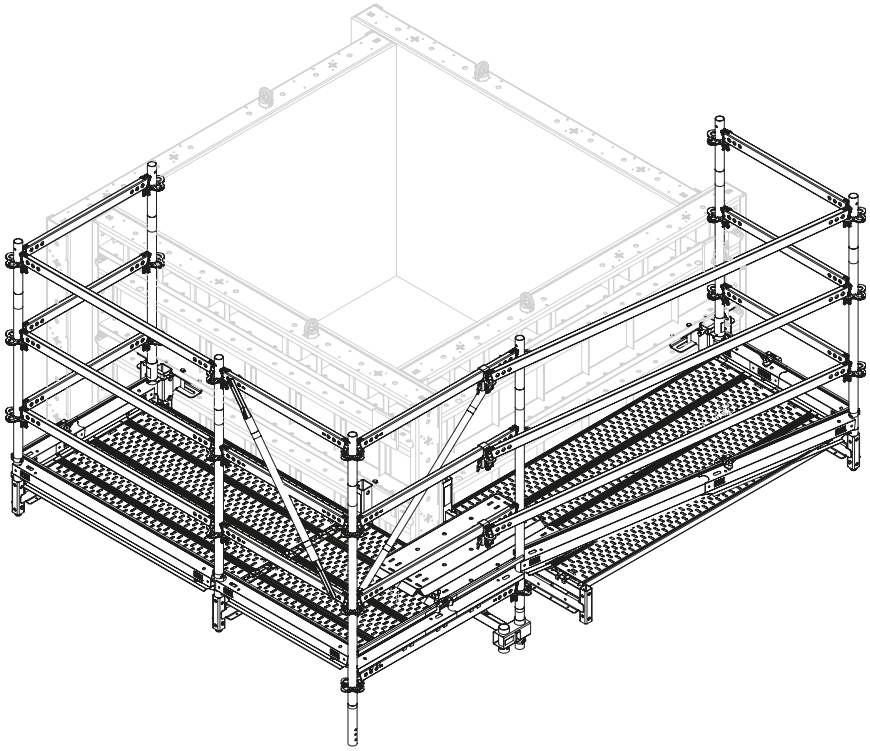


Fig. D2.19

D3 Concreting

- Adhere to the permissible fresh concrete pressure for the formwork.
- For this, observe the permissible rate of rise of the formwork.

The reinforcement must be removed prior to concreting.

Concreting

1. Pour concrete into the formwork from a safe working position.
2. Compact the concrete.
3. Allow concrete to cure until the required load-bearing capacity is achieved.

(Fig. D3.01)

Deshuttering

1. Remove anchoring.
2. Separate the formwork halves.
3. Deshuttering.
4. If necessary, repair the formlining of the panelsSee section “D4 Formlining repair” on page 141.

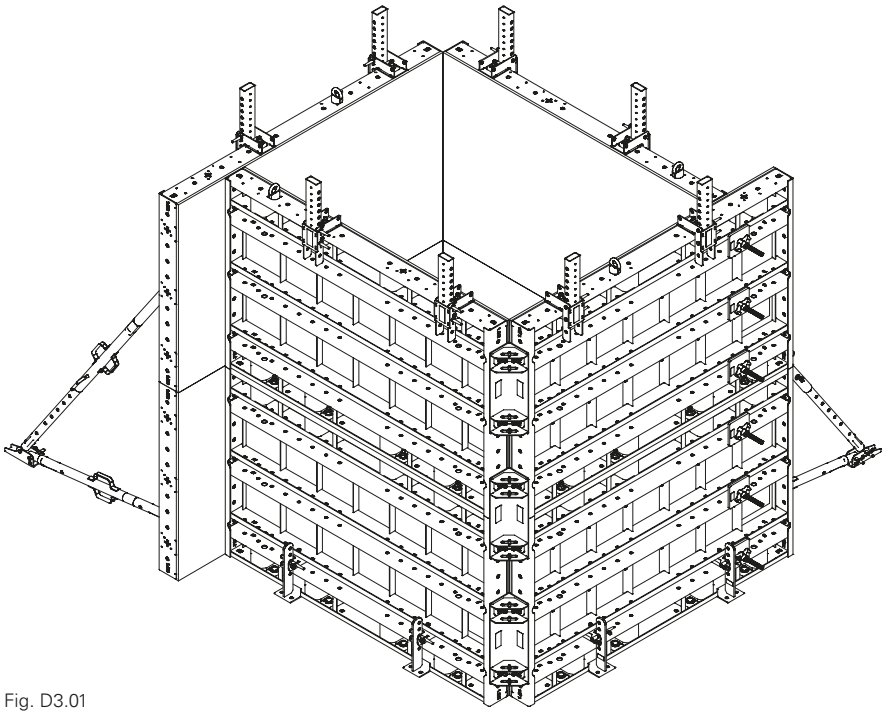


Fig. D3.01

D4 Formlining repair

It is necessary to drill through the formlining if you are carrying out the assembly process in windmill form. The formlining can then be repaired with Repair Plugs VPS 51/18 (**99**).

Components

	Forstner drill Ø 51 mm
	Rubber mallet
99	Repair Plug VPS 51/18
109	Ponal-Super 3

Assembly

1. If necessary, drill the hole to 51 mm with a Ø 51 mm Forstner bit.

(Fig. D4.01)

2. Remove sawdust.
3. Coat the inside of the hole and the outside of the Repair Plug VPS 51/18 (**99**) with Ponal-Super 3 (**109**).
4. Insert the Repair Plug VPS 51/18 (**99**) into the hole with a rubber mallet.
5. Remove excess Ponal-Super 3 (**109**).
6. Allow the Ponal Super 3 (**109**) to dry.

(Fig. D4.02)

Alternative

The Repair Plug DUO (art. no. 132104) can also be used instead of the Repair Plug VPS 51/18.

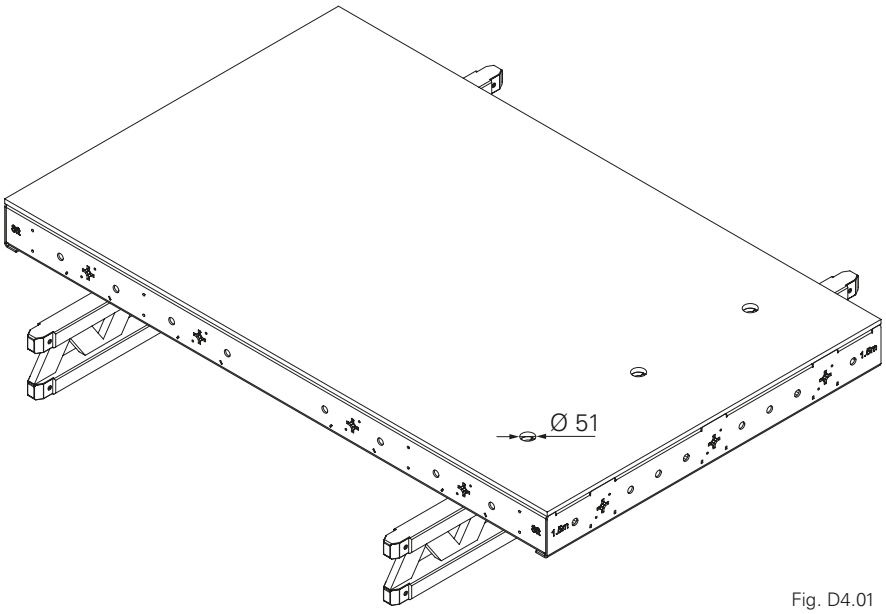


Fig. D4.01

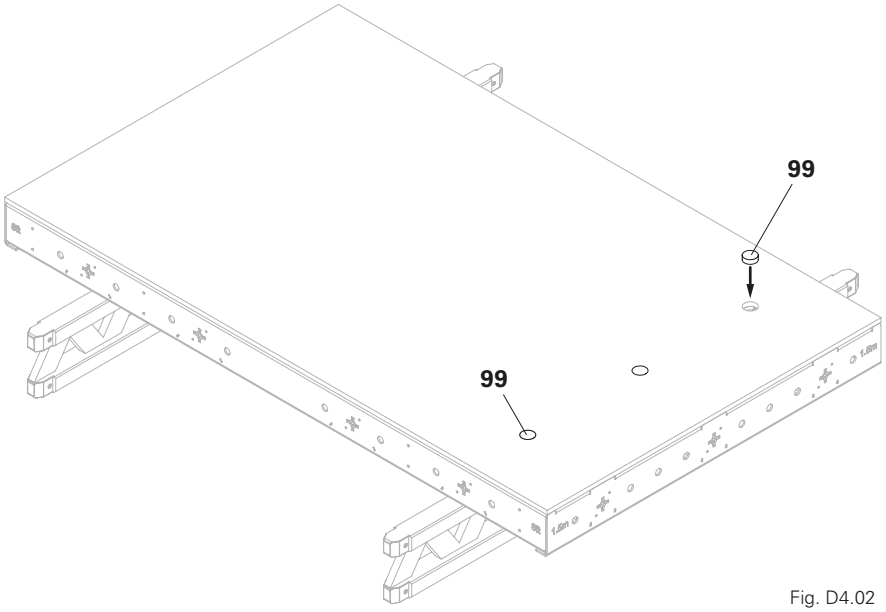
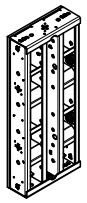
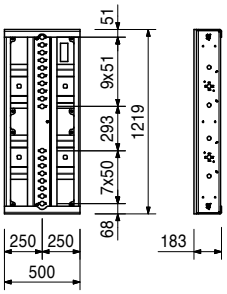


Fig. D4.02

Art no.	Weight [kg]	
137572	76.400	**Panel VPS 4ftx0.5m**

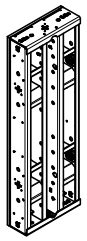
Formwork Panel with Plywood for SpeedStage und SpeedColumn application.
Width: 4 ft (1.219 m).
Height: 0.50 m (1‘ - 7 11/16“).

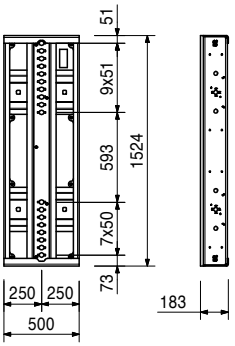




Art no.	Weight [kg]	
137576	89.200	**Panel VPS 5ftx0.5m**

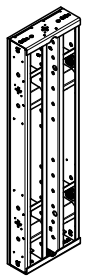
Formwork Panel with Plywood for SpeedStage und SpeedColumn application.
Width: 5 ft (1.524 m).
Height: 0.50 m (1‘ - 7 11/16“).

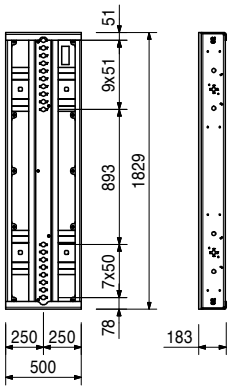




Art no.	Weight [kg]	
137580	102.000	**Panel VPS 6ftx0.5m**

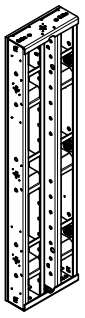
Formwork Panel with Plywood for SpeedStage und SpeedColumn application.
Width: 6 ft (1.829 m).
Height: 0.50 m (1‘ - 7 11/16“).

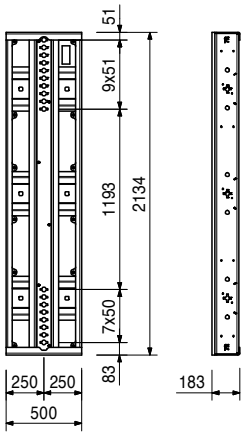




Art no.	Weight [kg]	
137584	137.000	**Panel VPS 7ftx0.5m**

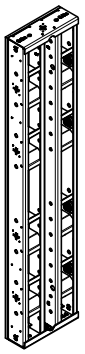
Formwork Panel with Plywood for SpeedStage und SpeedColumn application.
Width: 7 ft (2.134 m).
Height: 0.50 m (1' - 7 11/16").

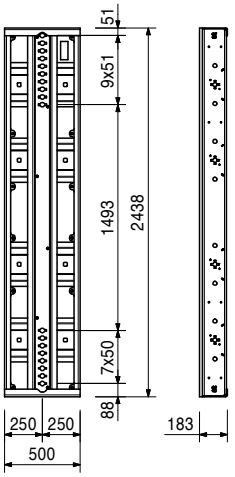




Art no.	Weight [kg]	
137588	159.000	**Panel VPS 8ftx0.5m**

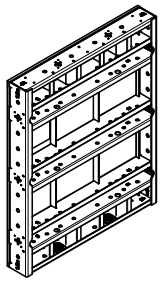
Formwork Panel with Plywood for SpeedStage and SpeedColumn application.
Width: 8 ft (2.438 m).
Height: 0.50 m (1' - 7 11/16").

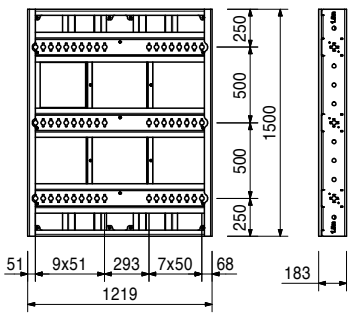




Art no.	Weight [kg]	
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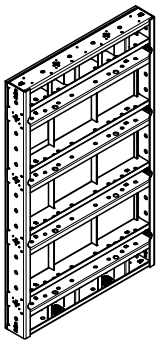
Formwork Panel with Plywood for SpeedStage and SpeedColumn application.
Width: 4 ft (1.219 m).
Height: 1.50 m (4' - 11 1/16").

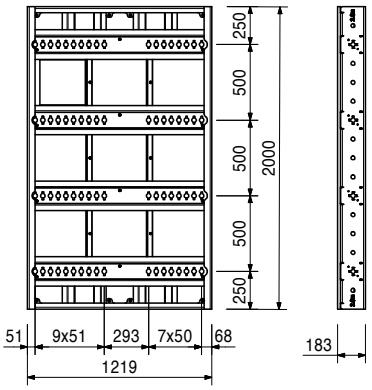




Art no.	Weight [kg]	
136933	198.000	**Panel VPS 4ftx2m**

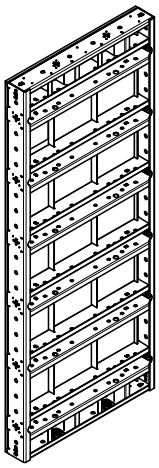
Formwork Panel with Plywood for SpeedStage and SpeedColumn application.
Width: 4 ft (1.219 m).
Height: 2.00 m (6' - 6 3/4").

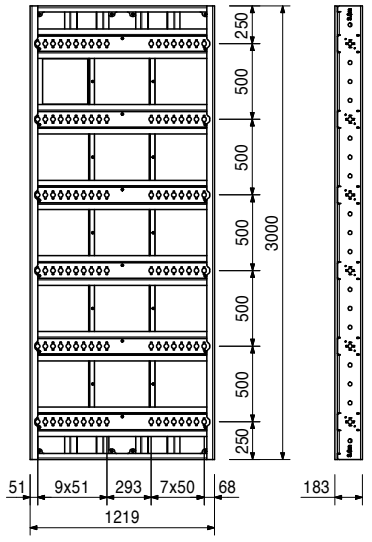




Art no.	Weight [kg]	
136938	280.000	**Panel VPS 4ftx3m**

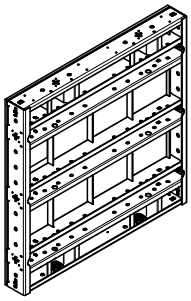
Formwork Panel with Plywood for SpeedStage and SpeedColumn application.
Width: 4 ft (1.219 m).
Height: 3.00 m (9' - 10 1/8").

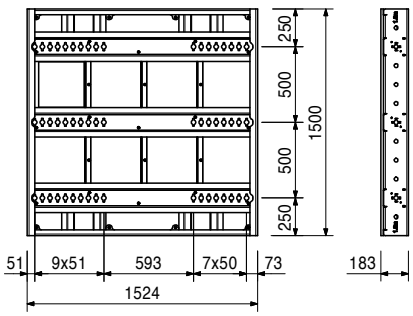




Art no.	Weight [kg]	
136944	186.000	**Panel VPS 5ftx1.5m**

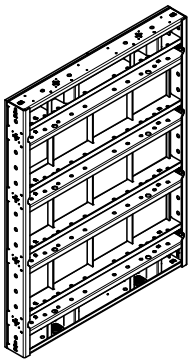
Formwork Panel with Plywood for SpeedStage and SpeedColumn application.
Width: 5 ft (1.524 m).
Height: 1.50 m (4' - 11 1/16").

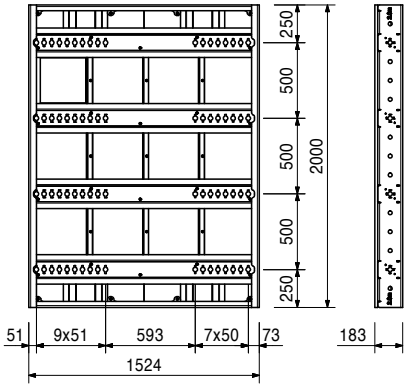




Art no.	Weight [kg]	
136948	258.000	**Panel VPS 5ftx2m**

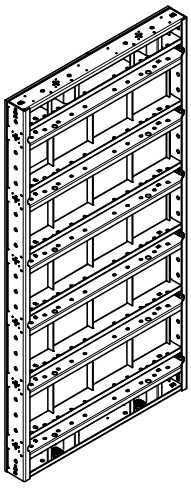
Formwork Panel with Plywood for SpeedStage and SpeedColumn application.
Width: 5 ft (1.524 m).
Height: 2.00 m (6' - 6 3/4").

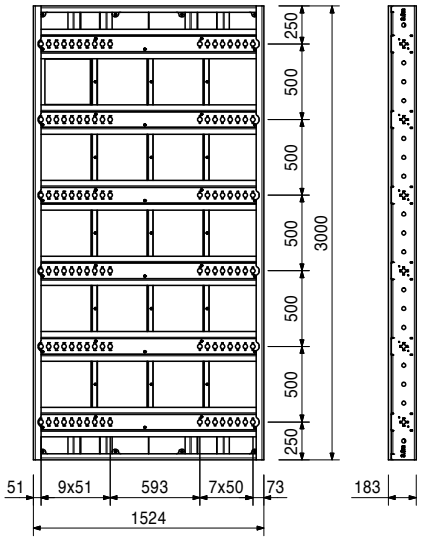




Art no.	Weight [kg]	
136952	331.000	**Panel VPS 5ftx3m**

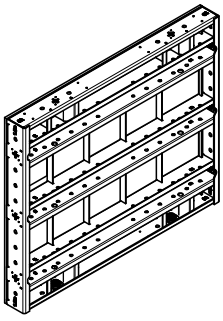
Formwork Panel with Plywood for SpeedStage and SpeedColumn application.
Width: 5 ft (1.524 m).
Height: 3.00 m (9' - 10 1/8").

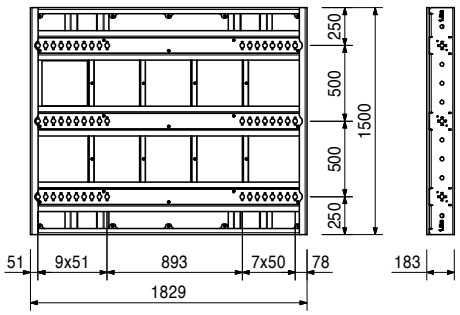




Art no.	Weight [kg]	
136958	215.000	**Panel VPS 6ftx1.5m**

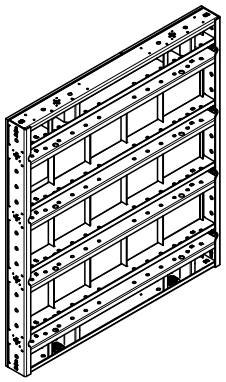
Formwork Panel with Plywood for SpeedStage and SpeedColumn application.
Width: 6 ft (1.829 m).
Height: 1.50 m (4' - 11 1/16").

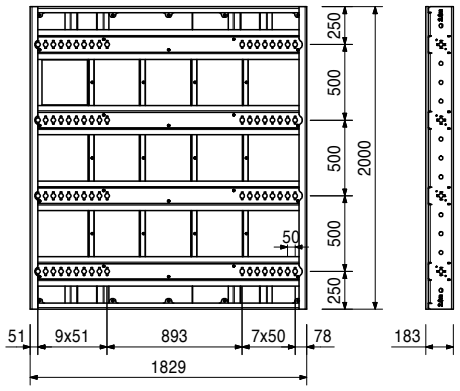




Art no.	Weight [kg]	
136962	272.000	**Panel VPS 6ftx2m**

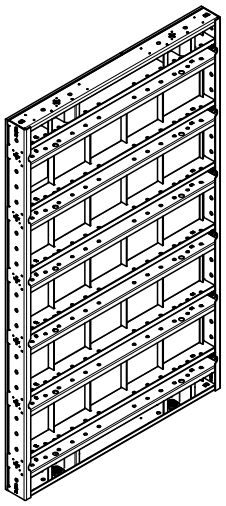
Formwork Panel with Plywood for SpeedStage and SpeedColumn application.
Width: 6 ft (1.829 m).
Height: 2.00 m (6' - 6 3/4").

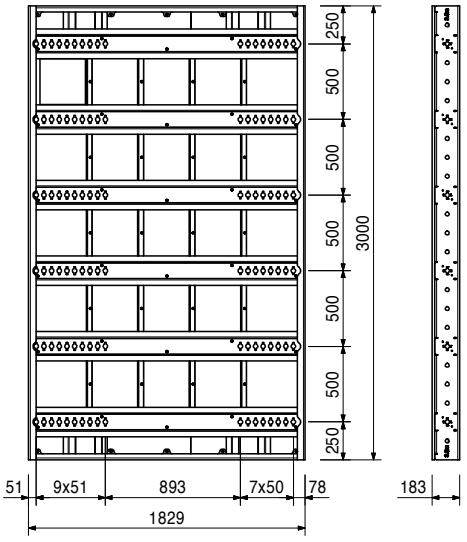




Art no.	Weight [kg]	
136966	384.000	**Panel VPS 6ftx3m**

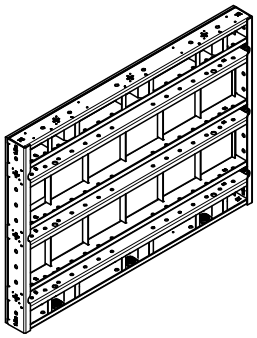
Formwork Panel with Plywood for SpeedStage and SpeedColumn application.
Width: 6 ft (1.829 m).
Height: 3.00 m (9' - 10 1/8").

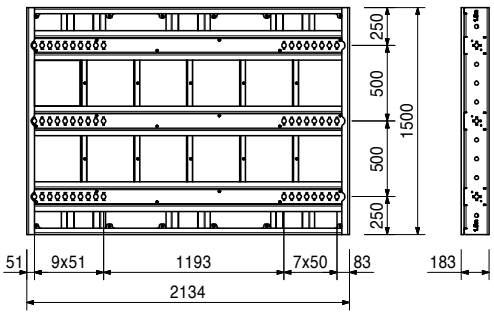




Art no.	Weight [kg]	
136973	296.000	**Panel VPS 7ftx1.5m**

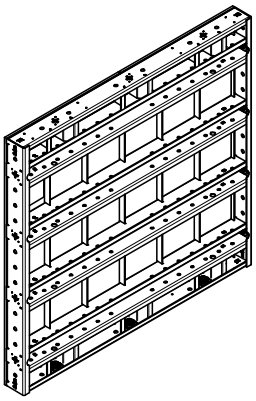
Formwork Panel with Plywood for SpeedStage and SpeedColumn application.
Width: 7 ft (2.134 m).
Height: 1.50 m (4' - 11 1/16").

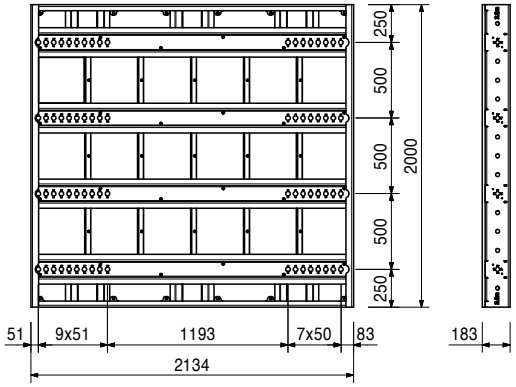




Art no.	Weight [kg]	
136978	382.000	**Panel VPS 7ftx2m**

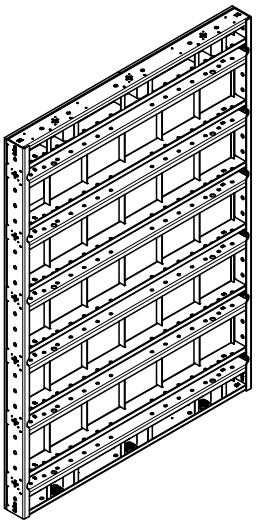
Formwork Panel with Plywood for SpeedStage and SpeedColumn application.
Width: 7 ft (2.134 m).
Height: 2.00 m (6' - 6 3/4").

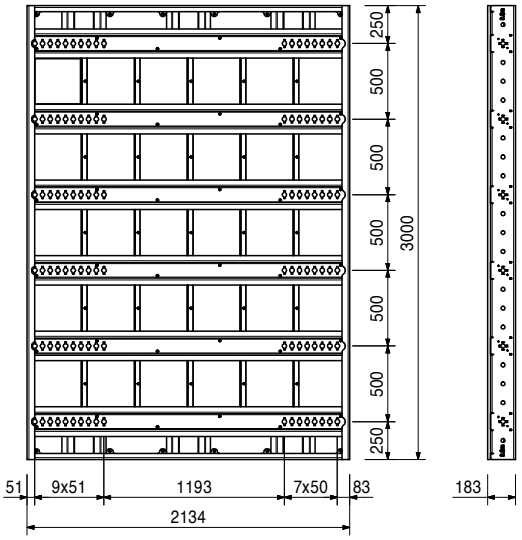




Art no.	Weight [kg]	
136983	513.000	**Panel VPS 7ftx3m**

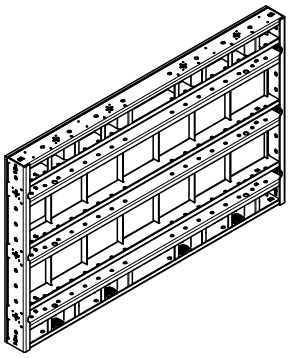
Formwork Panel with Plywood for SpeedStage and SpeedColumn application.
Width: 7 ft (2.134 m).
Height: 3.00 m (9' - 10 1/8").

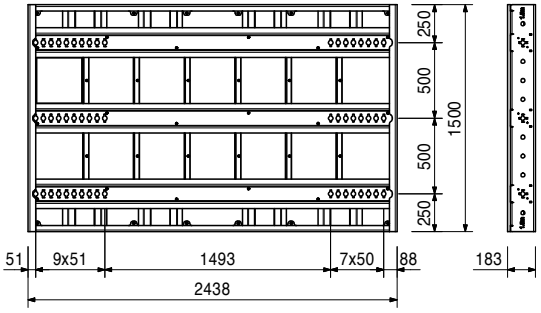




Art no.	Weight [kg]	
136989	338.000	**Panel VPS 8ftx1.5m**

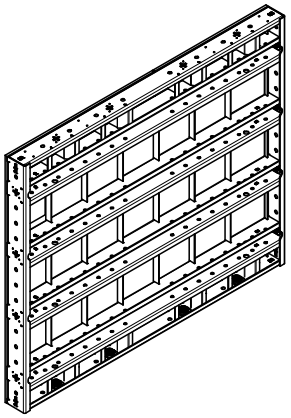
Formwork Panel with Plywood for SpeedStage and SpeedColumn application.
Width: 8 ft (2.438 m).
Height: 1.50 m (4' - 11 1/16").

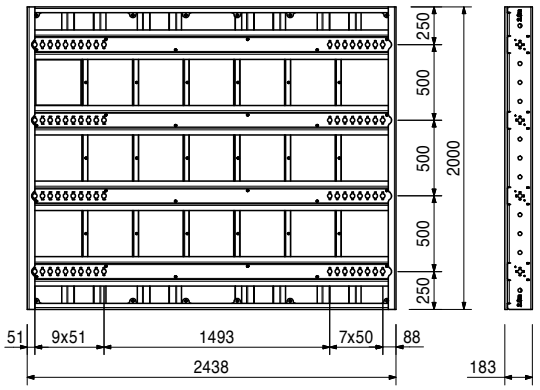




Art no.	Weight [kg]	
136993	427.000	**Panel VPS 8ftx2m**

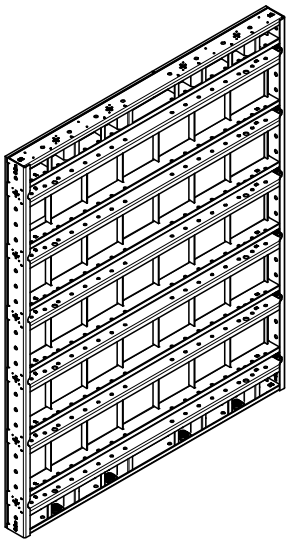
Formwork Panel with Plywood for SpeedStage and SpeedColumn application.
Width: 8 ft (2.438 m).
Height: 2.00 m (6' - 6 3/4").

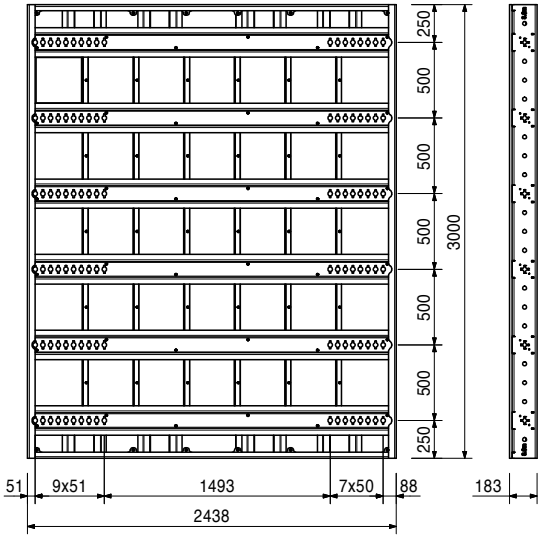




Art no.	Weight [kg]	
136997	605.000	**Panel VPS 8ftx3m**

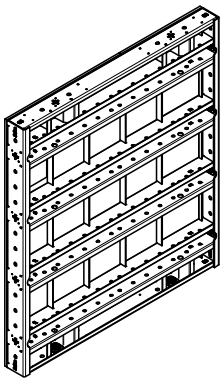
Formwork Panel with Plywood for SpeedStage and SpeedColumn application.
Width: 8 ft (2.438 m).
Height: 3.00 m (9' - 10 1/8").

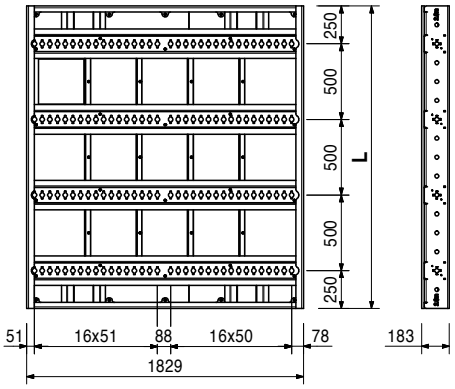




Art no.	Weight [kg]		B [mm]	L [mm]
		Multipanels VPS 6ft		
138618	102.000	**Multipanel VPS 6ftx0.5m**	1829	500
138621	214.000	**Multipanel VPS 6ftx1.5m**	1829	1500
138624	270.000	**Multipanel VPS 6ftx2m**	1829	2000
138627	381.000	**Multipanel VPS 6ftx3m**	1829	3000

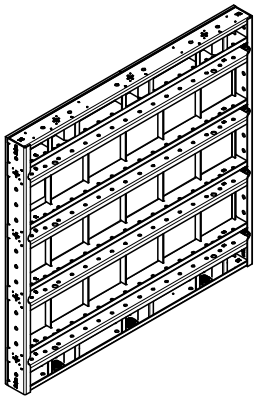
Multipanel with Plywood for SpeedStage and SpeedColumn application. Width 6 ft (1.829 m).

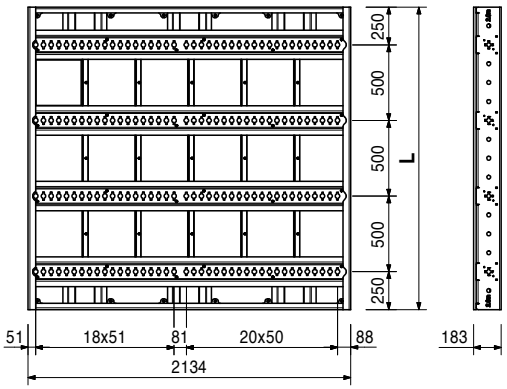




Art no.	Weight [kg]		B [mm]	L [mm]
		Multipanels VPS 7ft		
138631	136.000	**Multipanel VPS 7ftx0.5m**	2134	500
138634	293.000	**Multipanel VPS 7ftx1.5m**	2134	1500
138637	378.000	**Multipanel VPS 7ftx2m**	2134	2000
138640	507.000	**Multipanel VPS 7ftx3m**	2134	3000

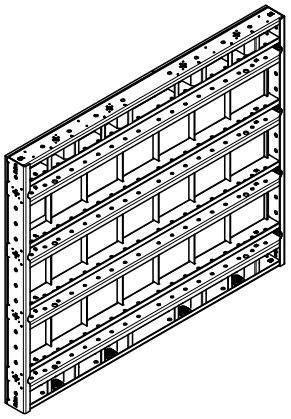
Multipanel with Plywood for SpeedStage und SpeedColumn application. Width 7 ft (2.134 m).

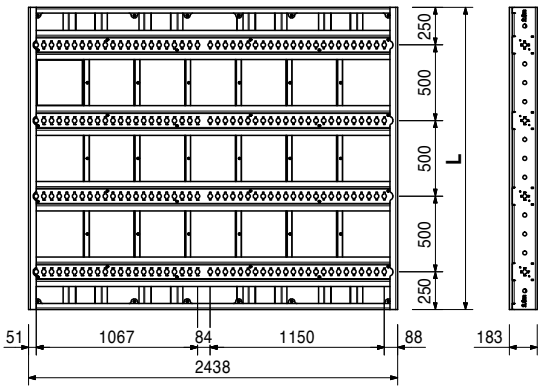




Art no.	Weight [kg]		B [mm]	L [mm]
		Multipanels VPS 8ft		
138644	158.000	**Multipanel VPS 8ftx0.5m**	2438	500
138647	334.000	**Multipanel VPS 8ftx1.5m**	2438	1500
138650	422.000	**Multipanel VPS 8ftx2m**	2438	2000
138653	597.000	**Multipanel VPS 8ftx3m**	2438	3000

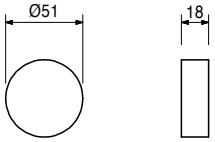
Multipanel with Plywood for SpeedStage and SpeedColumn application. Width: 8 ft (2.438 m).





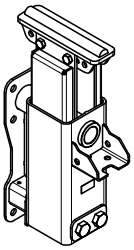
Art no.	Weight [kg]	
137755	0.025	**Repair Plug VPS Ø51x18mm**

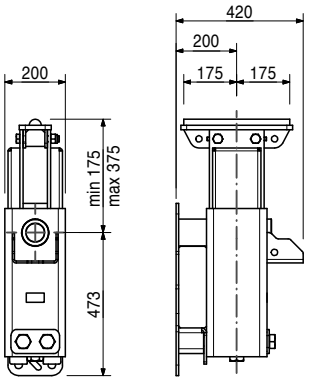




Art no.	Weight [kg]	
137423	101.000	**Support Bracket VPS**

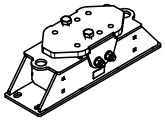
Support for steel beams at concrete structures with facilitated adjusting and lowering function.
Perm. Load Bearing Capacity: 380.0 kN.
Adjustability: +/-10 cm (3 15/16 ‘’).
Standard anchoring method: Thru-Bolt M48 and M56.
Consider Instructions for Assembly & Use!

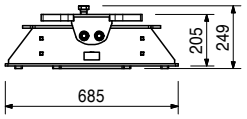


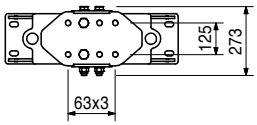


Art no.	Weight [kg]	
137660	55.100	**Spreader Beam VPS**

For even load distribution when using double Support VPS.





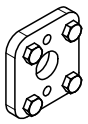


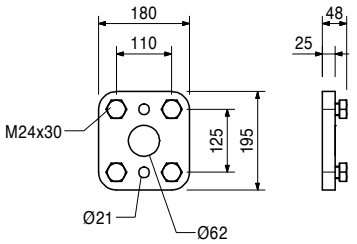
Included in delivery

109199 Screw ISO4017-M24x50-8.8-ga 2 pc

Art no.	Weight [kg]	
137633	6.960	**Support Adaptor VPS 1in**

Adapter for Support VPS to widen the distance to the column by 25 mm/1 ‘’.



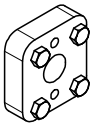


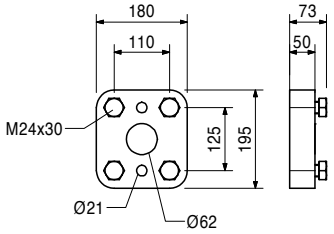
Included in delivery

706480 Screw ISO4017-M24x30-8.8-ga 4 pc

Art no.	Weight [kg]	
137637	13.100	**Support Adaptor VPS 2in**

Adapter for Support VPS to widen the distance to the column by 50 mm/2".

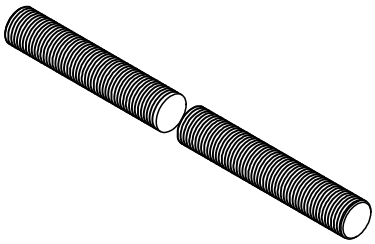


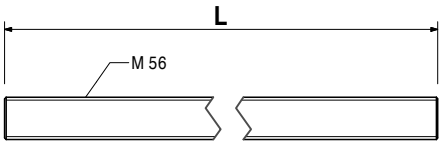


Included in delivery

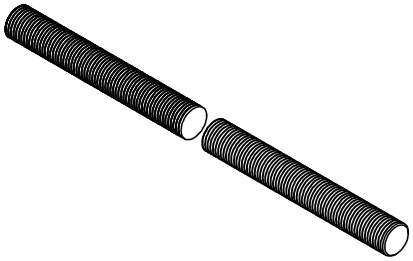
706480 Screw ISO4017-M24x30-8.8-ga 4 pc

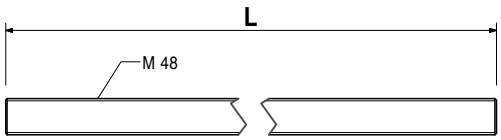
Art no.	Weight [kg]	
		Thread Bars M56-10.9
137898	48.300	**Thread Bar M56x2500-10.9-raw**
137899	48.300	**Thread Bar M56x2500-10.9-coat**
137896	58.000	**Thread Bar M56x3000-10.9-raw**
137897	58.000	**Thread Bar M56x3000-10.9-coat**
137894	67.700	**Thread Bar M56x3500-10.9-raw**
137895	67.700	**Thread Bar M56x3500-10.9-coat**
137892	77.300	**Thread Bar M56x4000-10.9-raw**
137893	77.300	**Thread Bar M56x4000-10.9-coat**
137890	87.000	**Thread Bar M56x4500-10.9-raw**
137891	87.000	**Thread Bar M56x4500-10.9-coat**



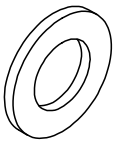


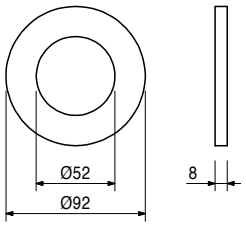
Art no.	Weight [kg]		L [mm]
		Thread Bars M48-10.9	
137908	35.500	**Thread Bar M48x2500-10.9-raw**	2500
137909	35.500	**Thread Bar M48x2500-10.9-coat**	2500
137906	42.600	**Thread Bar M48x3000-10.9-raw**	3000
137907	42.600	**Thread Bar M48x3000-10.9-coat**	3000
137904	49.700	**Thread Bar M48x3500-10.9-raw**	3500
137905	49.700	**Thread Bar M48x3500-10.9-coat**	3500
137902	56.800	**Thread Bar M48x4000-10.9-raw**	4000
137903	56.800	**Thread Bar M48x4000-10.9-coat**	4000
137900	63.900	**Thread Bar M48x4500-10.9-raw**	4500
137901	63.900	**Thread Bar M48x4500-10.9-coat**	4500



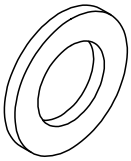


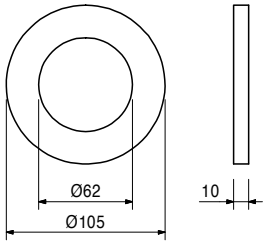
Art no.	Weight [kg]	
137803	0.284	**Washer ISO7089-48-200HV-ga**



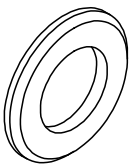


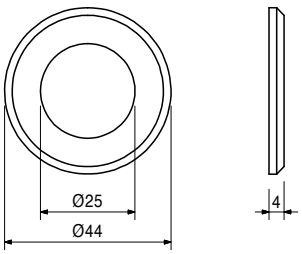
Art no.	Weight [kg]	
137804	0.443	**Washer ISO7089-56-200HV-ga**





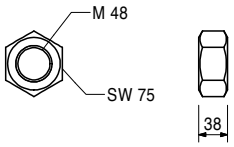
Art no.	Weight [kg]	
132362	0.030	**Washer ISO7090-24-200HV-ga**





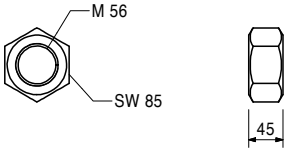
Art no.	Weight [kg]	
137800	0.997	**Nut ISO4032-M48-8-ga**



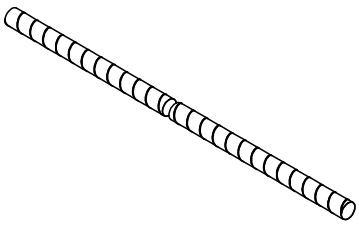


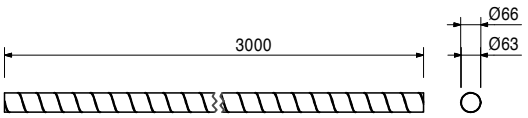
Art no.	Weight [kg]	
137799	1.471	**Nut ISO4032-M56-8-ga**





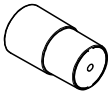
Art no.	Weight [kg]	
		Imbed Tubes Ø63x0.45
137887	2.451	**Imbed Tube Ø63x0.45x3.0m**
137888	2.860	**Imbed Tube Ø63x0.45x3.5m**

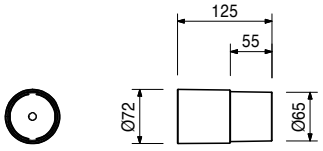




Art no.	Weight [kg]	
137930	0.062	**Plastic Cap Ø63/55mm**

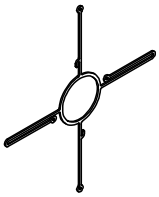
Cap for attaching Imbed Tubes at the formwork face sheet

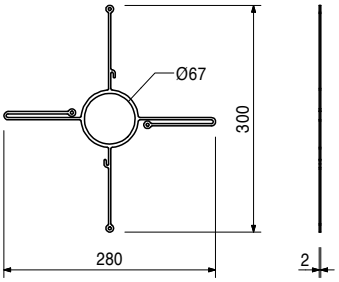




Art no.	Weight [kg]	
137882	0.049	**Imbed Tube Holder VPS Ø63mm**

For positioning and fixing the cladding tube to the reinforcing bars.

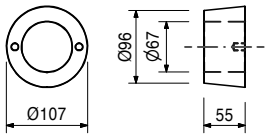




Art no.	Weight [kg]	
137886	2.000	**Cone Ring VPS Ø63/Ø108x55mm**

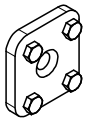
Ring for an anchor point with Imbed Tube Ø63x0.45 for making a closable anchor hole with a Concrete Cone SWILK Ø105x52mm M36.

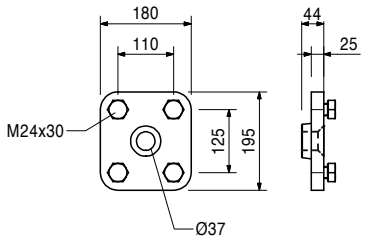




Art no.	Weight [kg]	
137641	12.900	**Climbco. Adaptor VPS M36x1in**

Adapter for Support VPS in connection with a Heavy Duty Cone DW26 Ø10.8 M36. Thickness of the adapter 25 mm/1".





Accessory (not included)

137633 Support Adaptor VPS 1in

Included in delivery

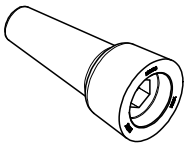
706480 Screw ISO4017-M24x30-8.8-ga 4 pc

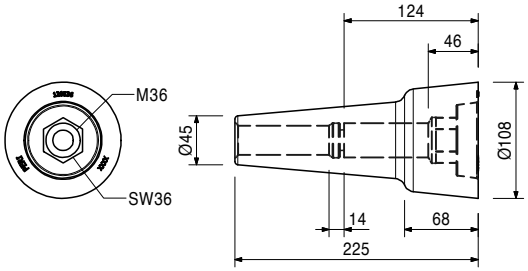
Art no.	Weight [kg]	
128536	5.870	**Heavy Duty Cone DW26 Ø10.8 M36**

For transferring high shear and tension forces in steel concrete.

Notes

Reports about load-bearing capacities (on request)!

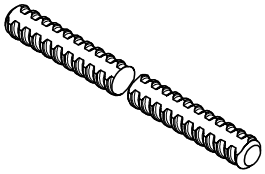


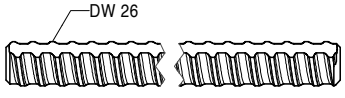


Art no.	Weight [kg]	
		Tie Rods DW26
030340	4.480	**Tie Rod DW26 spec. Length**
030500	0.000	**Cutting Costs DW26**

Notes

Weldable! Take official approval into consideration! Permissible tension force 250.0 kN.



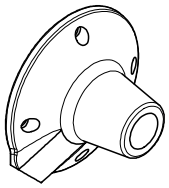


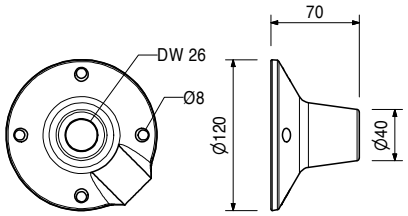
Art no.	Weight [kg]	
030870	1.260	**Threaded Anchor Plate DW26**

For use with Tie Rod DW26 or Screw-On Cone M36/DW26. For anchoring in concrete.

Notes

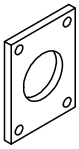
Lost anchor part.

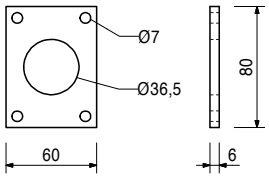




Art no.	Weight [kg]	
029390	0.170	**Anchor Posit. Plate M36 ga**

For fixing the M36 anchor system if the plywood formlining is drilled through.



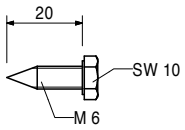


Accessory (not included)

029440 Hex-Wood Screw DIN571-6x20-ga

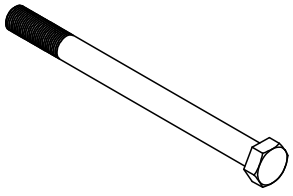
Art no.	Weight [kg]		L [mm]
029440	0.005	**Hex-Wood Screw DIN571-6x20-ga**	20

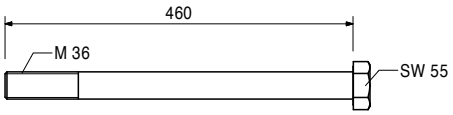




Art no.	Weight [kg]	
137952	4.131	**Screw ISO4014-M36x460-10.9**

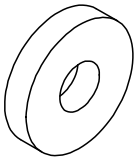
Screw for fastening Support VPS to Heavy Duty Cone DW26 Ø10.8 M36.

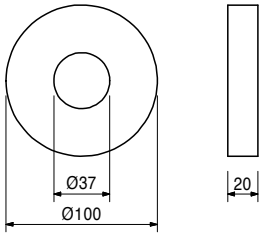




Art no.	Weight [kg]	
137866	1.060	**Anchor Disc VPS M36 Ø100x20mm**

Washer for Bolt M36x460 when used on Support VPS 137952.



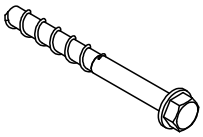


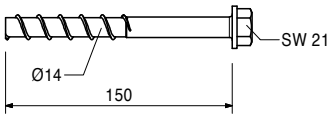
Art no.	Weight [kg]	
132889	0.213	**Anchor Bolt AF21 Ø14x150 TG**

For temporary attachment to reinforced concrete components.

Notes

Take the PERI Data Sheet into consideration!
Drill hole Ø 14 mm.



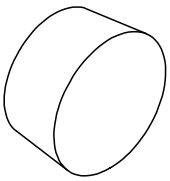


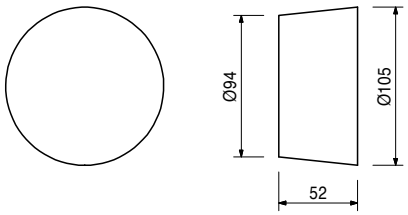
Art no.	Weight [kg]	
136576	0.838	**Concrete Cone HD Ø105x52mm M36**

For closing anchor points with Heavy Duty Cone DW26 Ø10.8 M36.

Notes

Delivery unit 10 pieces.



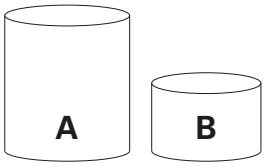


Art no.	Weight [kg]	
131709	9.980	**Sealing Adhesive-3 6-Cans-Set**

For bonding PERI Concrete Cones.

Notes

See Safety Data sheet!
Consisting of: 6 x Component A, 6 x Component B
Component A = Net quantity / Can 459 ml / 752 g
Component B = Net quantity / Can 356 ml / 583 g

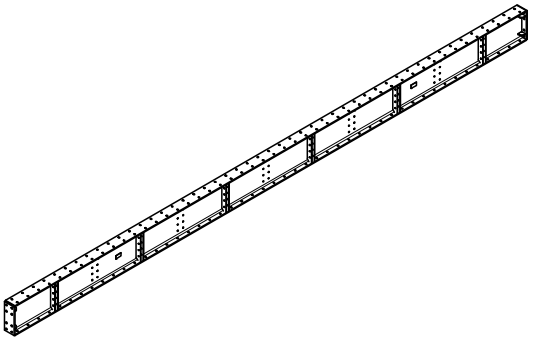


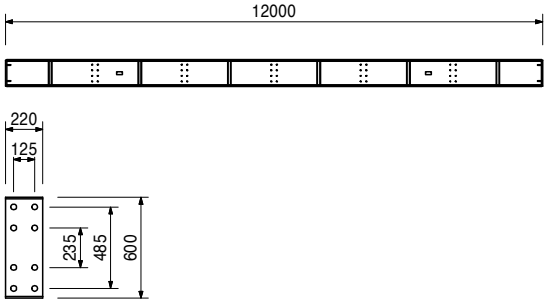
Included in delivery

131710 Sealing Adhesive-3 Can CO-A 6 pc
131711 Sealing Adhesive-3 Can CO-B 6 pc

Art no.	Weight [kg]	
136575	1,600.000	**IPE 600 VARIOKIT 1200**

IPE 600 steel beam with head plate for splicing. Length 12.00 m, doubling ability and VARIOKIT compatibel.





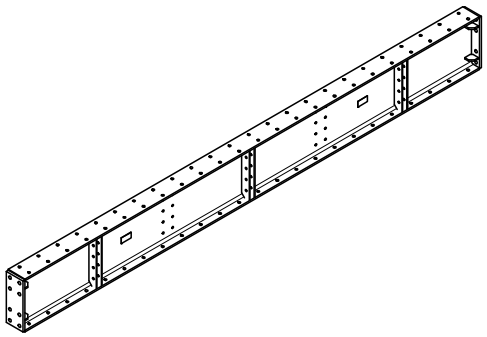
Accessory (not included)

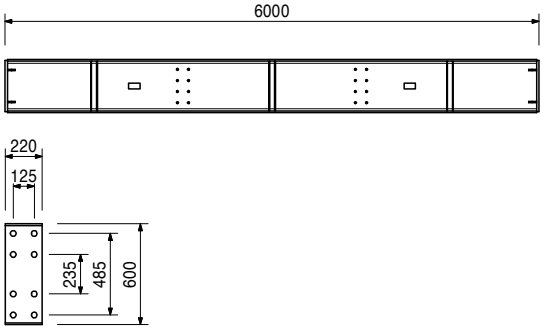
130003 Screw ISO4017-M30x100-8.8-ga

130152 Nut ISO4032-M30-8-ga

Art no.	Weight [kg]	
136572	824.000	**IPE 600 VARIOKIT 600**

IPE 600 steel beam with head plate for splicing. Length 6.00 m, doubling ability and VARIOKIT compatibel.





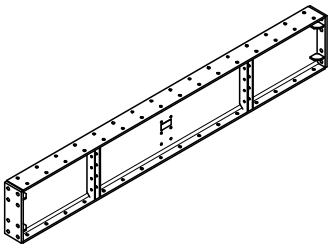
Accessory (not included)

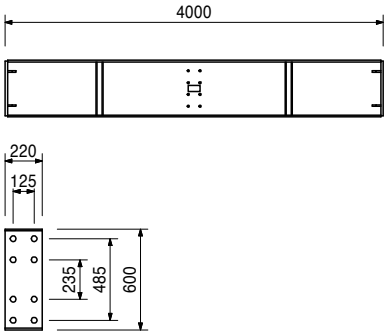
130003 Screw ISO4017-M30x100-8.8-ga

130152 Nut ISO4032-M30-8-ga

Art no.	Weight [kg]	
136569	565.000	**IPE 600 VARIOKIT 400**

IPE 600 steel beam with head plate for splicing. Length 4.00 m, doubling ability and VARIOKIT compatibel.





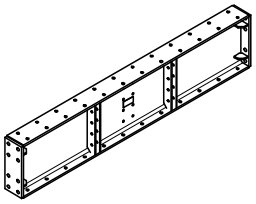
Accessory (not included)

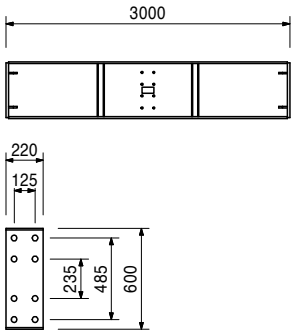
130003 Screw ISO4017-M30x100-8.8-ga

130152 Nut ISO4032-M30-8-ga

Art no.	Weight [kg]	
136566	444.000	**IPE 600 VARIOKIT 300**

IPE 600 steel beam with head plate for splicing. Length 3.00 m, doubling ability and VARIOKIT compatibel.



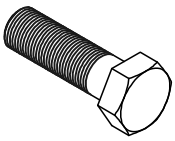


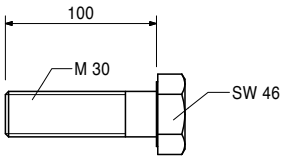
Accessory (not included)

130003 Screw ISO4017-M30x100-8.8-ga

130152 Nut ISO4032-M30-8-ga

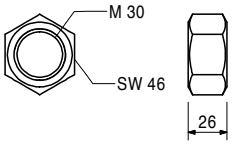
Art no.	Weight [kg]	
130003	0.819	**Screw ISO4017-M30x100-8.8-ga**





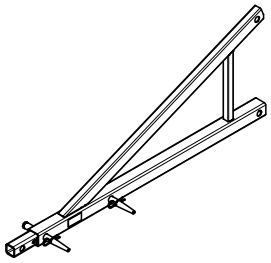
Art no.	Weight [kg]	
130152	0.220	**Nut ISO4032-M30-8-ga**

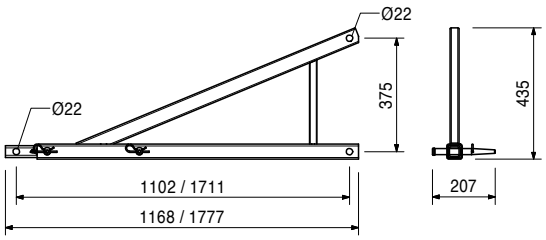




Art no.	Weight [kg]	
137330	13.400	**Y-Brace VPS**

For bracing of IPE 600 VARIOKIT Beams with SpeedStage configuration.





Accessory (not included)

104031 Fitting Pin Ø21x120mm

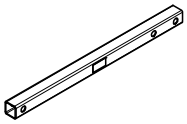
018060 Cotter Pin 4/1 ga

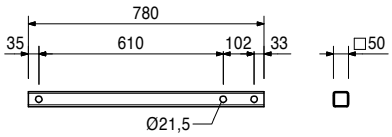
Included in delivery

104031 Fitting Pin Ø21x120mm 2 pc
018060 Cotter Pin 4/1 ga 2 pc

Art no.	Weight [kg]		
137332	3.260	**Y-Brace Adaptor VPS 7-8ft**	

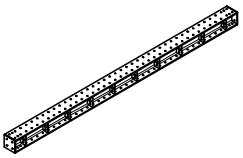
For extension of Y-Brace VPS for beam spacings of 7 ft (2.13 m) and 8 ft (2.44 m).

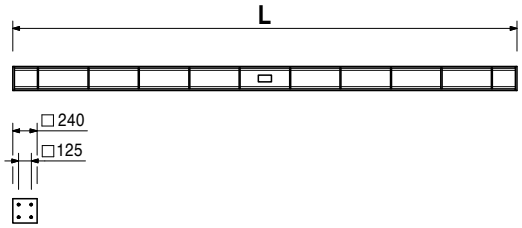




Art no.	Weight [kg]		L [mm]
		Longitudin. Beams VARIOKIT	
129895	141.000	**Longitudin. Beam VARIOKIT 150**	1500
129898	229.000	**Longitudin. Beam VARIOKIT 250**	2500
129901	273.000	**Longitudin. Beam VARIOKIT 300**	3000
129904	317.000	**Longitudin. Beam VARIOKIT 350**	3500
129907	448.000	**Longitudin. Beam VARIOKIT 500**	5000
129910	667.000	**Longitudin. Beam VARIOKIT 750**	7500
129913	886.000	**Longitudin. Beam VARIOKIT 1000**	10000

For use in temporary shoring systems and heavy-duty structures. Profile HEB 240.



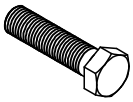


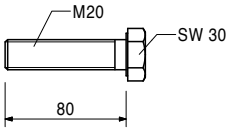
Accessory (not included)

057139 Screw ISO4017-M20x60-8.8-ga

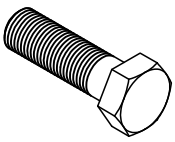
710334 Hex-Nut ISO4032-M20-8-ga

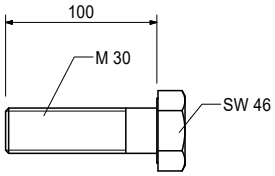
Art no.	Weight [kg]	
113548	0.272	**Screw ISO4017-M20x80-8.8-ga**



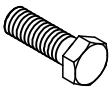


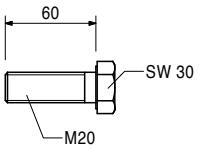
Art no.	Weight [kg]		B [mm]	L [mm]
131792	0.819	**Screw ISO4017-M30x100-10.9**	46	100





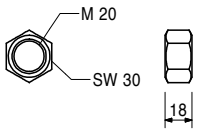
Art no.	Weight [kg]	
057139	0.199	**Screw ISO4017-M20x60-8.8-ga**





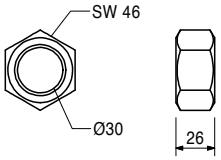
Art no.	Weight [kg]	
710334	0.064	**Nut ISO4032-M20-8-ga**





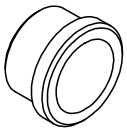
Art no.	Weight [kg]	
710336	0.220	**Nut ISO4032-M30-10**

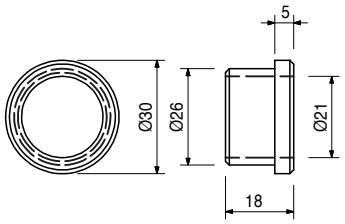




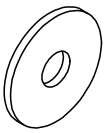
Art no.	Weight [kg]	
129695	0.028	**Reducing Sleeve Ø26/Ø21mm ga**

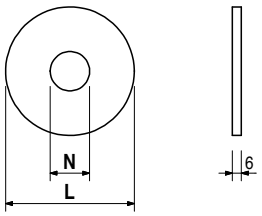
For reducing the hole diameter from Ø 26 to Ø 21 mm in fitting pin connections.



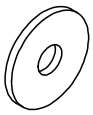


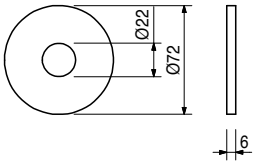
Art no.	Weight [kg]	
129975	0.210	**Washer ISO7094-24-100HV-ga**





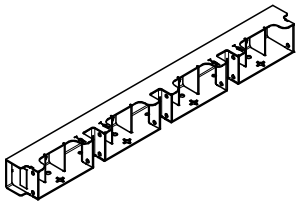
Art no.	Weight [kg]	
113350	0.174	**Washer ISO7094-20-100HV-ga**

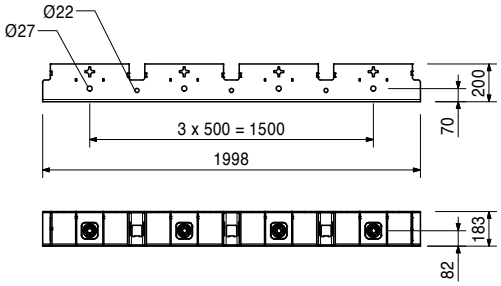




Art no.	Weight [kg]	
136806	65.600	**Speed Beam VPS 200**

To connect IPE 600 VARIOKIT or Logitudinal Beam VARIOKIT with Formwork Panel VPS.



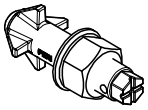


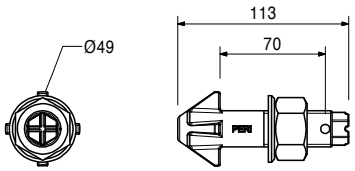
Accessory (not included)

057139	Screw ISO4017-M20x60-8.8-ga
710334	Hex-Nut ISO4032-M20-8-ga
125462	Screw ISO4017-M24x60-8.8-ga
022250	Nut ISO4032-M24-8-ga

Art no.	Weight [kg]	
137179	0.563	**X-Bolt VPS M24 70mm**

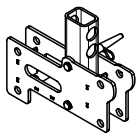
Connection mean, installable from one side, with thread M24 (1") and nominal length 70 mm (2 ¾").

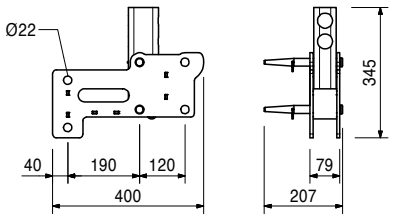




Art no.	Weight [kg]	
137141	11.100	**Sideform Holder VPS**

For side formwork positioning and carrying fresh concrete pressure at side formwork bottom. Connectable to Speed Beam VPS 200.





Accessory (not included)

100411	Adj. Base Plate UJB 38-50/30
104031	Fitting Pin Ø21x120mm
018060	Cotter Pin 4/1 ga

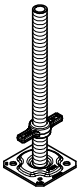
Included in delivery

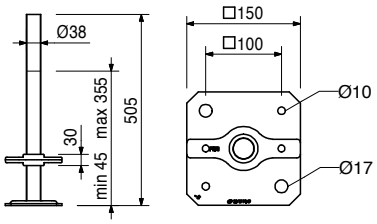
104031 Fitting Pin Ø21x120mm 2 pc
018060 Cotter Pin 4/1 ga 2 pc

Art no.	Weight [kg]	
100411	3.390	**Adj. Base Plate UJB 38-50/30**

Notes

With captive red quick jack nut.



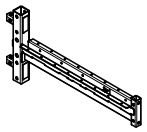


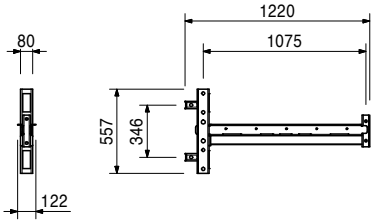
Accessory (not included)

100863	Spindle Locking UJS

Art no.	Weight [kg]	
137149	18.400	**Platform Bracket VPS 100**

Bracket for 1.00 m (3' - 3 3/8") wide platforms with PERI UP or lumber decking.
Compatible with PERI UP, PERI HSGP-2 & SGP Guardrail-Posts, PERI SRU & RCS Steel-Waler.



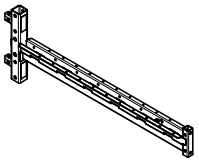


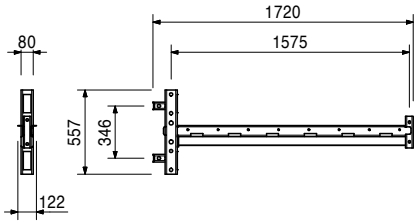
Accessory (not included)

104031	Fitting Pin Ø21x120mm
018060	Cotter Pin 4/1 ga

Art no.	Weight [kg]		
137153	23.200	**Platform Bracket VPS 150**	

Bracket for 1.50 m (4‘ - 11 1/16“) wide platforms with PERI UP or lumber decking.
Compatible with PERI UP, PERI HSGP-2 & SGP Guardrail-Posts, PERI SRU & RCS Steel-Waler.



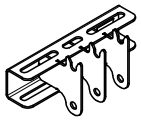


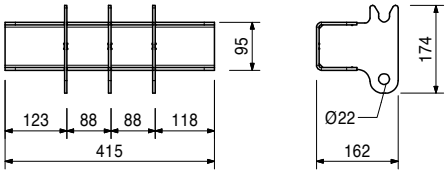
Accessory (not included)

104031 Fitting Pin Ø21x120mm
018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]		B [mm]	L [mm]
138657	5.340	**Column Adaptor VPS/Flex**	162	415

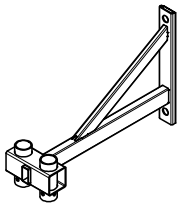
Adapter for Platform Console VPS 100 to Panel VPS Standard and Multi Panel.

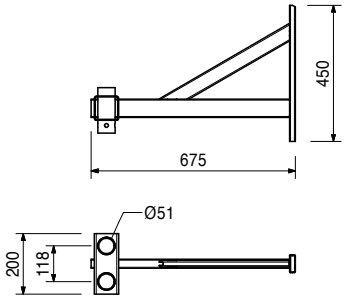




Art no.	Weight [kg]		B [mm]	L [mm]
138694	6.380	**Corner Bracket VPS/Flex 100**	200	675

Corner bracket to accommodate a UVH-2 200 Ledger to form a Concreting Platform for VPS Column Formwork.



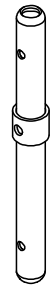


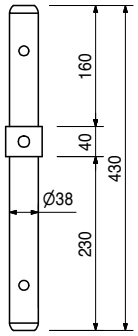
Accessory (not included)

132382 Screw ISO4017-M24x70-8.8-ga
022250 Nut ISO4032-M24-8-ga
132362 Washer ISO7090-24-200HV-ga

Art no.	Weight [kg]	
105372	2.500	**Spigot w. Spacer URE 4/42**

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





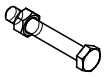
Accessory (not included)

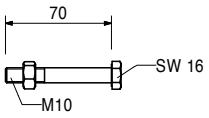
100719 Screw ISO4014-M10x70-8.8-ga-Nu

780356 Nut ISO7040-M10-8-ga

Art no.	Weight [kg]	
100719	0.060	**Screw ISO4014-M10x70-8.8-ga-Nu**

As tension-proof connection of standards at suspended scaffolds and formwork girders.

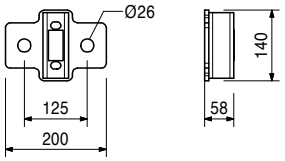




Art no.	Weight [kg]	
137264	1.960	**End Rail Post Holder VPS**

Adaptor for connecting guardrail posts to the front of Panels VPS. Compatible with PERI UP, PERI HSGP-2 & SGP Guardrail Posts.





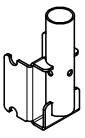
Accessory (not included)

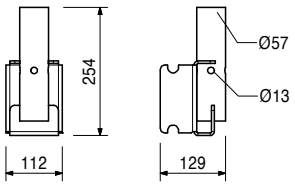
125462 Screw ISO4017-M24x60-8.8-ga

022250 Nut ISO4032-M24-8-ga

Art no.	Weight [kg]	
137481	2.510	**Connector VPS/Flex**

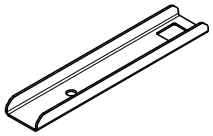
For connecting PERI UP Top Standards UVH to the Speed Beam VPS 200 to create fall protection at the end.

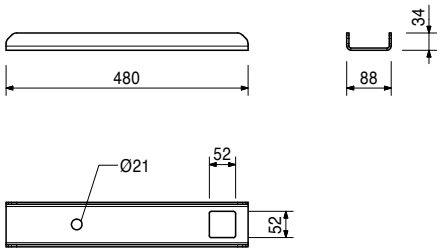




Art no.	Weight [kg]	
137277	2.040	**Adaptor Plate VPS/RS**

Adaptor for PERI Base Plates RS when using lumber decking on Platform Bracket VPS.



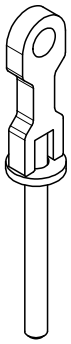


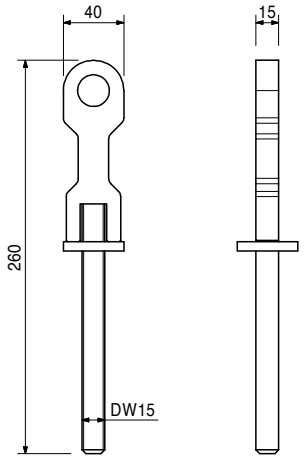
Accessory (not included)

113810 Push-Pull Prop Bolt FB

Art no.	Weight [kg]	
113810	0.621	**Push-Pull Prop Bolt FB**

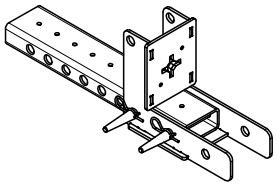
For fixing the base plates of push-pull props to the Folding Platform FB 180-3.

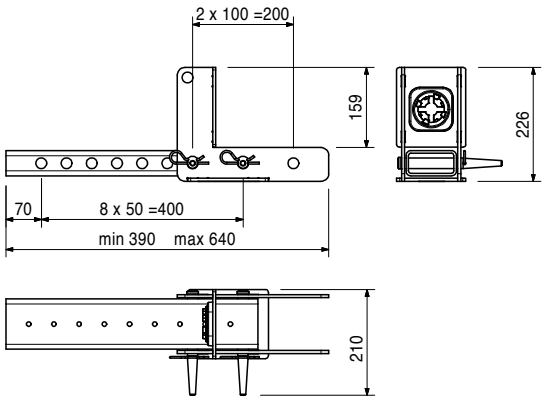




Art no.	Weight [kg]	
137272	11.100	**Filler Support VPS**

Support fixed at Panels VPS for forming filler areas with SpeedStage configuration or extension of SpeedColumn configuration.





Accessory (not included)

137179 X-Bolt VPS M24 70mm

Included in delivery

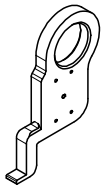
104031 Fitting Pin Ø21x120mm 2 pc
018060 Cotter Pin 4/1 ga 2 pc

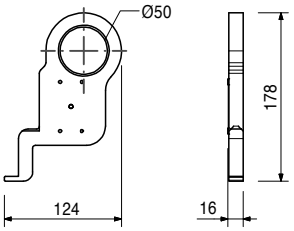
Art no.	Weight [kg]	
137365	1.040	**Lifting Eye VPS**

For transporting single or stacks of Panels VPS.
Follow Instructions for Use!

Notes

Permissible load capacity from 1534 lb (696.0 kg) to 2060 lb (934.0 kg) depend on the lifting situation / attachment situation.

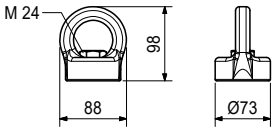




Art no.	Weight [kg]	
137464	1.400	**Eye Nut M24**

Pick-Point for fixation at several items with bolt M24. Capacity 0°: 17637 lb - 8000.0 kg, Capacity 90°: 7054 lb - 3200.0 kg.

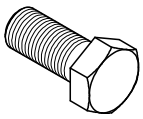


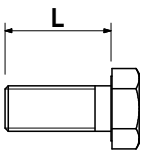


Accessory (not included)

137788 Screw ISO4017-M24x60-10.9-ga

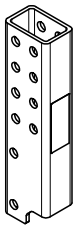
Art no.	Weight [kg]		L [mm]
125462	0.343	**Screw ISO4017-M24x60-8.8-ga**	60

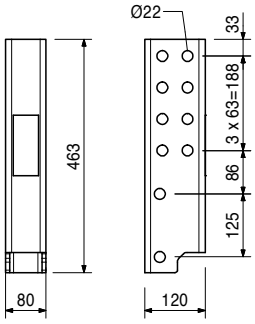




Art no.	Weight [kg]	
137254	9.580	**Striking Adaptor VPS/RCS**

To connect PERI RCS steel profiles to Speed Beam VPS 2.0 for SpeedStage striking.





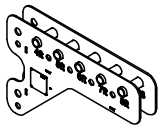
Accessory (not included)

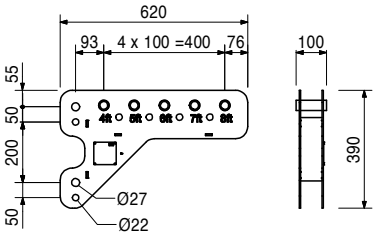
104031 Fitting Pin Ø21x120mm

018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]	
137273	12.700	**Gallow VPS**

For crane transport of striked SpeedStage units in the center of gravity.
Follow Instructions for Use!



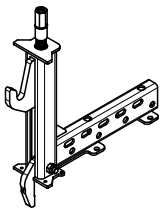


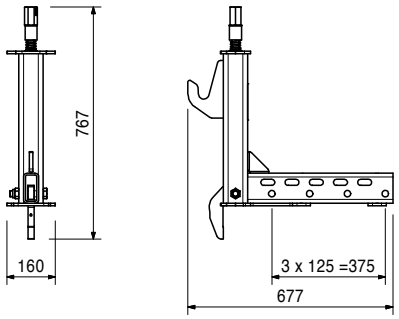
Accessory (not included)

104031	Fitting Pin Ø21x120mm
018060	Cotter Pin 4/1 ga
111567	Fitting Pin Ø26x120mm
022230	Cotter Pin 5/1 ga

Art no.	Weight [kg]	
137445	25.000	**Stagestriker VPS 6600lb/3000kg**

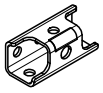
For striking the VARIOKIT SpeedStage.
Perm. Load Bearing Capacity: 6600 lb (3000.0 kg).
Consider Instructions for Assembly & Use!

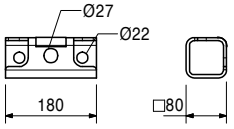




Art no.	Weight [kg]	
131040	1.810	**Cross Connector RCS VARIOKIT**

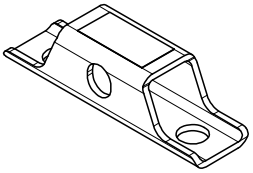
For crosswise connection of Longitudinal Beams VARIOKIT and Climbing Rails RCS.

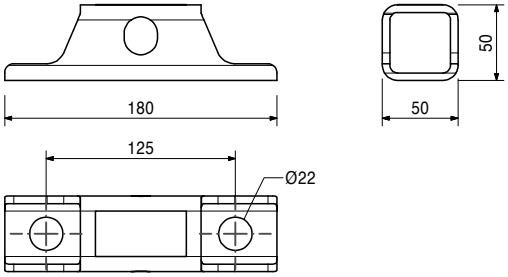




Art no.	Weight [kg]	
137553	0.716	**Cross Connector SRU VARIOKIT**

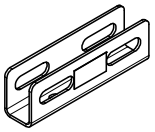
For crosswise connection of PERI SRU Steel Waler on Longitudinal Beams VARIOKIT or IPE 600 VARIOKIT.

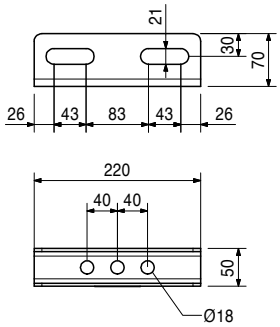




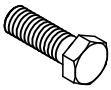
Art no.	Weight [kg]	
137644	1.030	**Waler Fixation SRU**

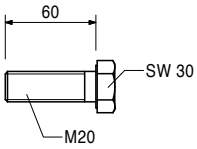
For fastening a Steel Ledger SRU to a VARIOKIT Beam or to a concrete element.





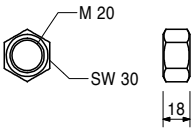
Art no.	Weight [kg]	
057139	0.199	**Screw ISO4017-M20x60-8.8-ga**



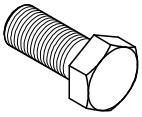


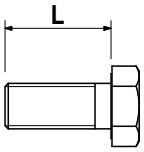
Art no.	Weight [kg]	
710334	0.064	**Nut ISO4032-M20-8-ga**





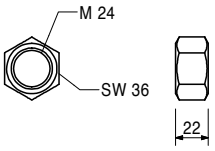
Art no.	Weight [kg]		L [mm]
125462	0.343	**Screw ISO4017-M24x60-8.8-ga**	60





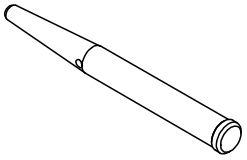
Art no.	Weight [kg]	
022250	0.100	**Nut ISO4032-M24-8-ga**

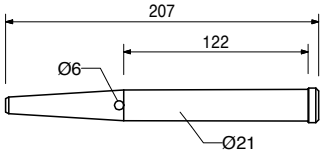




Art no.	Weight [kg]	
104031	0.462	**Fitting Pin Ø21x120mm**

For different connections. High strength.

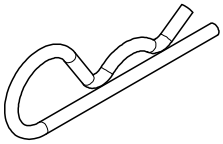




Accessory (not included)

018060 Cotter Pin 4/1 ga

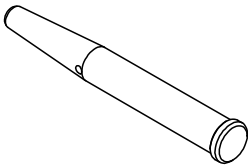
Art no.	Weight [kg]	
018060	0.014	**Cotter Pin 4/1 ga**

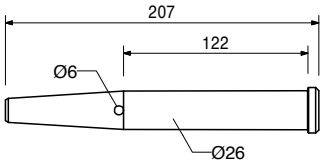




Art no.	Weight [kg]	
111567	0.729	**Fitting Pin Ø26x120mm**

For different connections. High strength.



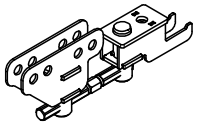


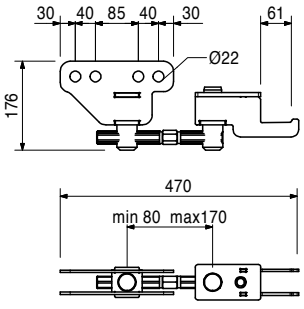
Accessory (not included)

018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]	
137476	6.310	**Top Tie Adaptor SRU/MX**

For installing PERI SRU Walers as top ties on MAXIMO and TRIO.



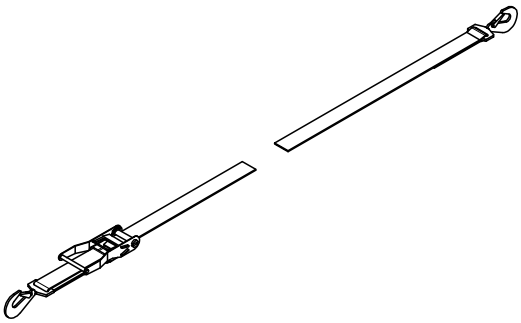


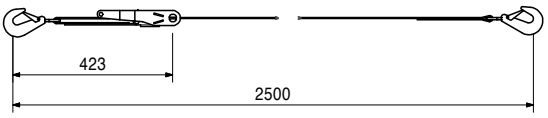
Accessory (not included)

104031 Fitting Pin Ø21x120mm

018060 Cotter Pin 4/1 ga

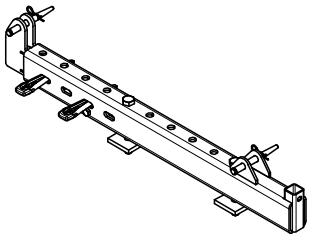
Art no.	Weight [kg]	
137805	1.993	**Tension Belt 2.5m 25kN**

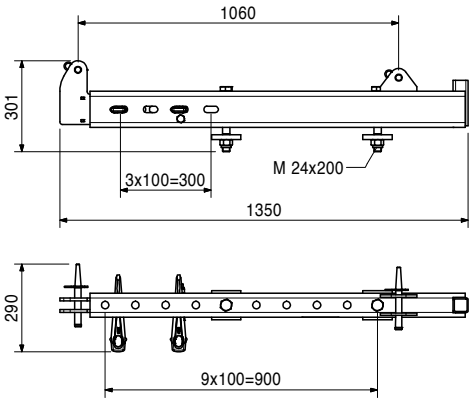




Art no.	Weight [kg]	
137357	44.300	**Stopend Connector VPS**

For attachment of PERI SRU Steel Walers as strongback for cap stopend formwork. Installable on horizontal Panels VPS in SpeedStage configuration.



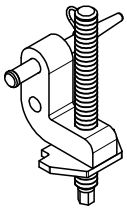


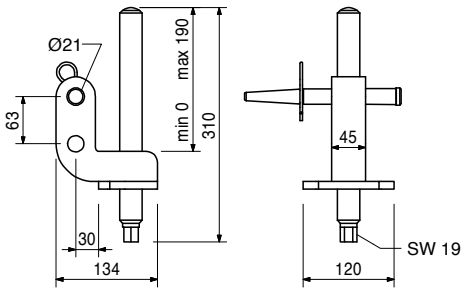
Included in delivery

024240 Wedge KZ tensionproof 2 pc
137601 Plate 97x97x15 coat 2 pc
113686 Screw ISO4014-M24x200-8.8-ga 2 pc
105032 Nut ISO7040-M24-8-ga 2 pc
104031 Fitting Pin Ø21x120mm 2 pc
018060 Cotter Pin 4/1 ga 2 pc

Art no.	Weight [kg]	
111135	5.620	**Adjusting Unit SRU internal**

For internal height adjustment of the formwork on the strongback (Steel Waler SRU) or Climbing Rail RCS.



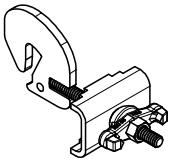


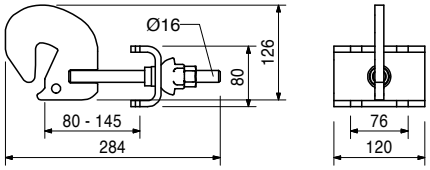
Included in delivery

105400 Pin Ø20x140mm ga 1 pc
018060 Cotter Pin 4/1 ga 1 pc

Art no.	Weight [kg]	
110059	2.840	**Waler Fixation U100/U120**

For fixing VARIO GT 24 Panels to Strongbacks CB, SCS and Steel Waler SRU.



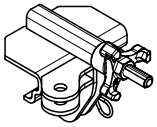


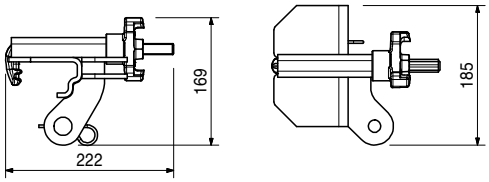
Included in delivery

110055 Cross Strap coat 1 pc
118260 Spherical Nut RD16 coat 1 pc

Art no.	Weight [kg]	
023660	3.290	**Brace Connector-2 MX/TR**

For connecting push-pull props and kicker braces to MAXIMO and TRIO Panels. Mounted on vertical and horizontal struts.



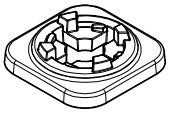


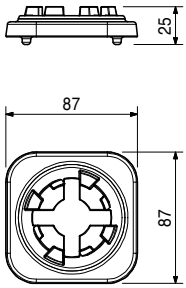
Included in delivery

027170 Pin Ø16x42mm ga 1 pc
018060 Cotter Pin 4/1 ga 1 pc

Art no.	Weight [kg]	
136799	0.547	**X-Plate VPS**

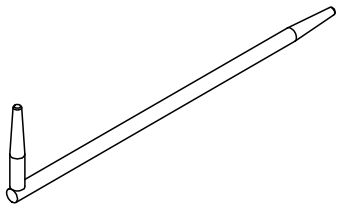
Weldable counter plate for fabrication of special X-Bolt connections.

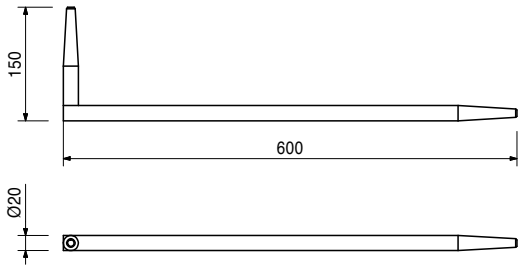




Art no.	Weight [kg]	
137551	1.660	**Centering Tool VARIOKIT 21mm**

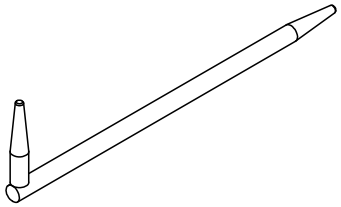
Tool for alignment of VARIOKIT Items. Suiting for holes Ø 21 mm.

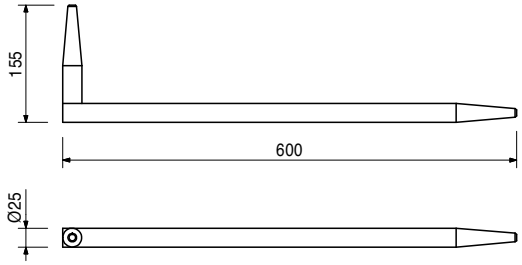




Art no.	Weight [kg]	
137547	2.530	**Centering Tool VARIOKIT 26mm**

Tool for alignment of VARIOKIT Items. Suiting for holes Ø 26 mm.

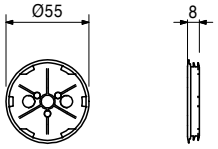




Art no.	Weight [kg]	
132104	0.006	**Repair Plug DUO**

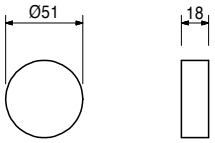
For repairing the DUO formwork skin.





Art no.	Weight [kg]	
137755	0.025	**Repair Plug VPS Ø51x18mm**

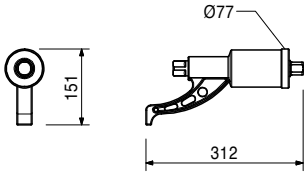




Art no.	Weight [kg]	
137916	13.500	**Torque Multipl. 56fold 3200Nm**

For operating Jack VPS.





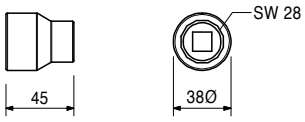
Accessory (not included)

137964	Hex Socket SW75-1“
137963	Hex Socket SW85-1“
137962	Bihex Socket SW28-1/2“

Art no.	Weight [kg]	
137962	0.161	**Bihex Socket SW28-1/2“**

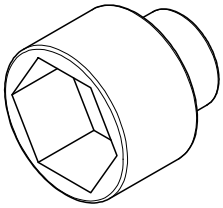
Socket for gear of Torque Multiplier

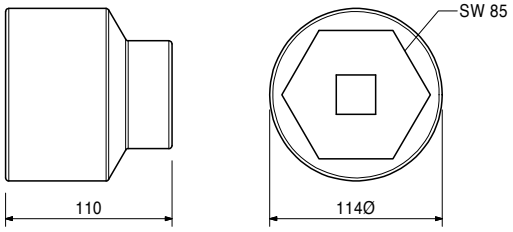




Art no.	Weight [kg]	
137963	4.149	**Hex Socket SW85-1“**

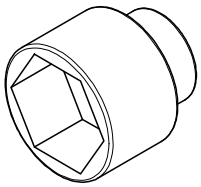
For Hex Bolts M56

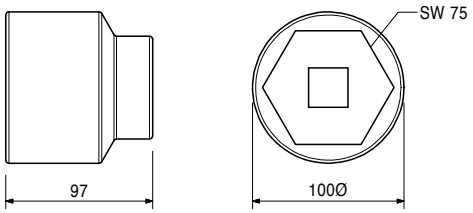




Art no.	Weight [kg]	
137964	2.979	**Hex Socket SW75-1“**

For Hex Bolts M48



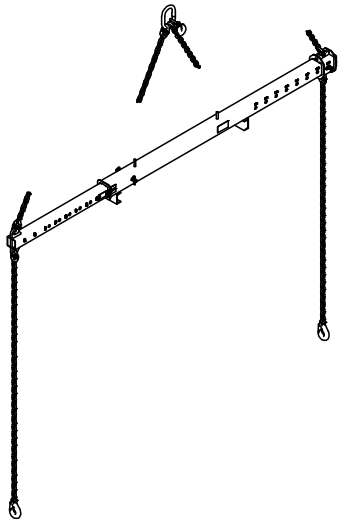


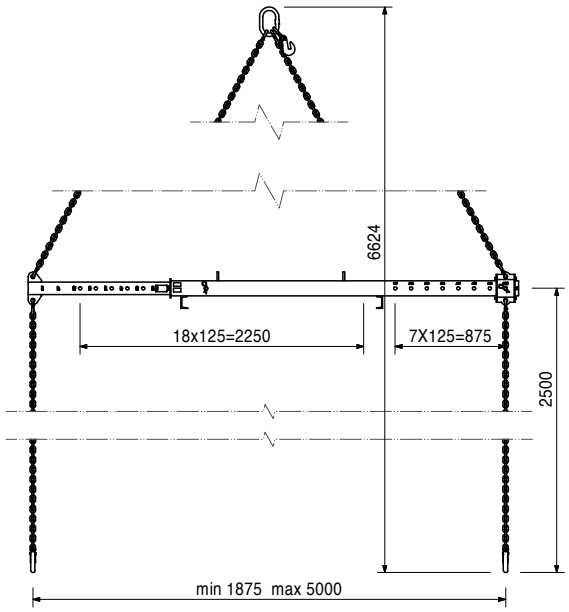
Art no.	Weight [kg]	
127320	158.000	**Lifting Beam 9t**

For moving climbing units.

Notes

Follow Instructions for Use.
Permissible load-bearing capacity 9.0 t.

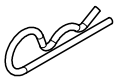




Included in delivery

107297 Screw ISO4014-M12x140-8.8-ga 1 pc
710330 Nut ISO4032-M12-8-ga 1 pc
112865 Locking Pin Ø25x180mm coat 1 pc
022230 Cotter Pin 5/1 ga 1 pc

Art no.	Weight [kg]	
022230	0.033	**Cotter Pin 5/1 ga**

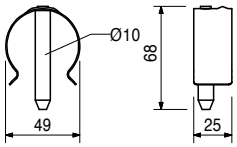




Art no.	Weight [kg]	
111053	0.059	**Locking Pin Ø48-57mm**

As tension-proof connection of standards with Ø 48 up to 57 mm.



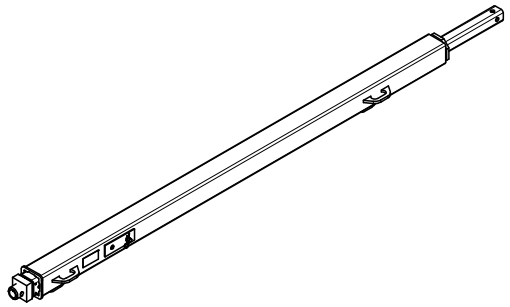


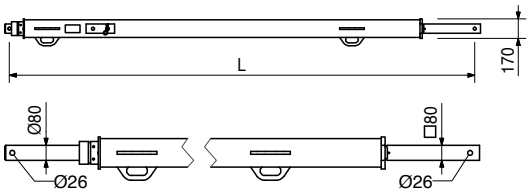
Art no.	Weight [kg]		min. L [mm]	max. L [mm]
		Struts VARIOKIT		
118404	165.000	**Strut VARIOKIT 275-450**	2750	4500
112840	239.000	**Strut VARIOKIT 400-700**	4000	7000
112841	295.000	**Strut VARIOKIT 600-900**	6000	9000

For the bracing of system solutions.

Notes

Permissible load: see PERI Design Tables.





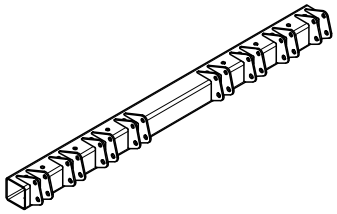
Accessory (not included)

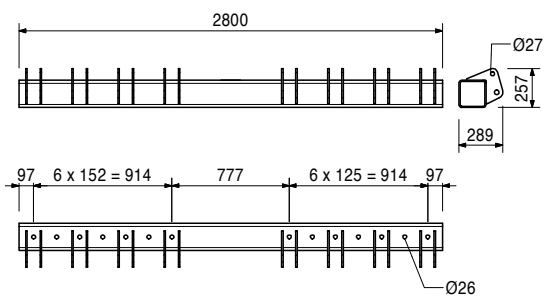
111567 Fitting Pin Ø26x120mm

022230 Cotter Pin 5/1 ga

Art no.	Weight [kg]	
137490	144.000	**Strut Traverse VPS**

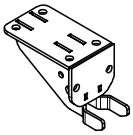
For connecting Struts VARIOKIT to Steel Beams IPE 600 / Longitudinal Beams VARIOKIT and concrete columns.

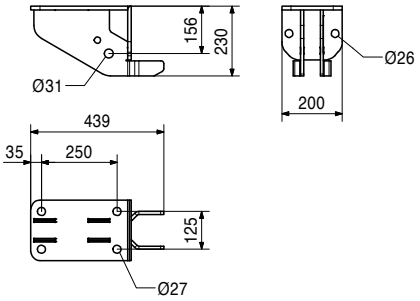




Art no.	Weight [kg]	
137503	16.500	**Traverse Connector VPS**

For fixation of the Strut Traverse VPS at Steel Beams IPE 600 / Longitudinal Beams VARIOKIT and concrete columns.





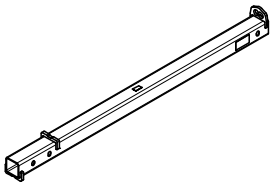
Accessory (not included)

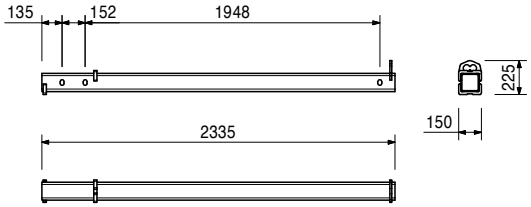
125462 Screw ISO4017-M24x60-8.8-ga

022250 Nut ISO4032-M24-8-ga

Art no.	Weight [kg]	
137558	52.100	**Traverse Externsion VPS**

For handling of the Strut Traverse VPS via crane.



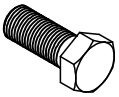


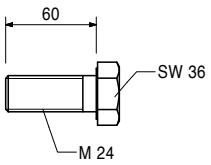
Accessory (not included)

106797 Screw ISO4014-M24x220-10.9

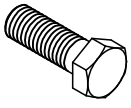
022250 Nut ISO4032-M24-8-ga

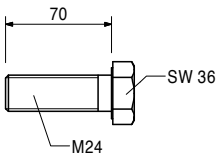
Art no.	Weight [kg]		L [mm]
125462	0.343	**Screw ISO4017-M24x60-8.8-ga**	60



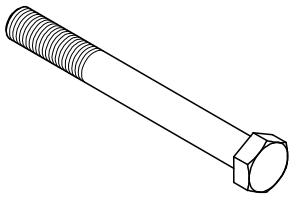


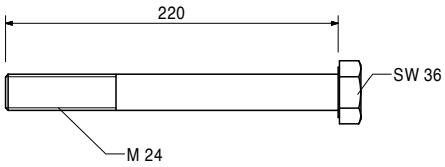
Art no.	Weight [kg]	
132382	0.360	**Screw ISO4017-M24x70-8.8-ga**





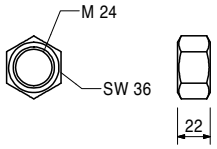
Art no.	Weight [kg]		L [mm]
106797	0.870	**Screw ISO4014-M24x220-10.9**	220





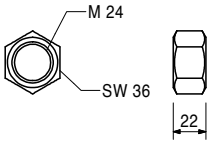
Art no.	Weight [kg]	
022250	0.100	**Nut ISO4032-M24-8-ga**





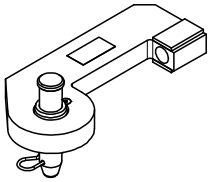
Art no.	Weight [kg]	
706488	0.110	**Nut ISO4032-M24-10**

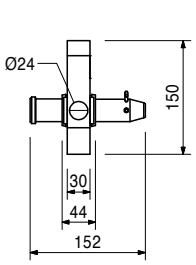


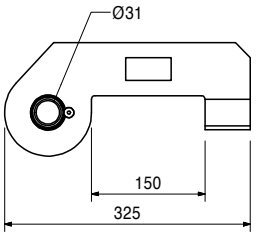


Art no.	Weight [kg]	
125741	7.870	**Articulated Spanner VRB DW20**

Articulated clamping component for DW20 - bracing in the upper chord.







Accessory (not included)

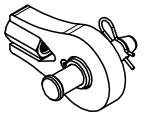
030700	Tie Rod DW20 spec. Length
030580	Hex-Nut DW20 AF36 60mm weldab

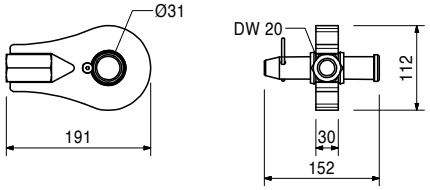
Included in delivery

125347 Fitting Pin VRB Ø30mm 1 pc
018060 Cotter Pin 4/1 ga 1 pc

Art no.	Weight [kg]	
125727	4.020	**Eye Nut VRB DW20**

Articulated connection component for DW20 - bracing.





Accessory (not included)

030700 Tie Rod DW20 spec. Length

Included in delivery

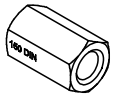
125347 Fitting Pin VRB Ø30mm 1 pc
018060 Cotter Pin 4/1 ga 1 pc

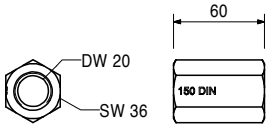
Art no.	Weight [kg]	
030580	0.371	**Hex-Nut DW20 AF36 60mm weldab**

For anchoring with Tie Rod DW20 or B20.

Notes

Weldable! Permissible load 150.0 kN.



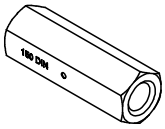


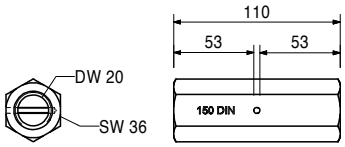
Art no.	Weight [kg]	
030590	0.685	**Hex-Nut DW20 AF36 110mm weldab**

For coupling Tie Rod DW20 oder B20.

Notes

Weldable! Permissible load 150.0 kN.

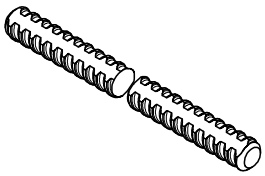




Art no.	Weight [kg]	
		Tie Rods DW20
030700	2.560	**Tie Rod DW20 spec. Length**
030640	1.280	**Tie Rod DW20 0.5m**
030641	2.560	**Tie Rod DW20 1m**
030680	15.400	**Tie Rod DW20 6m**
030800	0.000	**Cutting Costs DW20/B20**

Notes

Weldable! Observe Approval! Permissible tension force 150.0 kN.

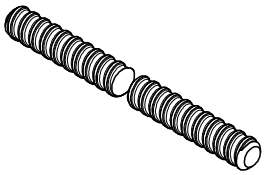




Art no.	Weight [kg]	
		Tie Rods B20
030745	2.600	**Tie Rod B20 spec. Length**
030800	0.000	**Cutting Costs DW20/B20**

Notes

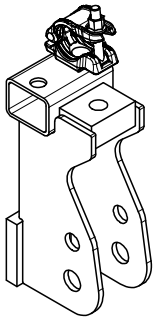
Weldable! Take official Approval into consideration! Permissible tension force 150.0 kN.

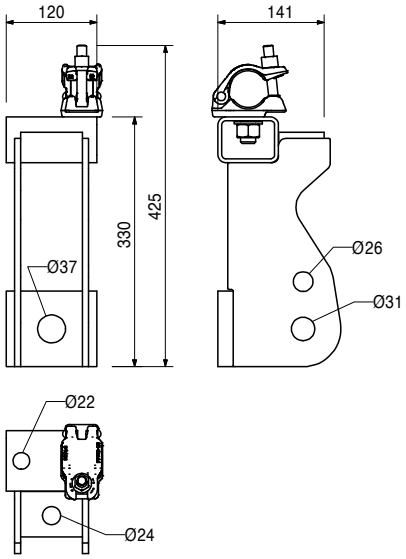




Art no.	Weight [kg]	
123819	9.610	**Bracing Shoe SCS DW20 M36**

Used as compression point at starter sections with optional connections to Scaffold Tube Bracing Ø 48 mm, Vertical Tie Rod DW20 Suspension, Climbing Anchor M36, Diagonal Strut SCS or Heavy Duty Spindle SCS.





Accessory (not included)

029420 Screw ISO4017-M30x70-8.8-ga

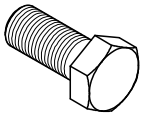
029430 Screw ISO4017-M36x70-8.8-ga

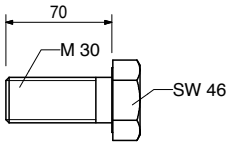
Included in delivery

131404 Screw-On Cou.-2 HT B Ø48mm M20 1 pc

Art no.	Weight [kg]		L [mm]
029420	0.590	**Screw ISO4017-M30x70-8.8-ga**	70

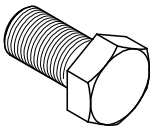
Alternative to Leading Screw M30 galvanized, item number: 029450.

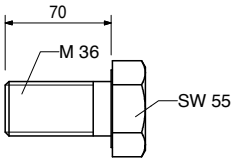




Art no.	Weight [kg]		L [mm]
029430	0.930	**Screw ISO4017-M36x70-8.8-ga**	70

Bolt for anchoring of climbing systems and as advancing bolt.



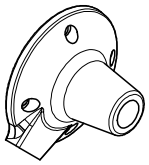


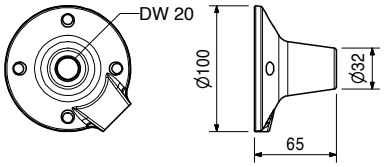
Art no.	Weight [kg]	
030860	0.792	**Threaded Anchor Plate DW20**

For use with Tie Rod DW20, B20 or Screw-On Cone-2 M24/DW20. For anchoring in concrete.

Notes

Lost anchor part.



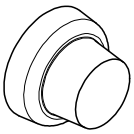


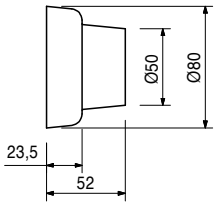
Art no.	Weight [kg]	
031653	0.364	**Concrete Cone KK M30 Ø80x52mm**

For closing anchor points with Climbing Cone-2 M30/DW20 or Screw Cone M30/DW26.

Notes

Delivery Unit 50 pieces.



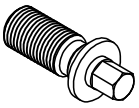


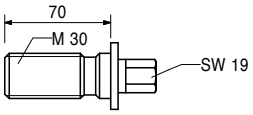
Accessory (not included)

131709 Sealing Adhesive-3 6-Cans-Set

Art no.	Weight [kg]	
029450	0.339	**Advancing Screw M30x70 ga**

For fixing the M30 Anchor System if the plywood formlining is drilled through.



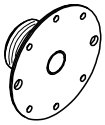


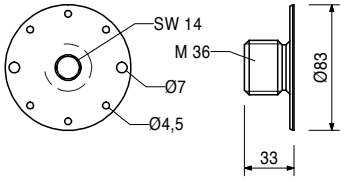
Accessory (not included)

029380 Anchor Posit. Plate M30 ga

Art no.	Weight [kg]	
026460	0.308	**Anchor Posit. Stud M36 ga**

For fixing the M36 anchor system if the plywood formlining is not drilled through.





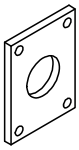
Accessory (not included)

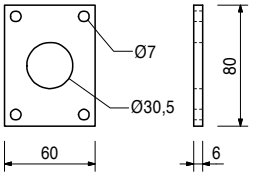
027212 Hexag. Recess Wrench AF14 long

710312 Wire Nail 3x80mm

Art no.	Weight [kg]	
029380	0.184	**Anchor Posit. Plate M30 ga**

For fixing the M30 Anchor System if the plywood formlining is drilled through.





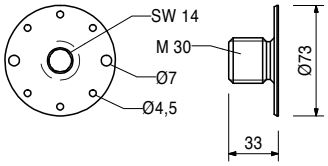
Accessory (not included)

029440 Hex-Wood Screw DIN571-6x20-ga

Art no.	Weight [kg]	
026450	0.214	**Anchor Posit. Stud M30 ga**

For fixing the M30 Anchor System if the plywood formlining is not drilled through.





Accessory (not included)

027212 Hexag. Recess Wrench AF14 long

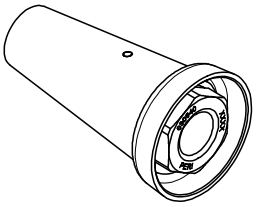
710312 Wire Nail 3x80mm

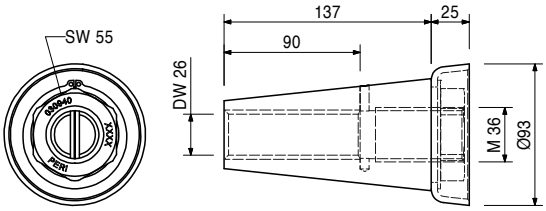
Art no.	Weight [kg]	
030940	2.980	**Climbing Cone-2 M36 DW26**

Tie System M36. For anchoring of climbing systems.

Notes

Separate Design Information on request.





Accessory (not included)

030870 Threaded Anchor Plate DW26

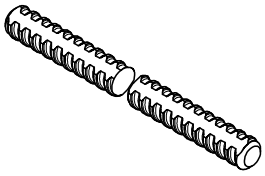
030340 Tie Rod DW26 spec. Length

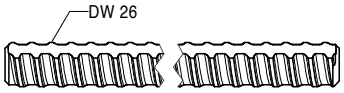
029430 Screw ISO4017-M36x70-8.8-ga

Art no.	Weight [kg]	
		Tie Rods DW26
030340	4.480	**Tie Rod DW26 spec. Length**
030500	0.000	**Cutting Costs DW26**

Notes

Weldable! Take official approval into consideration! Permissible tension force 250.0 kN.



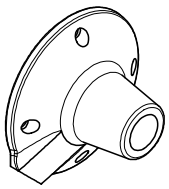


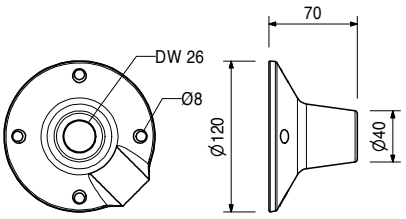
Art no.	Weight [kg]	
030870	1.260	**Threaded Anchor Plate DW26**

For use with Tie Rod DW26 or Screw-On Cone M36/DW26. For anchoring in concrete.

Notes

Lost anchor part.



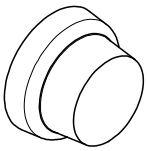


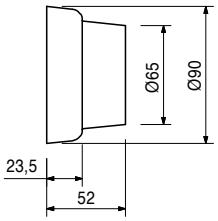
Art no.	Weight [kg]	
031654	0.512	**Concrete Cone KK M36 Ø90x52mm**

For closing anchor points with Climbing Cone-2 M36/DW26.

Notes

Delivery unit 50 pieces.





Accessory (not included)

131709 Sealing Adhesive-3 6-Cans-Set

Art no.	Weight [kg]	
113127	5.400	**Sealing Compound-3 5.4 kg Set**

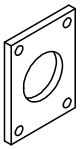
For bonding PERI Concrete Cones.

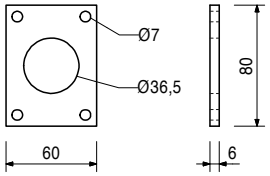
Notes

See Safety Data sheet!
Consisting of:
6 x Component A, 6 x Component B
2 x Stirring Container, 3 x Stirring Staff

Art no.	Weight [kg]	
029390	0.170	**Anchor Posit. Plate M36 ga**

For fixing the M36 anchor system if the plywood formlining is drilled through.





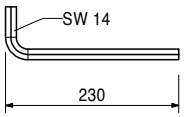
Accessory (not included)

029440 Hex-Wood Screw DIN571-6x20-ga

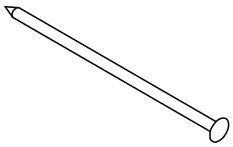
Art no.	Weight [kg]	
027212	0.445	**Hexag. Recess Wrench AF14 long**

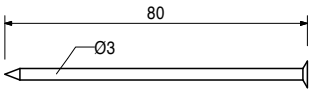
Fits PERI Positioning Discs and Allen Key Bolts M16.





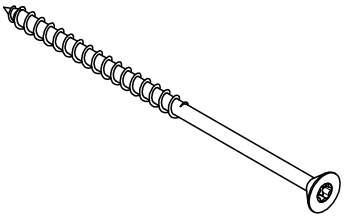
Art no.	Weight [kg]	
710312	0.005	**Wire Nail 3x80mm**

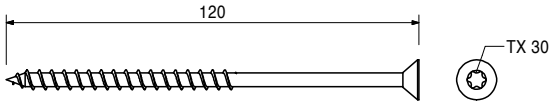




Art no.	Weight [kg]		L [mm]
024960	0.015	**Wood Screw 6x120 SK-TX30 HSX**	120

For Torx Blade TX30. Self-drilling.

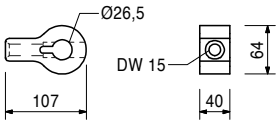




Art no.	Weight [kg]	
115378	1.080	**Eye Nut RCS DW15**

As an articulated connection to the Climbing Rail RCS, Steel Waler SRU for bracing with DW15.





Accessory (not included)

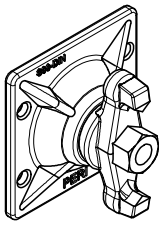
104031 Fitting Pin Ø21x120mm
018060 Cotter Pin 4/1 ga
111567 Fitting Pin Ø26x120mm
022230 Cotter Pin 5/1 ga

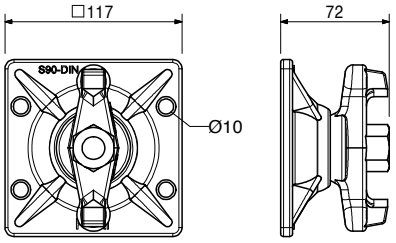
Art no.	Weight [kg]	
030370	1.660	**Wingnut Pivot Plate DW15 ga**

For anchoring with Tie Rod DW15 or B15.
With articulated, captive nut. Maximum inclination of anchor: +/- 8°.

Notes

Wrench size AF27.
Permissible load 90,0 kN.





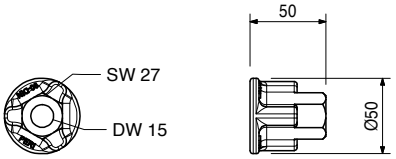
Art no.	Weight [kg]	
030130	0.318	**Cam Nut DW15 coat**

For anchoring with Tie Rod DW15 or B15.

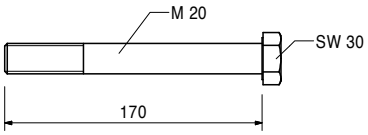
Notes

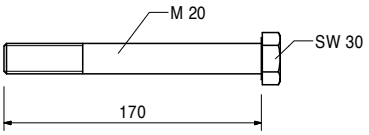
Permissible load 90.0 kN.





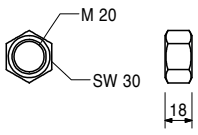
Art no.	Weight [kg]	
724964	0.470	**Screw ISO4014-M20x170-8.8-ga**





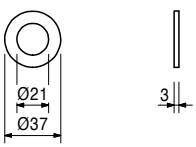
Art no.	Weight [kg]	
710334	0.064	**Nut ISO4032-M20-8-ga**





Art no.	Weight [kg]	
706454	0.017	**Washer ISO7089-20-200HV-ga**





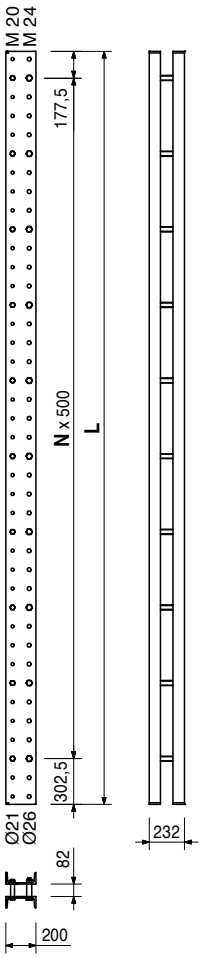
Art no.	Weight [kg]		L [mm]	N
		Climbing Rails RCS		
114166	78.200	**Climbing Rail RCS 148**	1480	2
135990	105.000	**Climbing Rail RCS 198**	1980	3
109469	130.000	**Climbing Rail RCS 248**	2480	4
112102	156.000	**Climbing Rail RCS 298**	2980	5
109470	182.000	**Climbing Rail RCS 348**	3480	6
112141	209.000	**Climbing Rail RCS 398**	3980	7
109471	262.000	**Climbing Rail RCS 498**	4980	9
109472	393.000	**Climbing Rail RCS 748**	7480	14
109610	524.000	**Climbing Rail RCS 998**	9980	19

Steel profile for all-purpose use of climbing application or civil constructions.
With Spacers M20x82mm and M24x82mm.

Notes

Wy = 357.6 cm³, Iy = 3576 cm⁴.



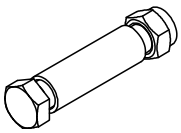


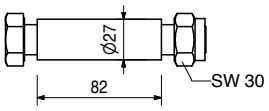
Accessory (not included)

136109	Pin Set RCS MAX
110022	Spacer M20x82mm
110023	Spacer M24x82mm

Art no.	Weight [kg]	
110022	0.491	**Spacer M20x82mm**

Spacer for Climbing Rails RCS.



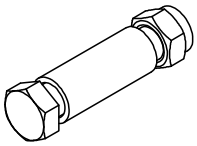


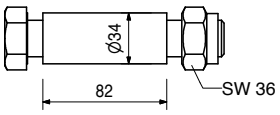
Included in delivery

104477 Screw ISO4014-M20x120-8.8-ga 1 pc
130341 Nut ISO7042-M20-8-ga 1 pc

Art no.	Weight [kg]	
110023	0.910	**Spacer M24x82mm**

Spacer for Climbing Rails RCS.





Included in delivery

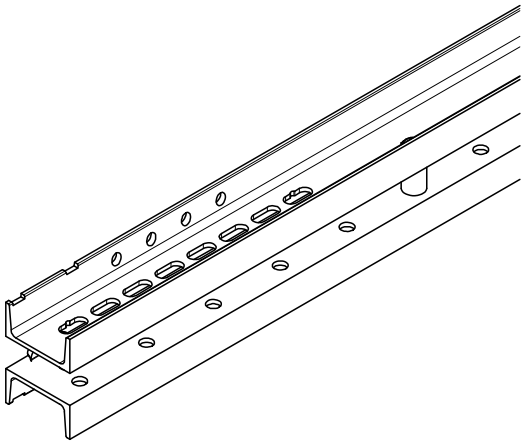
109612 Screw ISO4014-M24x130-8.8-ga 1 pc
130342 Nut ISO7042-M24-8-ga 1 pc

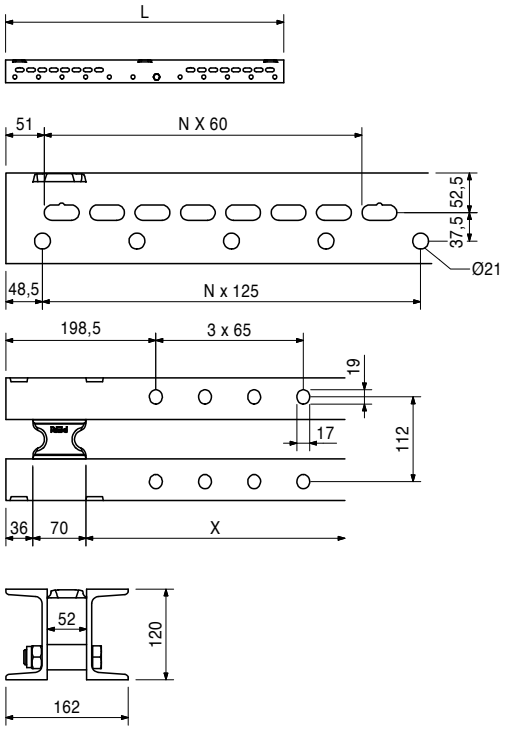
Art no.	Weight [kg]		L [mm]
		Steel Walers SRU U120	
103868	18.100	**Steel Waler SRU 72 U120**	722
103871	24.200	**Steel Waler SRU 97 U120**	972
123809	29.500	**Steel Waler SRU 117 U120**	1172
103874	30.900	**Steel Waler SRU 122 U120**	1222
103877	38.100	**Steel Waler SRU 147 U120**	1472
103886	44.700	**Steel Waler SRU 172 U120**	1722
125088	46.100	**Steel Waler SRU 177 U120**	1772
103889	52.000	**Steel Waler SRU 197 U120**	1972
103898	58.600	**Steel Waler SRU 222 U120**	2222
123812	63.000	**Steel Waler SRU 237 U120**	2372
103892	65.600	**Steel Waler SRU 247 U120**	2472
103929	72.000	**Steel Waler SRU 272 U120**	2722
103903	81.000	**Steel Waler SRU 297 U120**	2972
103906	92.600	**Steel Waler SRU 347 U120**	3472
103915	106.000	**Steel Waler SRU 397 U120**	3972
103918	119.000	**Steel Waler SRU 447 U120**	4472
103922	135.000	**Steel Waler SRU 497 U120**	4972
103925	146.000	**Steel Waler SRU 547 U120**	5472
103928	159.000	**Steel Waler SRU 597 U120**	5972

Universal Steel Waler Profile U120 used as waling for girder wall formwork and for diverse special applications. With adjustable spacers.

Notes

Steel grade according to DIN EN 10025 or 10027: S235JR
SRU 120 Wy = 121.4 cm³, Iy = 728 cm⁴.
SRU 140 Wy = 172,8 cm³, Iy = 1210 cm⁴.





Accessory (not included)

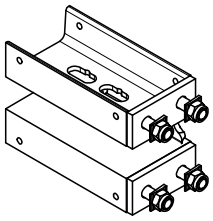
135912 Spacer SRU

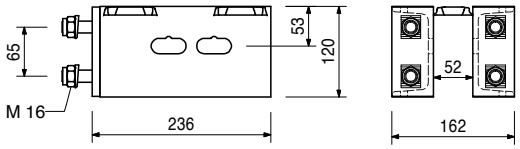
Art no.	Weight [kg]	
104027	7.770	**Extension VARIO 24 U120**

For assembly on Steel Waler SRU.

Notes

U120: Wy = 121.4 cm³, Iy = 728 cm⁴.





Included in delivery

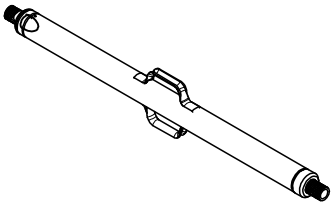
710252 Screw ISO4017-M16x50-8.8-ga 4 pc
070890 Nut ISO7040-M16-8-ga 4 pc
710880 Washer DIN434-18-ga 4 pc

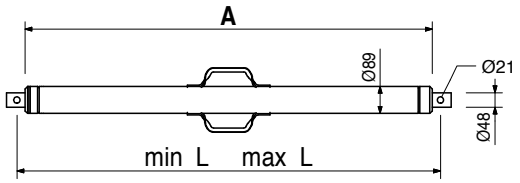
Art no.	Weight [kg]		min. L [mm]	max. L [mm]
		Heavy-Duty Spindles SLS		
111035	12.000	**Heavy Duty Spindle SLS 40-80**	400	800
101773	15.300	**Heavy Duty Spindle SLS 80-140**	800	1400
101774	18.300	**Heavy Duty Spindle SLS 100-180**	1000	1800
101776	24.900	**Heavy Duty Spindle SLS 140-240**	1400	2400
101778	32.300	**Heavy Duty Spindle SLS 200-300**	2000	3000
101779	38.500	**Heavy Duty Spindle SLS 260-360**	2600	3600
109726	44.800	**Heavy Duty Spindle SLS 320-420**	3200	4200
109785	51.000	**Heavy Duty Spindle SLS 380-480**	3800	4800

Used as adjustable spindle for truss beams made of Steel Walers SRU and Climbing Rails RCS.

Notes

Permissible load see PERI Design Tables, Type Test is available.



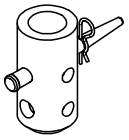


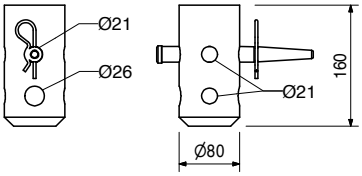
Accessory (not included)

110477 Spindle Adaptor SLS/RCS
104031 Fitting Pin Ø21x120mm
018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]	
110477	3.990	**Spindle Adaptor SLS/RCS**

For connecting the Heavy-Duty Spindle SLS to the Climbing Rail RCS.





Accessory (not included)

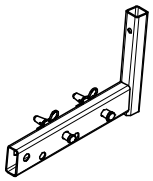
104031	Fiting Pin Ø21x120mm
018060	Cotter Pin 4/1 ga
111567	Fitting Pin Ø26x120mm
022230	Cotter Pin 5/1 ga

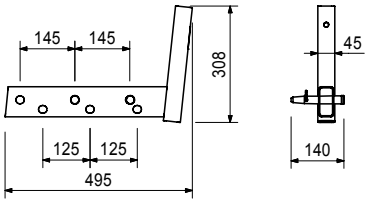
Included in delivery

104031 Fitting Pin Ø21x120mm 1 pc
018060 Cotter Pin 4/1 ga 1 pc

Art no.	Weight [kg]	
104131	3.940	**Guardrail Holder SRU/SRZ**

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





Accessory (not included)

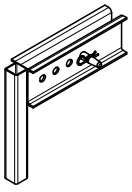
116292	Guardrail Post-2 HSGP
061260	Guardrail Post SGP

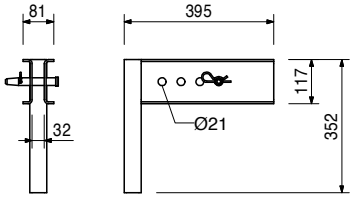
Included in delivery

105400 Pin Ø20x140mm ga 2 pc
018060 Cotter Pin 4/1 ga 2 pc

Art no.	Weight [kg]	
101290	5.670	**Guardrail Holder GT 24/VT 20**

For assembling a guardrail to GT 24 or VT 20 Girders.





Accessory (not included)

116292	Guardrail Post-2 HSGP
061260	Guardrail Post SGP

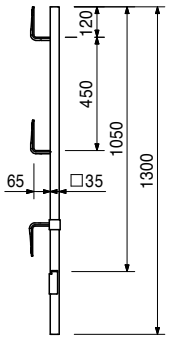
Included in delivery

105400 Pin Ø20x140mm ga 1 pc
018060 Cotter Pin 4/1 ga 1 pc

Art no.	Weight [kg]	
116292	4.720	**Guardrail Post-2 HSGP**

As guardrail for different systems.



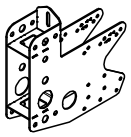


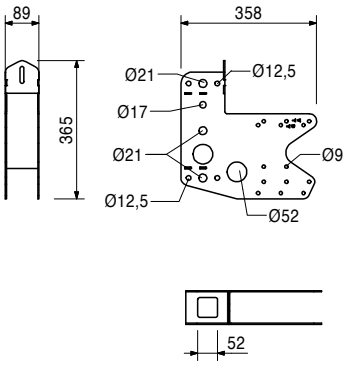
Art no.	Weight [kg]	
126088	4.390	**Guardrail Post Holder Multi**

For fixing of an end guardrail post on Girders GT 24, VT 20 or KH 80/160. Fixing of the guardrail posts by means of Screws M20.

Notes

Suitable for
Guardrail Post RCS 226 item no.: 109720
Guardrail Post RCS/SRU 184 item no.: 114328
Vertical scaffold tubes
Special post QR 50x50



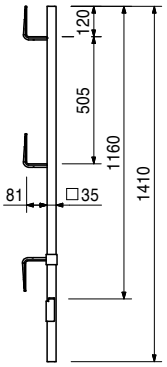


Accessory (not included)

710285	Screw ISO4014-M8-100-8.8-ga
024090	Self-cleaning Nut M8 coat
024470	Wood Screw 6x60 SK-TX30 HPI

Art no.	Weight [kg]	
115634	5.090	**Guardrail Post HSGP US**

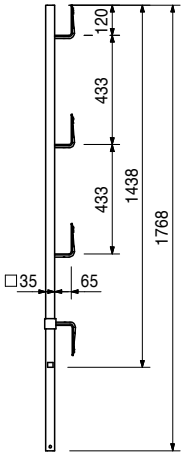




Art no.	Weight [kg]	
061260	6.150	**Guardrail Post SGP**

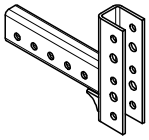
As guardrail for different systems.

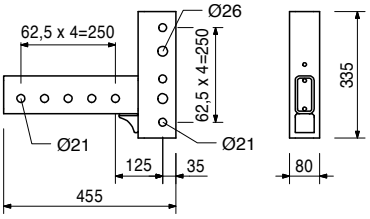




Art no.	Weight [kg]	
111283	9.950	**Angle Connector RCS/SRU**

For right-angled connection of Steel Walers SRU to the Climbing Rails RCS and for attaching guardrail posts to Steel Walers SRU.





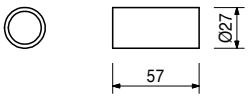
Accessory (not included)

104031	Fitting Pin Ø21x120mm
018060	Cotter Pin 4/1 ga
111567	Fitting Pin Ø26x120mm
022230	Cotter Pin 5/1 ga

Art no.	Weight [kg]	
116363	0.089	**Spacer RCS 184**

Compensator between Angle Connector RCS/SRU and Guardrail Post RCS 184.

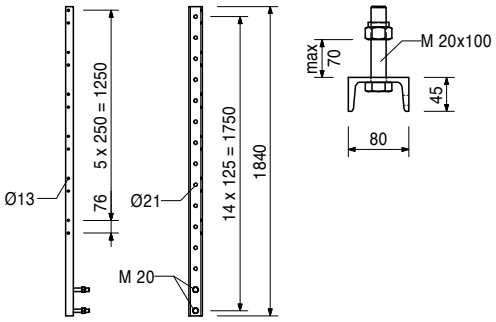




Art no.	Weight [kg]	
114328	16.600	**Guardrail Post RCS/SRU 184**

For assembly of the guardrail on the Platform Beam RCS/SRU or Guardrail Post Holder Multi.





Accessory (not included)

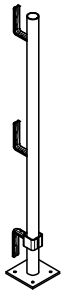
110296	Clamp A64 DIN3570-M12-ga
710709	Screw DIN603-M8x65-4.8-ga-Nut
710330	Nut ISO4032-M12-8-ga
780354	Washer ISO7089-8-200HV-ga
057345	Washer 9mm DIN434 ga

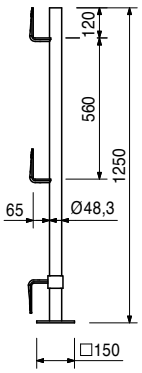
Included in delivery

114727 Screw ISO4017-M20x100-8.8-ga 2 pc
781053 Nut ISO7040-M20-8-ga 2 pc

Art no.	Weight [kg]	
019040	6.480	**Guardrail Post PD 8**

As guardrail for different systems. Screwed onto sub-structure.



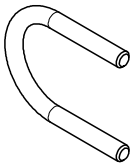


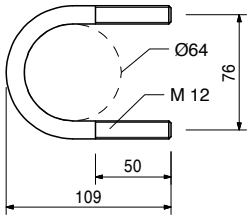
Art no.	Weight [kg]	
110296	0.220	**Clamp A64 DIN3570-M12-ga**

For assembling Scaffold Tubes on Guardrail Posts RCS.

Notes

Wrench size AF19.



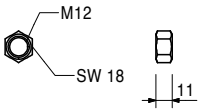


Accessory (not included)

710330 Nut ISO4032-M12-8-ga

Art no.	Weight [kg]	
710330	0.017	**Nut ISO4032-M12-8-ga**

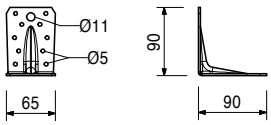




Art no.	Weight [kg]	
123478	0.255	**Angle Connector 90x90x65mm**

For diverse timber connections.





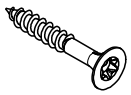
Accessory (not included)

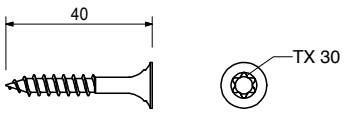
129711 Wood Screw 6x20 HRK-TX30 HSX

024550 Wood-Screw 8x20 SK-TX30 HSX

Art no.	Weight [kg]		L [mm]
024540	0.005	**Wood Screw 6x40 SK-TX30 HPI**	40

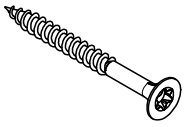
For Torx Bit Points TX30. Self-drilling.

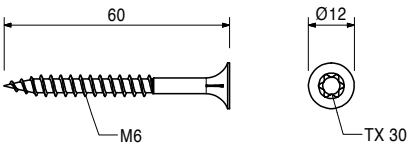




Art no.	Weight [kg]		L [mm]
024470	0.008	**Wood Screw 6x60 SK-TX30 HPI**	60

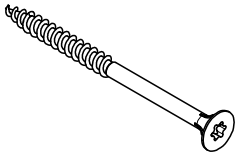
For Torx Bit Points TX30. Self-drilling.

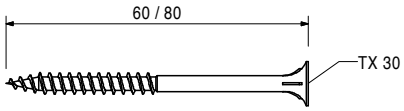




Art no.	Weight [kg]		L [mm]
024690	0.008	**Wood Screw 6x80 SK-TX30 HPI**	80

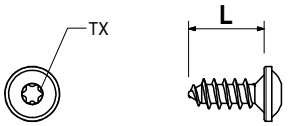
For Torx Bit Points TX30. Self-drilling.



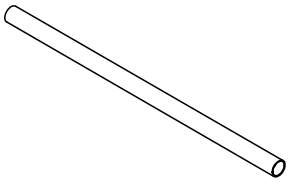


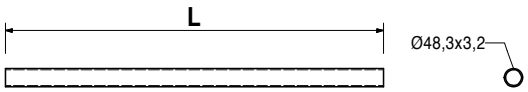
Art no.	Weight [kg]	
		Wood Screws 20 TX30
129711	0.010	**Wood Screw 6x20 HRK-TX30 HSX**
024550	0.005	**Wood Screw 8x20 SK-TX30 HGK**





Art no.	Weight [kg]		L [mm]
		Scaff. Tubes 48.3x3.2mm ga	
026415	3.550	**Scaff. Tube 48.3x3.2mm lfm ga**	1000
026411	3.550	**Scaff. Tube 48.3x3.2mm 1m ga**	1000
026412	7.100	**Scaff. Tube 48.3x3.2mm 2m ga**	2000
125976	8.900	**Scaff. Tube 48,3x3,2mm 2,5m ga**	2500
026413	10.650	**Scaff. Tube 48.3x3.2mm 3m ga**	3000
114287	12.500	**Scaff. Tube 48,3x3,2mm 3,5m ga**	3500
026414	14.200	**Scaff. Tube 48.3x3.2mm 4m ga**	4000
026419	17.750	**Scaff. Tube 48.3x3.2mm 5m ga**	5000
026418	21.600	**Scaff. Tube 48.3x3.2mm 6m ga**	6000
026417	0.000	**Cutting Costs Scaffold Tube**	1



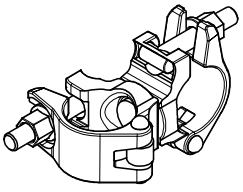


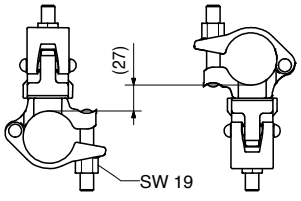
Art no.	Weight [kg]	
017010	1.400	**Swivel Coupler AF Ø48/48mm ga**

For Scaffold Tubes Ø 48 mm.

Notes

Coupling category: B.



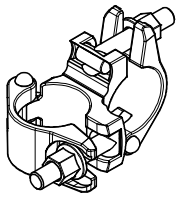


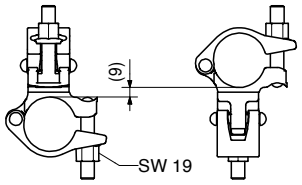
Art no.	Weight [kg]	
017020	1.120	**Standard Coupl. RA Ø48/48mm ga**

For Scaffold Tubes Ø 48 mm.

Notes

Coupling category: B.



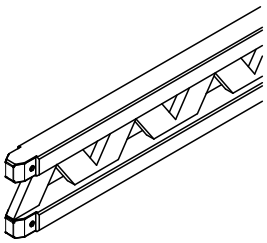


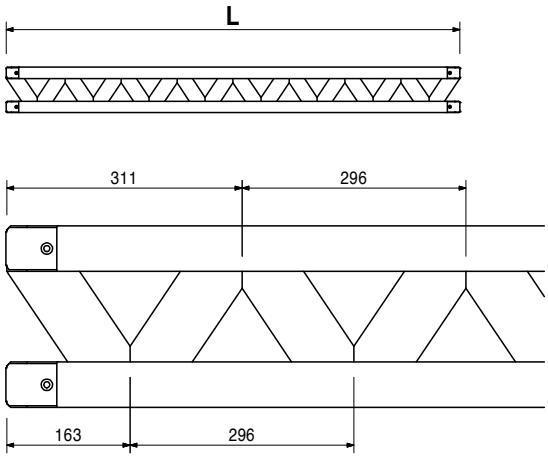
Art no.	Weight [kg]		L [mm]
		Girders GT 24	
075100	5.300	**Girder GT 24 90**	918
075120	7.100	**Girder GT 24 120**	1214
075150	8.900	**Girder GT 24 150**	1510
075180	10.600	**Girder GT 24 180**	1806
075210	12.400	**Girder GT 24 210**	2102
075240	14.200	**Girder GT 24 240**	2398
075270	15.900	**Girder GT 24 270**	2694
075300	17.700	**Girder GT 24 300**	2990
075330	19.500	**Girder GT 24 330**	3286
075360	21.200	**Girder GT 24 360**	3582
075390	23.000	**Girder GT 24 390**	3878
075420	24.800	**Girder GT 24 420**	4174
075450	26.600	**Girder GT 24 450**	4470
075480	28.300	**Girder GT 24 480**	4766
075510	30.100	**Girder GT 24 510**	5062
075540	31.900	**Girder GT 24 540**	5358
075570	33.600	**Girder GT 24 570**	5654
075600	35.400	**Girder GT 24 600**	5950

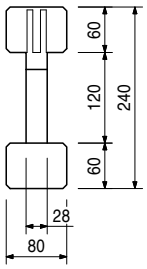
Universal formwork girder made of wood.

Notes

Special lengths over 6.00 m are possible and can be provided on request.





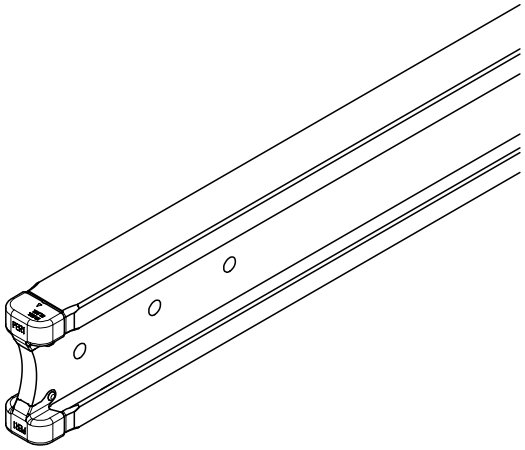


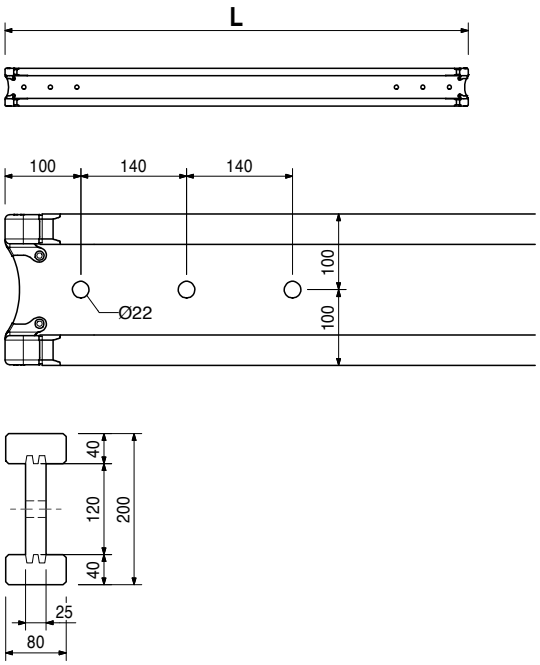
Art no.	Weight [kg]		L [mm]
		Girders VT 20K	
074990	8.230	**Girder VT 20K 145**	1447
074905	12.010	**Girder VT 20K 215**	2152
074910	13.630	**Girder VT 20K 245**	2452
074890	14.710	**Girder VT 20K 265**	2652
074920	16.060	**Girder VT 20K 290**	2902
074930	18.220	**Girder VT 20K 330**	3292
074940	19.840	**Girder VT 20K 360**	3592
074950	21.460	**Girder VT 20K 390**	3892
074960	24.700	**Girder VT 20K 450**	4492
074970	26.860	**Girder VT 20K 490**	4902
074980	32.260	**Girder VT 20K 590**	5902

Universal formwork girder made of wood.

Notes

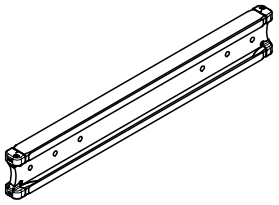
The girder fulfils all requirements of DIN EN 13377 class P20 (Declaration of Conformity).

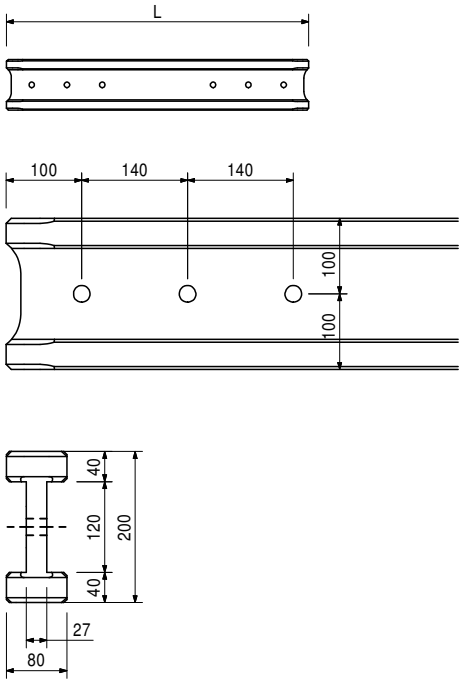




Art no.	Weight [kg]	
074900	0.000	**Cutting Cost for VT Grider**

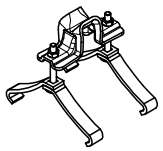
Art no.	Weight [kg]		L [mm]
		Girders VT 20	
073710	8.600	**Girder VT 20 145**	1445
073720	12.700	**Girder VT 20 215**	2150
073730	14.500	**Girder VT 20 245**	2450
073740	15.600	**Girder VT 20 265**	2650
073750	17.100	**Girder VT 20 290**	2900
073760	19.500	**Girder VT 20 330**	3290
073770	21.200	**Girder VT 20 360**	3590
073780	23.000	**Girder VT 20 390**	3890
073790	26.700	**Girder VT 20 450**	4490
073800	29.900	**Girder VT 20 490**	4900
073810	34.800	**Girder VT 20 590**	5900

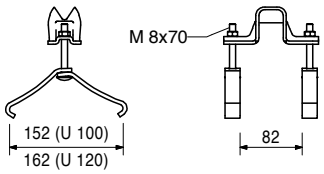




Art no.	Weight [kg]	
024070	0.691	**Hook Strap 24 U100/U120**

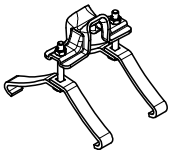
For fixing GT 24 Girders to Steel Walers SRZ, SRU and BR Profile U100 – U120.

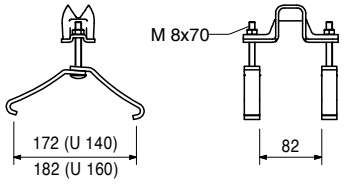




Art no.	Weight [kg]	
024080	0.735	**Hook Strap 24 U140/U160**

For fixing GT 24 Girders to Steel Walers SRZ, SRU and BR Profile U140 – U160.



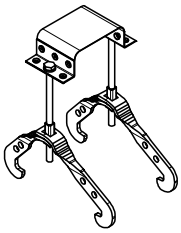


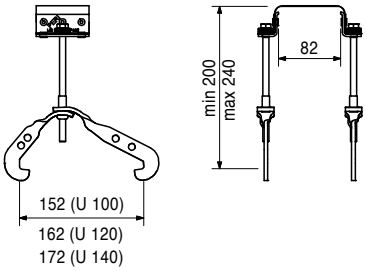
Art no.	Weight [kg]	
104931	0.829	**Hook Strap Uni HBU 20-24**

For fixing GT 24 Girders or VT 20 Girders to Steel Walers SRZ and SRU Profiles U100 – U140.

Notes

The girders can be mounted right-angled or diagonally to the steel walers and also outside of the nodes.





Accessory (not included)

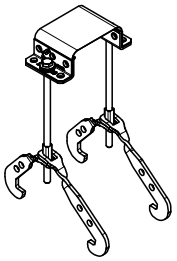
024540 Wood Screw 6x40 SK-TX30 HPI

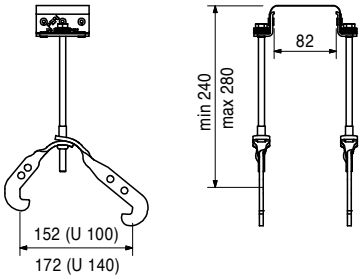
Art no.	Weight [kg]	
103845	0.859	**Hook Strap Uni HBU 24-28**

For fixing GT 24 Girders to Steel Walers SRZ, SRU and BR: U100 – U140.

Notes

The girders can be mounted right-angled or diagonally to the steel walers and also outside of the nodes.





Accessory (not included)

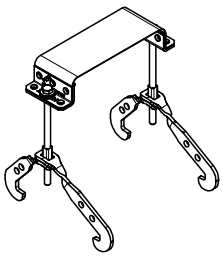
024540 Wood Screw 6x40 SK-TX30 HPI

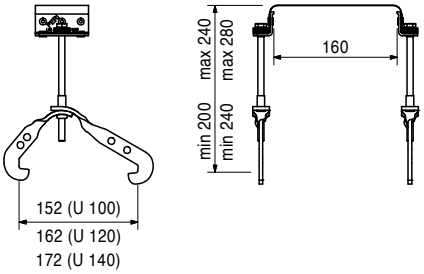
Art no.	Weight [kg]	
104930	0.853	**Hook Strap Uni dou. HBUD 20-24**

For fixing two GT 24 Girders or VT 20 Girders to SRZ Steel Walers and SRU Profiles U100 – U140.

Notes

The girders can be mounted right-angled or diagonally to the steel walers and also outside of the nodes.



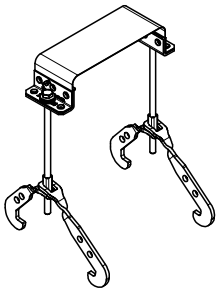


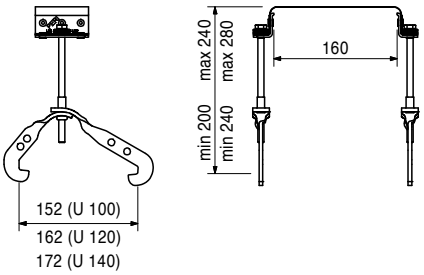
Art no.	Weight [kg]	
104096	0.878	**Hook Strap Uni dou. HBUD 24-28**

For fixing two GT 24 girders or VT 20K girders to SRZ steel walers and SRU Profiles U100 - U140.

Notes

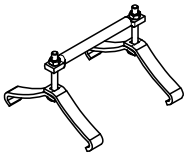
The girders can be mounted right-angled or diagonally to the steel walers and also outside of the nodes.

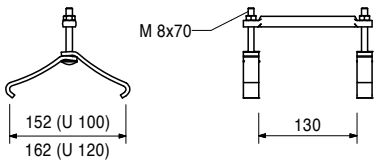




Art no.	Weight [kg]	
024860	0.616	**Hook Strap 24 Cross Bar 150mm**

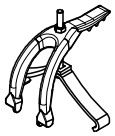
For fixing GT 24 Girders independent from girder node or timber beams with drilling Ø 20 mm to Steel Walers SRZ, SRU and BR Profile U100 – U120.

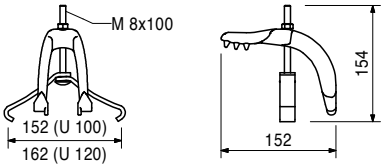




Art no.	Weight [kg]	
024600	0.907	**Girder Claw HB**

For mounting the GT 24 Edge Girder on the Steel Waler SRZ and SRU Profile U100 – U120.



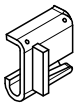


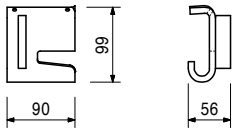
Art no.	Weight [kg]	
024640	0.923	**Impact Strap 24 U100/U140**

For fixing GT 24 Girders to Steel Waler SRZ and SRU Profile U100 – U140 outside of the girder nodes.

Notes

Girders fixed in position with the quick strap must be screwed to the formlining when using crane lifting gears.

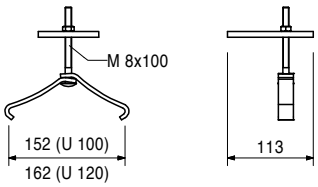




Art no.	Weight [kg]	
024630	0.742	**Fix Clamp U100/U120 ga**

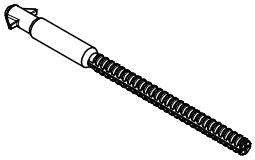
For fixing the GT 24 Girder in the VARIO Corner.

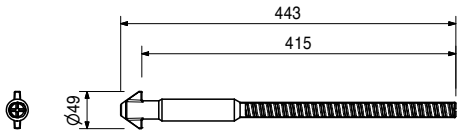




Art no.	Weight [kg]	
137275	1.480	**T-Bolt VPS DW20x415mm**

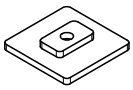
Conncetion mean, installable from one side, with thread DW 20 and nominal length 415mm.
(1'-4 5/15")

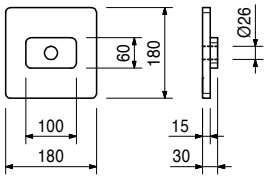




Art no.	Weight [kg]	
136624	4.370	**Counterplate VPS DW20**

Counterplate for DW20 connections and windmill configuration with Panels VPS.



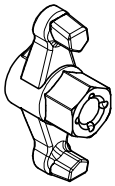


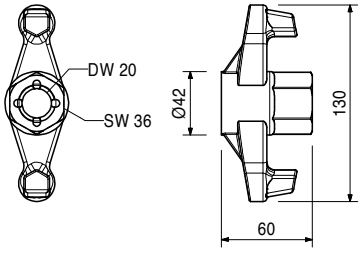
Art no.	Weight [kg]	
030990	0.786	**Wingnut DW20 ga**

For anchoring with Tie Rod DW20 or B20.

Notes

Permissible load 150.0 kN.



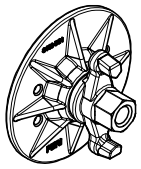


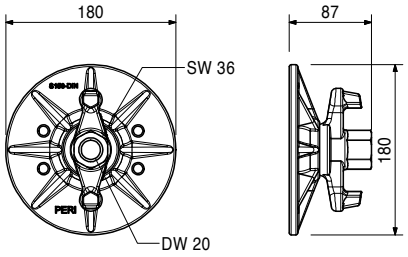
Art no.	Weight [kg]	
127587	3.210	**Wingnut Pivot Plate DW20 ga**

For anchoring with Tie Rod DW20. With pivoting captive nut. Maximum angle of tilting +/- 8°.

Notes

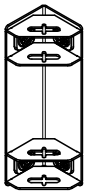
Permissible load 150.0 kN.

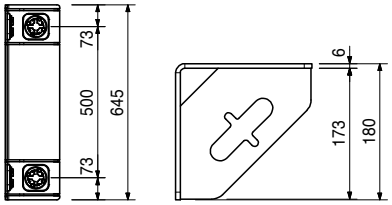




Art no.	Weight [kg]	
137163	15.900	**External Corner VPS**

For 90° connection of Panels VPS in SpeedColumn configuration.
Connection mean: X-Bolt VPS M24x70.



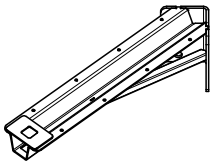


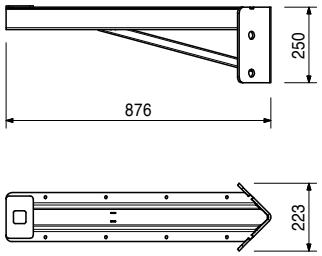
Accessory (not included)

137179 X-Bolt VPS M24 70mm

Art no.	Weight [kg]	
137342	12.800	**Corner Bracket VPS**

Bracket for creating corner working platforms with SpeedColumn configuration.





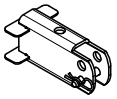
Accessory (not included)

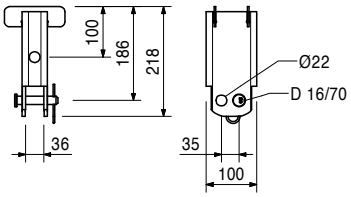
125462 Screw ISO4017-M24x60-8.8-ga

022250 Nut ISO4032-M24-8-ga

Art no.	Weight [kg]	
137244	2.600	**Push-Pull Prop Connector VPS**

To connect PERI Push-Pull Props RS or Hold-Down Bracket VPS to Panels VPS for SpeedColumn application.





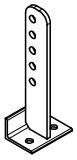
Accessory (not included)

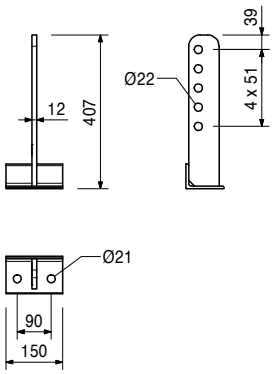
104031 Fitting Pin Ø21x120mm

018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]	
137336	4.070	**Hold-Down Bracket VPS**

For fixation of Panels VPS at bottom in combination with Push-Pull Prop Connector VPS.





Accessory (not included)

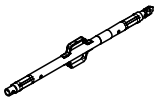
124777 Anchor Bolt AF24 Ø14/20x130 TG

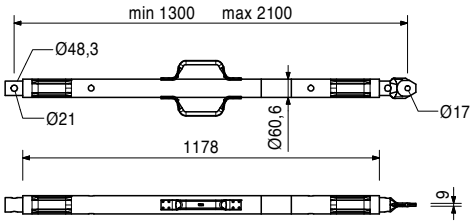
Art no.	Weight [kg]	
117466	10.600	**Push-Pull Prop RS 210 ga**

Extension length L = 1.30 – 2.10 m.
For aligning PERI Formwork Systems and precast concrete elements.

Notes

Permissible load see Instructions for Assembly and Use.



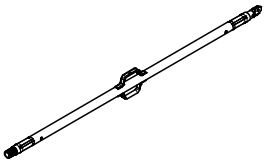


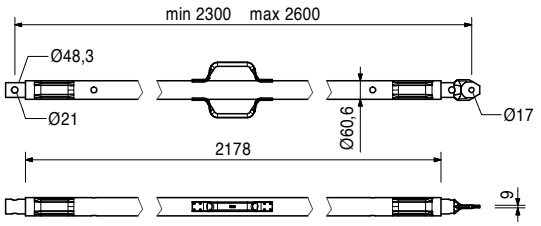
Art no.	Weight [kg]	
118238	12.100	**Push-Pull Prop RS 260 ga**

Extension length L = 2.30 – 2.60 m.
For aligning PERI Formwork Systems and precast concrete elements.

Notes

Permissible load see Instructions for Assembly and Use.



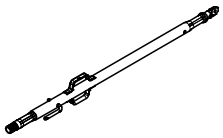


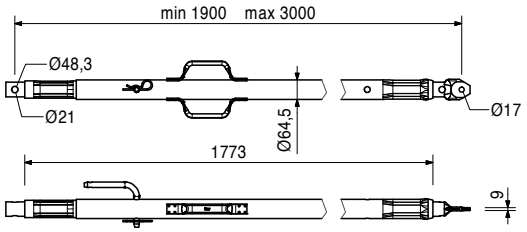
Art no.	Weight [kg]	
117467	15.500	**Push-Pull Prop RS 300 ga**

Extension length L = 1.90 – 3.00 m.
For aligning PERI Formwork Systems and precast concrete elements.

Notes

Permissible load see Instructions for Assembly and Use.



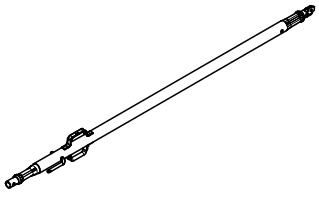


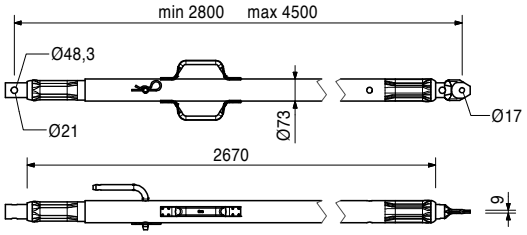
Art no.	Weight [kg]	
117468	23.000	**Push-Pull Prop RS 450 ga**

Extension length L = 2.80 – 4.50 m.
For aligning PERI Formwork Systems and precast concrete elements.

Notes

Permissible load see Instructions for Assembly and Use.



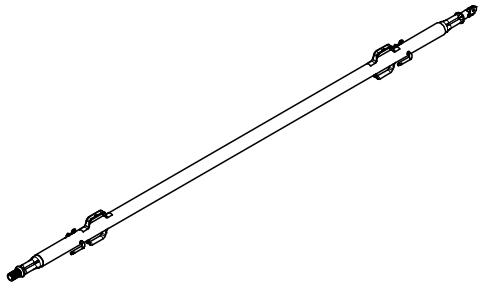


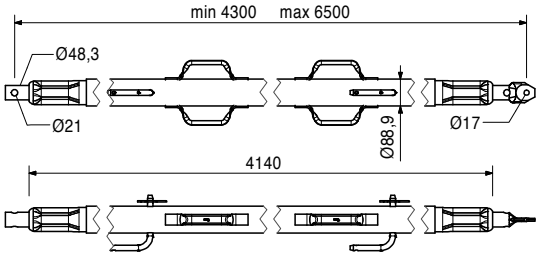
Art no.	Weight [kg]	
117469	39.900	**Push-Pull Prop RS 650 ga**

Extension length L = 4.30 – 6.50 m.
For aligning PERI Formwork Systems.

Notes

Permissible load see Instructions for Assembly and Use.



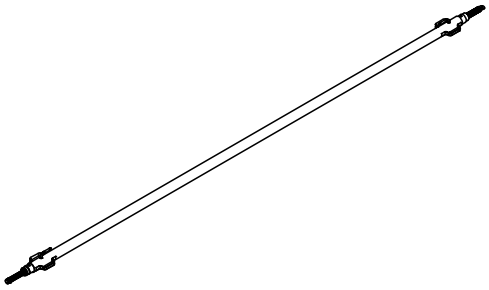


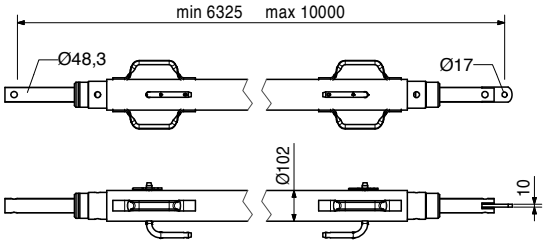
Art no.	Weight [kg]	
028990	115.000	**Push-Pull Prop RS 1000 ga**

Extension length L = 6.40 – 10.00 m.
For aligning PERI Formwork Systems.

Notes

Permissible load see Instructions for Assembly and Use.



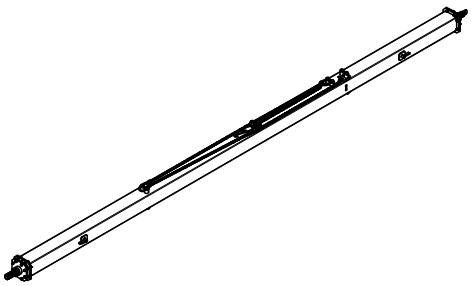


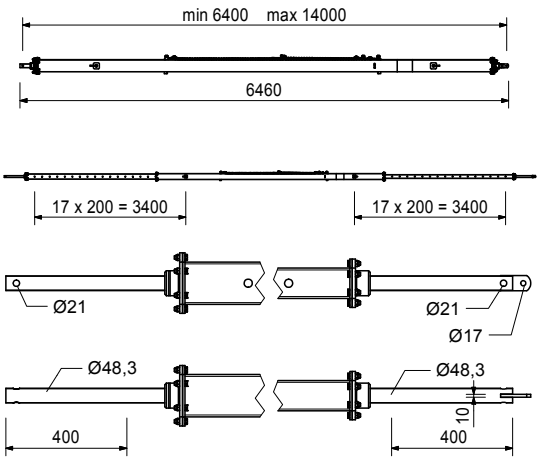
Art no.	Weight [kg]	
103800	271.000	**Push-Pull Prop RS 1400 ga**

Extension length L = 6.40 – 14.00 m.
For aligning PERI Formwork Systems.

Notes

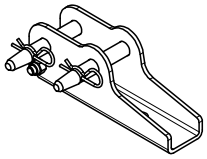
Permissible load see Instructions for Assembly and Use.
Chain can be operated from bottom.

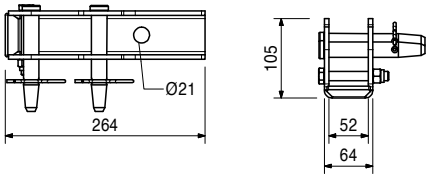




Art no.	Weight [kg]	
126666	3.040	**Base Plate-3 f. RS 210-1400**

For assembly of Push-Pull Props RS 210, 260, 300, 450, 650, 1000 and 1400.





Accessory (not included)

124777 Anchor Bolt AF24 Ø14/20x130 TG

Included in delivery

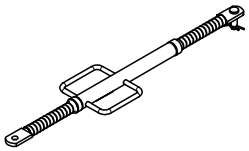
113063 Screw ISO4014-M12x80-8.8-ga 1 pc
113064 Hex-Nut ISO7040-M12-8-ga 1 pc
105400 Pin Ø20x140mm ga 2 pc
018060 Cotter Pin 4/1 ga 2 pc

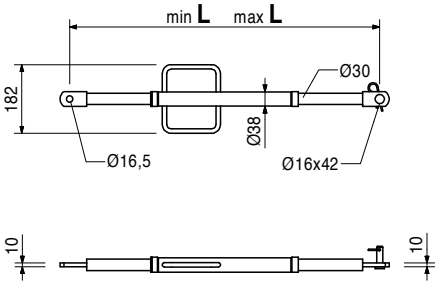
Art no.	Weight [kg]		min. L [mm]	max. L [mm]
		Kicker AV		
057087	3.510	**Kicker AV 82**	500	820
057088	4.200	**Kicker AV 111**	790	1110

For aligning PERI Formwork Systems.

Notes

Permissible load see PERI Design Tables.





Included in delivery

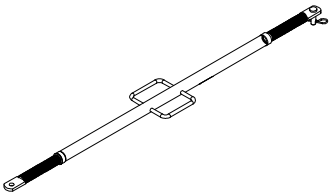
027170 Pin Ø16x42mm ga 1 pc
018060 Cotter Pin 4/1 ga 1 pc

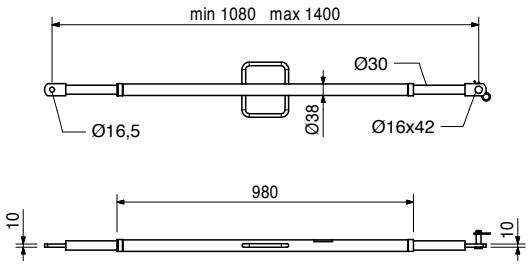
Art no.	Weight [kg]		D [mm]	L [mm]	min. L [mm]	max. L [mm]
028110	4.850	**Kicker AV 140**	2000	250	1080	1400

Extension length L = 1.08 - 1.40 m.
For aligning PERI Formwork Systems.

Notes

Permissible load see PERI Design Tables.





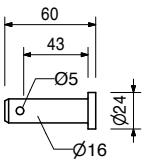
Included in delivery

027170 Pin Ø16x42mm ga 1 pc
018060 Cotter Pin 4/1 ga 1 pc

Art no.	Weight [kg]	
027170	0.102	**Pin Ø16x42mm ga**

For different connections.



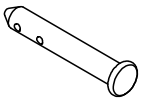


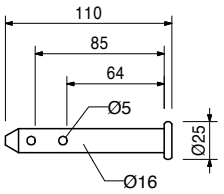
Accessory (not included)

018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]	
018050	0.171	**Pin Ø16x65/86mm ga**

For different connections.

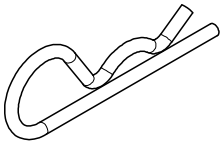




Accessory (not included)

018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]	
018060	0.014	**Cotter Pin 4/1 ga**

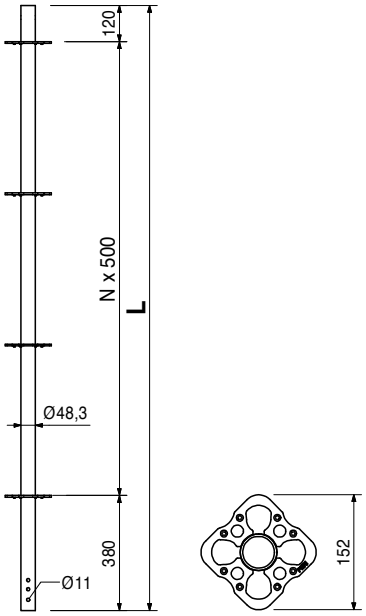




Art no.	Weight [kg]		L [mm]
		Top Standards UVH-2	
132123	2.100	**Top Standard UVH-2 50**	500
132194	4.210	**Top Standard UVH-2 100**	1000
132198	6.320	**Top Standard UVH-2 150**	1500
132200	8.420	**Top Standard UVH-2 200**	2000
132202	10.500	**Top Standard UVH-2 250**	2500

Without spigot for supporting head spindles.

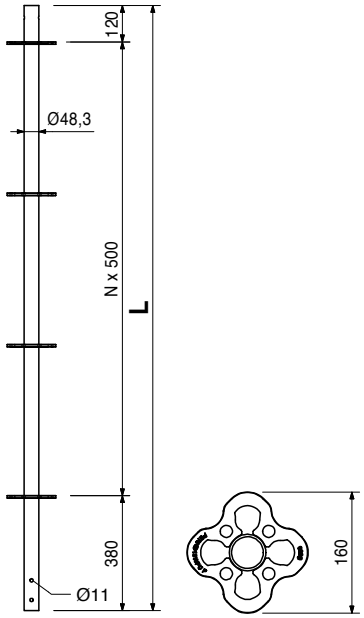




Art no.	Weight [kg]		L [mm]
		Top Standards UVH	
401309	2.510	**Top Standard UVH 50**	500
400000	4.610	**Top Standard UVH 100**	1000
400003	6.920	**Top Standard UVH 150**	1500
400005	9.240	**Top Standard UVH 200**	2000
400007	11.500	**Top Standard UVH 250**	2500

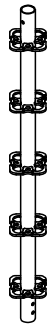
Without spigot for supporting head spindles.

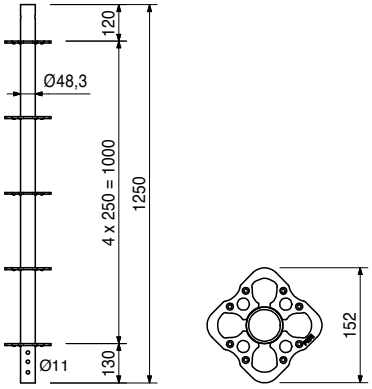




Art no.	Weight [kg]		L [mm]
132196	6.060	**Top Standard UVH-2 125**	1250

Without spigot for supporting head spindles.

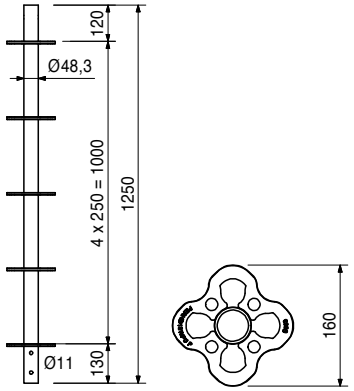




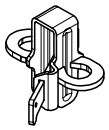
Art no.	Weight [kg]		L [mm]
417195	7.600	**Top Standard UVH 125**	1250

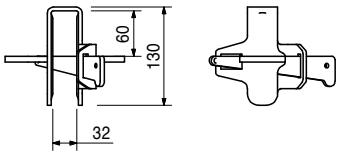
Without spigot for supporting head spindles.





Art no.	Weight [kg]	
110793	1.090	**Ledger Bracket UHA half**



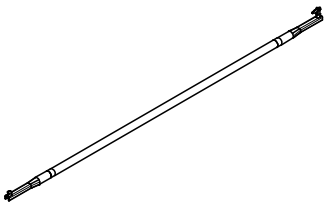


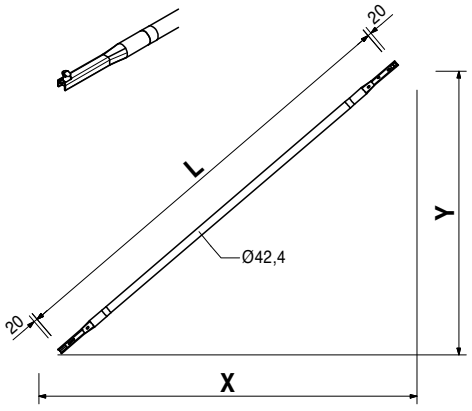
Art no.	Weight [kg]		L [mm]	X [mm]	Y [mm]
		Ledger Braces UBL-2			
132771	2.320	**Ledger Brace UBL-2 100/50**	901	1000	500
132773	3.130	**Ledger Brace UBL-2 100/100**	1250	1000	1000
132775	4.040	**Ledger Brace UBL-2 100/150**	1677	1000	1500
132777	5.090	**Ledger Brace UBL-2 100/200**	2136	1000	2000
132779	3.260	**Ledger Brace UBL-2 150/50**	1347	1500	500
132781	3.720	**Ledger Brace UBL-2 150/100**	1601	1500	1000
132783	4.640	**Ledger Brace UBL-2 150/150**	1953	1500	1500
132785	5.040	**Ledger Brace UBL-2 150/200**	2358	1500	2000
132787	5.320	**Ledger Brace UBL-2 175/200**	2500	1750	2000
132789	4.370	**Ledger Brace UBL-2 200/50**	1820	2000	500
132791	4.770	**Ledger Brace UBL-2 200/100**	2016	2000	1000
132793	4.940	**Ledger Brace UBL-2 200/150**	2305	2000	1500
132795	6.110	**Ledger Brace UBL-2 200/200**	2658	2000	2000
132797	4.870	**Ledger Brace UBL-2 225/50**	2062	2250	500
132808	5.190	**Ledger Brace UBL-2 225/100**	2236	2250	1000
132810	6.460	**Ledger Brace UBL-2 225/200**	2829	2250	2000
132812	5.250	**Ledger Brace UBL-2 250/100**	2462	2500	1000
132814	6.170	**Ledger Brace UBL-2 250/150**	2705	2500	1500
132816	6.340	**Ledger Brace UBL-2 250/200**	3010	2500	2000
132827	5.910	**Ledger Brace UBL-2 300/50**	2795	3000	500
132829	6.830	**Ledger Brace UBL-2 300/100**	2926	3000	1000
132831	7.360	**Ledger Brace UBL-2 300/150**	3133	3000	1500
132833	7.120	**Ledger Brace UBL-2 300/200**	3400	3000	2000

Suspension in holes of the Horizontal Ledgers.

Notes

With length embossing and coloured sticker for easy identification.
UBL-2 150/250 is identical with UBL-2 300/50.
UBL-2 225/150 is identical with UBL-2 175/200.
UBL-2 250/50 is identical with UBL-2 200/150.
UBL-2 75/200 is identical with UBL-2 225/50.



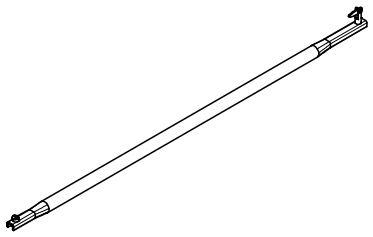


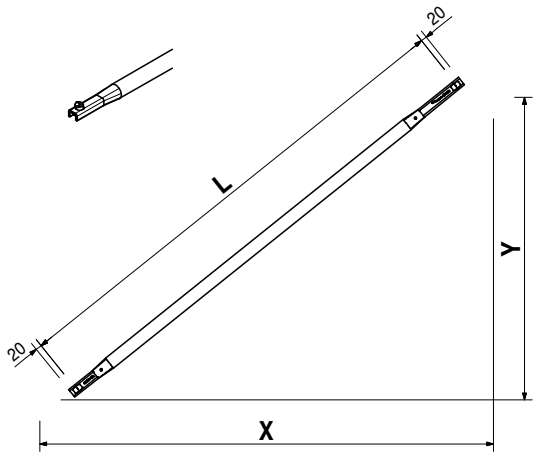
Art no.	Weight [kg]		L [mm]	X [mm]	Y [mm]
		Ledger Braces UBL			
415156	2.660	**Ledger Brace UBL 100/50**	901	1000	500
415513	4.640	**Ledger Brace UBL 100/150**	1677	1000	1500
415157	5.810	**Ledger Brace UBL 100/200**	2136	1000	2000
407867	3.790	**Ledger Brace UBL 150/50**	1347	1500	500
400055	4.440	**Ledger Brace UBL 150/100**	1601	1500	1000
402846	5.340	**Ledger Brace UBL 150/150**	1953	1500	1500
400057	6.380	**Ledger Brace UBL 150/200**	2358	1500	2000
409034	6.740	**Ledger Brace UBL 175/200**	2500	1750	2000
404391	5.000	**Ledger Brace UBL 200/50**	1820	2000	500
400059	5.510	**Ledger Brace UBL 200/100**	2016	2000	1000
402862	6.240	**Ledger Brace UBL 200/150**	2305	2000	1500
400061	7.150	**Ledger Brace UBL 200/200**	2658	2000	2000
430282	5.620	**Ledger Brace UBL 225/50**	2062	2250	500
430283	6.070	**Ledger Brace UBL 225/100**	2236	2250	1000
417689	7.580	**Ledger Brace UBL 225/200**	2829	2250	2000
400063	6.640	**Ledger Brace UBL 250/100**	2462	2500	1000
402861	7.260	**Ledger Brace UBL 250/150**	2705	2500	1500
400065	8.050	**Ledger Brace UBL 250/200**	3010	2500	2000
404762	7.490	**Ledger Brace UBL 300/50**	2795	3000	500
400067	7.830	**Ledger Brace UBL 300/100**	2926	3000	1000
404766	8.360	**Ledger Brace UBL 300/150**	3133	3000	1500
400069	9.040	**Ledger Brace UBL 300/200**	3400	3000	2000

Suspension in holes of the Horizontal Ledgers.

Notes

With length embossing and coloured sticker for easy identification.
UBL 150/250 is identical with UBL 300/50.
UBL 225/150 is identical with UBL 175/200.
UBL 250/50 is identical with UBL 200/150.
UBL 75/200 is identical with UBL 225/50.

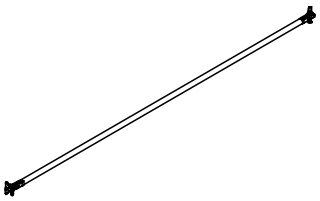


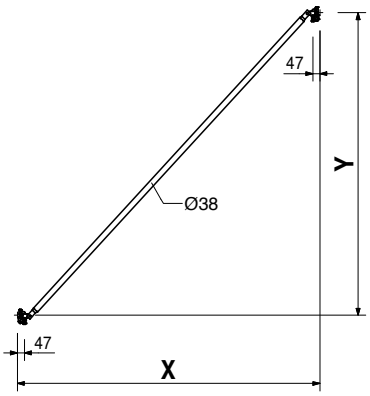


Art no.	Weight [kg]		L [mm]	X [mm]	Y [mm]
		Node Braces UBK-2			
133418	5.280	**Node Brace UBK-2 75/200**	2190	750	2000
133421	5.490	**Node Brace UBK-2 100/200**	2285	1000	2000
133424	3.900	**Node Brace UBK-2 125/100**	1625	1250	1000
133427	5.590	**Node Brace UBK-2 125/200**	2401	1250	2000
133430	4.240	**Node Brace UBK-2 150/100**	1821	1500	1000
133433	5.260	**Node Brace UBK-2 150/150**	2152	1500	1500
133436	5.810	**Node Brace UBK-2 150/200**	2539	1500	2000
133439	4.990	**Node Brace UBK-2 200/100**	2246	2000	1000
133442	5.860	**Node Brace UBK-2 200/150**	2521	2000	1500
133445	6.430	**Node Brace UBK-2 200/200**	2860	2000	2000
133448	6.280	**Node Brace UBK-2 250/100**	2696	2500	1000
133451	6.210	**Node Brace UBK-2 250/150**	2930	2500	1500
133454	7.160	**Node Brace UBK-2 250/200**	3226	2500	2000
133457	6.620	**Node Brace UBK-2 300/100**	3131	3000	1000
133460	6.980	**Node Brace UBK-2 300/150**	3356	3000	1500
133463	7.910	**Node Brace UBK-2 300/200**	3625	3000	2000

Notes

With color coding for length identification.

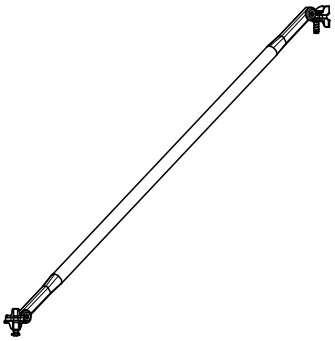


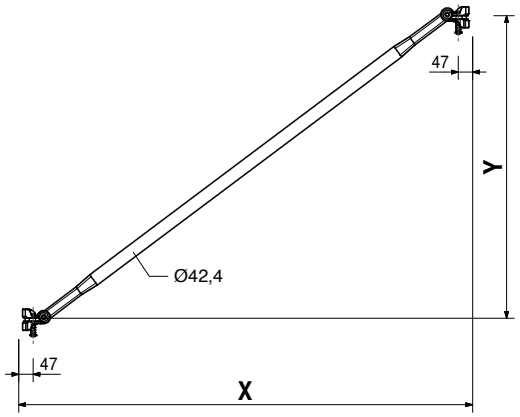


Art no.	Weight [kg]		L [mm]	X [mm]	Y [mm]
		Node Braces UBK			
424170	6.770	**Node Brace UBK 75/200**	2190	750	2000
412926	6.980	**Node Brace UBK 100/200**	2285	1000	2000
415354	5.210	**Node Brace UBK 125/100**	1625	1250	1000
412765	7.250	**Node Brace UBK 125/200**	2401	1250	2000
400981	5.700	**Node Brace UBK 150/100**	1821	1500	1000
400973	6.570	**Node Brace UBK 150/150**	2152	1500	1500
400572	7.590	**Node Brace UBK 150/200**	2539	1500	2000
400985	6.780	**Node Brace UBK 200/100**	2246	2000	1000
406630	7.500	**Node Brace UBK 200/150**	2521	2000	1500
400573	8.380	**Node Brace UBK 200/200**	2860	2000	2000
400989	7.930	**Node Brace UBK 250/100**	2696	2500	1000
406624	8.530	**Node Brace UBK 250/150**	2930	2500	1500
400574	9.300	**Node Brace UBK 250/200**	3226	2500	2000
400993	9.120	**Node Brace UBK 300/100**	3131	3000	1000
400575	10.300	**Node Brace UBK 300/200**	3625	3000	2000

Notes

With color coding for length identification.

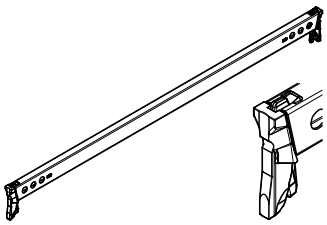


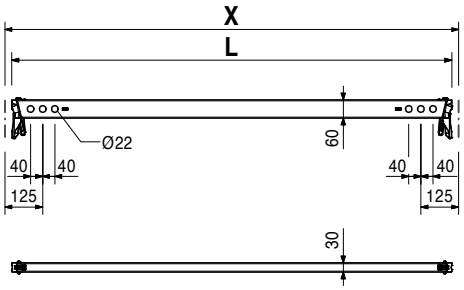


Art no.	Weight [kg]		L [mm]	X [mm]
		Horizontal Ledgers UH-2		
131995	1.390	**Horizontal Ledger UH-2 25**	204	250
133900	1.580	**Horizontal Ledger UH-2 33**	284	330
131998	2.210	**Horizontal Ledger UH-2 50**	454	500
133903	2.720	**Horizontal Ledger UH-2 67**	624	670
132213	2.680	**Horizontal Ledger UH-2 75**	704	750
132007	4.500	**Horizontal Ledger UH-2 125**	1204	1250
132010	4.670	**Horizontal Ledger UH-2 150**	1454	1500
132013	5.330	**Horizontal Ledger UH-2 175**	1704	1750
132016	6.620	**Horizontal Ledger UH-2 200**	1954	2000
132019	6.650	**Horizontal Ledger UH-2 225**	2204	2250
132025	8.210	**Horizontal Ledger UH-2 250**	2454	2500
132022	9.590	**Horizontal Ledger UH-2 300**	2954	3000

Notes

With color coding for length identification.

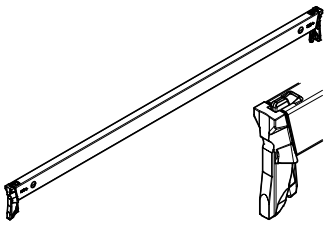


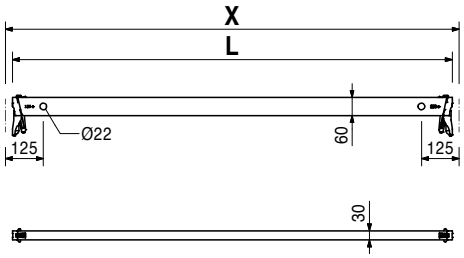


Art no.	Weight [kg]		L [mm]	X [mm]
		Horizontal Ledgers UH Plus		
414613	1.420	**Horizontal Ledger UH 25 Plus**	204	250
414595	2.070	**Horizontal Ledger UH 50 Plus**	454	500
429982	2.520	**Horizontal Ledger UH 67 Plus**	624	670
414629	2.730	**Horizontal Ledger UH 75 Plus**	704	750
414632	4.390	**Horizontal Ledger UH 100 Plus**	954	1000
414638	5.340	**Horizontal Ledger UH 125 Plus**	1204	1250
414641	4.720	**Horizontal Ledger UH 150 Plus**	1454	1500
417032	5.380	**Horizontal Ledger UH 175 Plus**	1704	1750
414645	6.040	**Horizontal Ledger UH 200 Plus**	1954	2000
416356	6.700	**Horizontal Ledger UH 225 Plus**	2204	2250
414648	7.360	**Horizontal Ledger UH 250 Plus**	2454	2500
414651	8.680	**Horizontal Ledger UH 300 Plus**	2954	3000

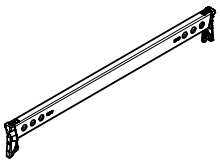
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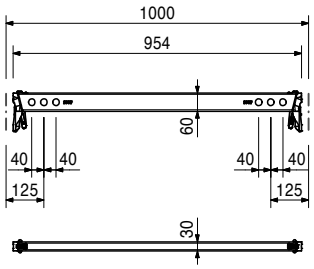
With length marking for easier identification.





Art no.	Weight [kg]	
137910	3.730	**Ledger UH-2 100E weld**



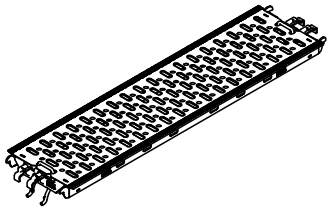


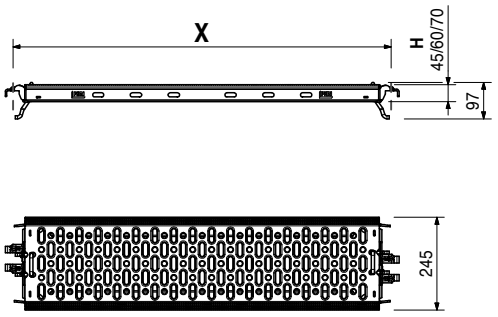
Art no.	Weight [kg]		L [mm]	X [mm]	zul. p [kN/m²]
		Steel Decks UDG-2 25			
138607	2.200	**Steel Deck UDG-2 25x25**	291	250	6
132479	3.190	**Steel Deck UDG-2 25x50**	541	500	6
132483	3.960	**Steel Deck UDG-2 25x67**	711	670	6
132488	4.320	**Steel Deck UDG-2 25x75**	791	750	6
132492	5.450	**Steel Deck UDG-2 25x100**	1041	1000	6
132502	6.590	**Steel Deck UDG-2 25x125**	1291	1250	6
132505	7.730	**Steel Deck UDG-2 25x150**	1541	1500	6
132508	9.340	**Steel Deck UDG-2 25x200**	2041	2000	6
132511	12.900	**Steel Deck UDG-2 25x250**	2541	2500	4.5
132515	15.800	**Steel Deck UDG-2 25x300**	3041	3000	3

Length X: 50 - 150 with H of 45 mm.
Length X: 200 - 250 with H of 60 mm.
Length X: 300 with H of 70 mm.

Notes

Values correspond to EN 12811-1.
With color plugs for length identification.



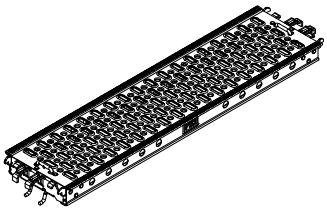


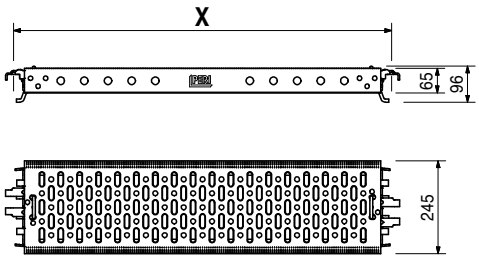
Art no.	Weight [kg]		L [mm]	X [mm]	zul. p [kN/m²]
		Steel Decks UDG 25			
424124	3.880	**Steel Deck UDG 25x50**	541	500	6
432858	4.810	**Steel Deck UDG 25x67**	711	670	6
424121	5.260	**Steel Deck UDG 25x75**	791	750	6
424118	6.630	**Steel Deck UDG 25x100**	1041	1000	6
424115	8.010	**Steel Deck UDG 25x125**	1291	1250	6
424112	9.410	**Steel Deck UDG 25x150**	1541	1500	6
424109	12.200	**Steel Deck UDG 25x200**	2041	2000	6
423771	14.900	**Steel Deck UDG 25x250**	2541	2500	4.5
424915	17.700	**Steel Deck UDG 25x300**	3041	3000	3

Assembly onto Horizontal Ledgers UH.

Notes

Values correspond to EN 12811-1.

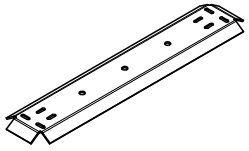


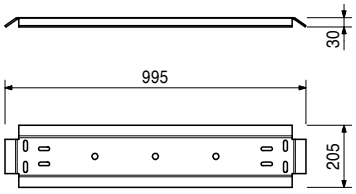


Art no.	Weight [kg]		L [mm]	X [mm]	zul. p [kN/m²]
136927	2.780	**Bottom Sheeting UDB-A 20x100**	995	1000	2

Notes

Load Class 3, 2.0 kN/m².





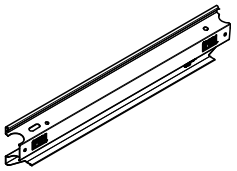
Accessory (not included)

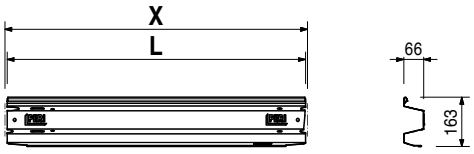
137252	Screw DIN603-M10x60-8.8-ga
137279	Nut ISO4032-M10-8-SW17-ga

Art no.	Weight [kg]		L [mm]	X [mm]
		Toeboards Steel UPY		
132592	0.413	**Toeboard Steel UPY 25**	236	250
110213	0.927	**Toeboard Steel UPY 50**	486	500
129947	1.280	**Toeboard Steel UPY 67**	656	670
110514	1.440	**Toeboard Steel UPY 75**	736	750
110073	1.960	**Toeboard Steel UPY 100**	986	1000
134628	2.480	**Toeboard Steel UPY 125**	1236	1250
110160	2.990	**Toeboard Steel UPY 150**	1486	1500
110176	4.020	**Toeboard Steel UPY 200**	1986	2000
110208	5.060	**Toeboard Steel UPY 250**	2486	2500
110211	6.090	**Toeboard Steel UPY 300**	2986	3000

Notes

Surface, galvanised and painted in yellow.



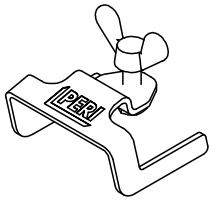


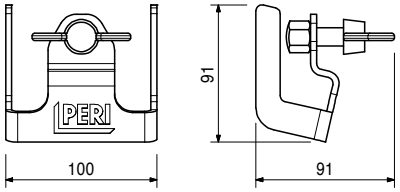
Accessory (not included)

134542 Toeboard Compensation UPY-L

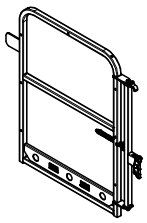
Art no.	Weight [kg]	
134542	0.606	**Toeboard Compensation UPY-L**

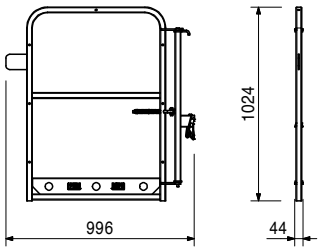
Connecting component for connecting of 2 x Toeboards UPY.





Art no.	Weight [kg]		L [mm]
126675	11.500	**Safety Entry Gate UPS 100**	996





Art no.	Weight [kg]	
134175	0.065	**Poly Cover Coupling UPC-C**

Surface: Yellow fluorescent (RAL 1026).



Art no.	Weight [kg]	
133907	0.015	**Poly Cover Tube UPC-T**

Surface: Yellow fluorescent (RAL 1026).



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