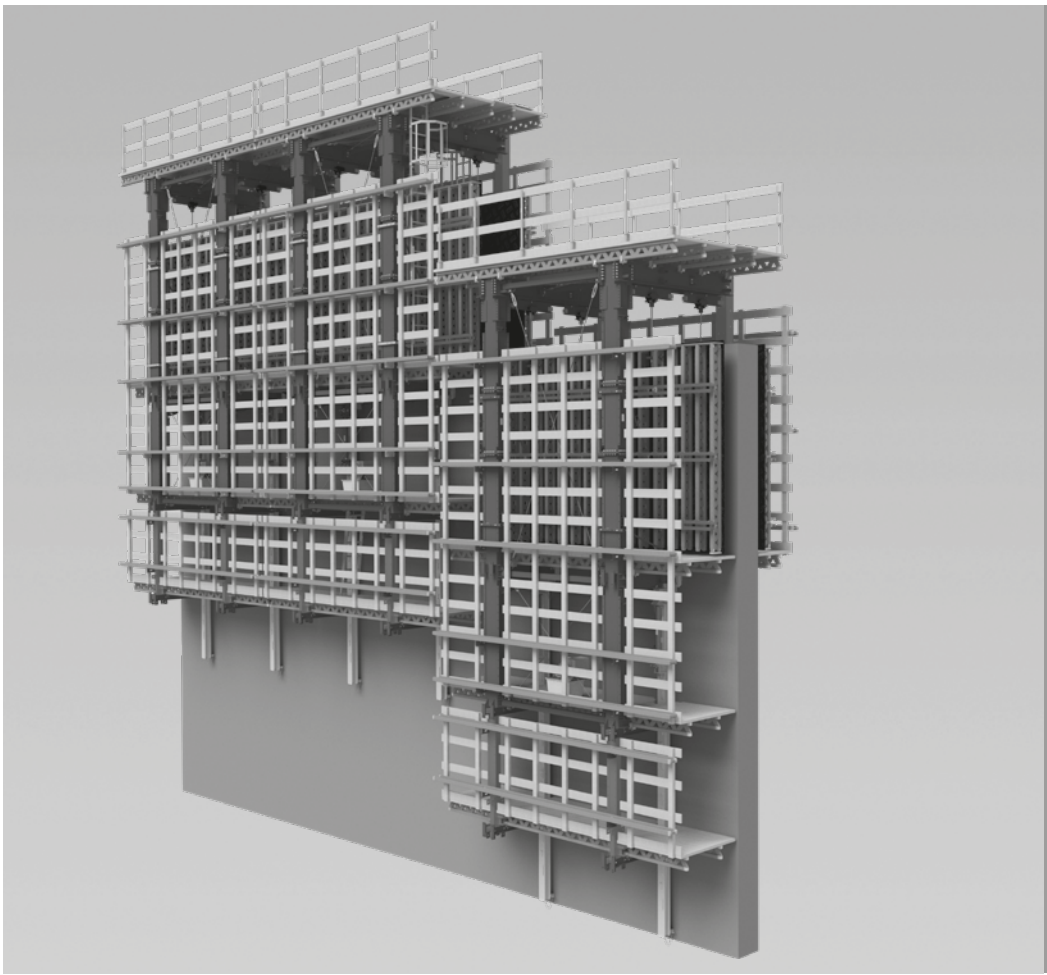
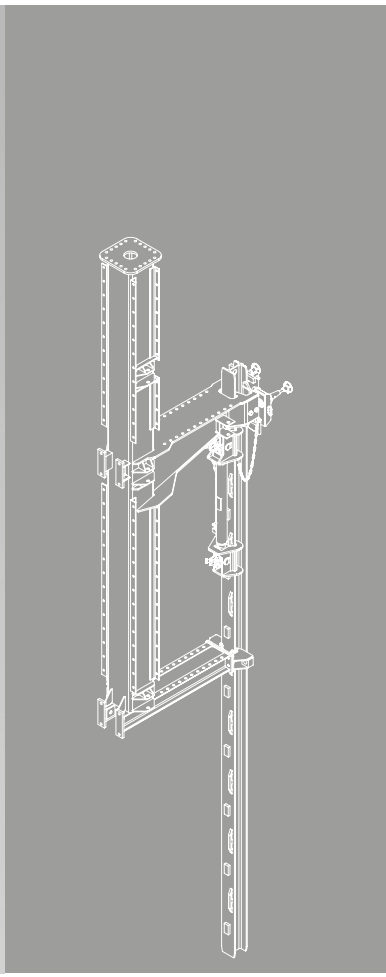
PERI

ACS G
Self-Climbing System

Instructions for Assembly and Use – Standard Configuration – Version 1.0





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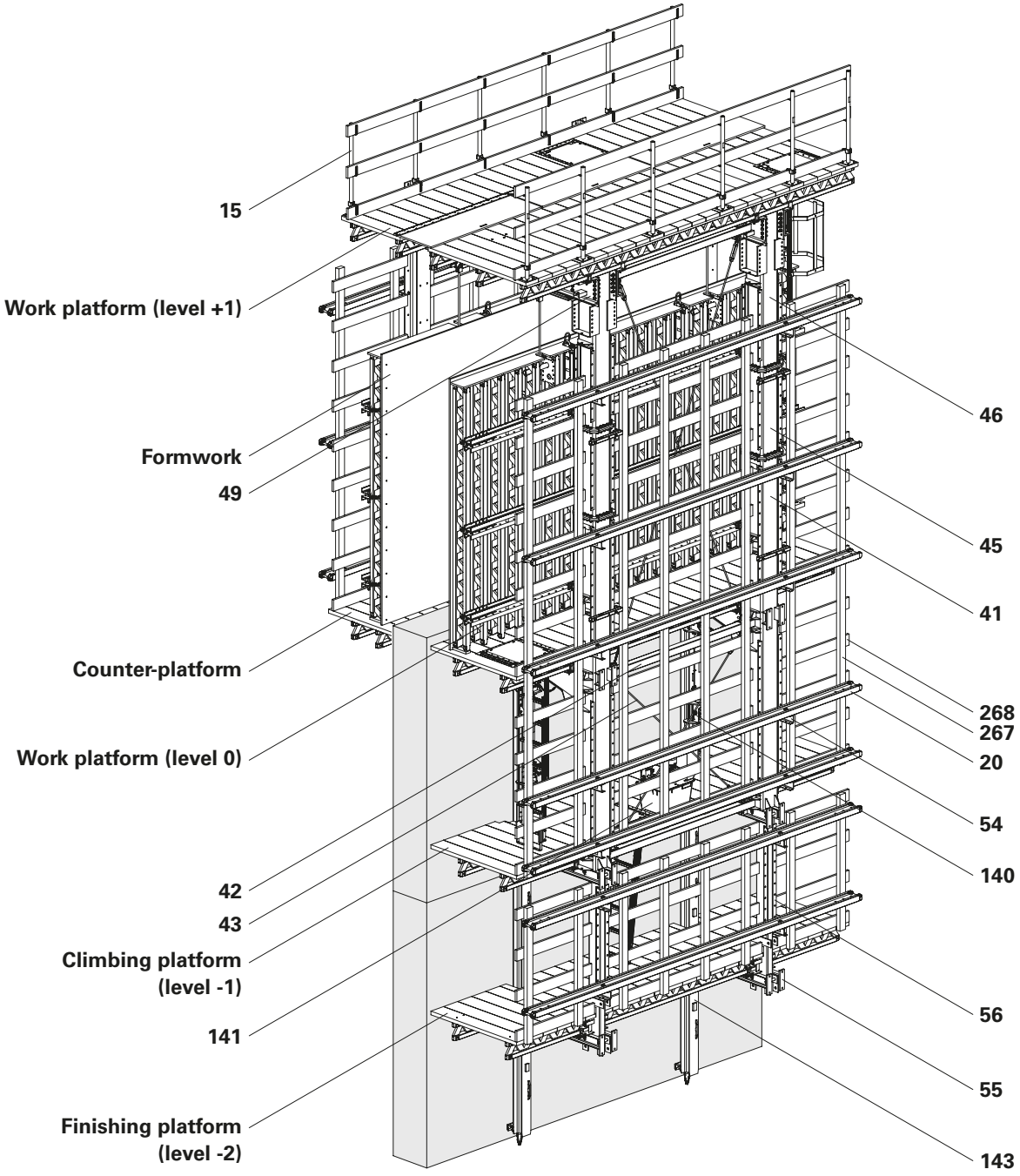
Main components



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Overview

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 which could result in death or serious, irreversible injury, if the safety instructions are not followed.

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

 **Caution**
This sign indicates a hazardous situation which 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 which has possibly not been shown in these detailed illustrations must nevertheless be available.

Target groups

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

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 person
(Construction Site Coordinator)
- is appointed by the contractor,
- must be on site for all work,
- prepares and updates the plan for assembly, modification and dismantling,
- prepares and updates the plan for use of the climbing formwork by the user,
- supervises the assembly, modification and dismantling work (supervisor).

Competent persons qualified to carry out inspections
Due to the specialist knowledge gained from professional training, work experience and recent professional activity, the competent person qualified to carry out inspections has a reliable understanding of safety-related issues and can 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
Climbing 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 climbing system in an understandable form and language.
- Description of the measures for safely assembling, modifying or dismantling the climbing system.
- Naming of the preventive measures to be taken to avoid the risk of persons and objects falling.
- Designation of the safety precautions in the event of changing weather conditions that could adversely affect the safety of the system, as well as the personnel 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 on site when any work is carried out on the climbing system as well as during the climbing procedure.**

* 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

- PERI Structural Design Information for self-climbing systems
- Approvals:
  – Z-21.6-1766
  – Z-21.6-1767
- Instructions for Assembly and Use for VARIO GT 24 Girder Wall Formwork
- Instructions for Use:
  – Crane Splice 24
  – Climbing beam 9 t
  – Pallets and stacking devices
  – PERI Bio Clean
- Assembly Instructions for ACS 100 Climbing Device and Hydraulics
- PERI Design Tables – Formwork and shoring
- User Information for concrete cones with sealing compound-3
- ACS Program Overview
- Manufacturer documentation:
  – Filter Pump CE
  – Makita DDF451
  – Hydraulic unit
- Safety data sheet for hydraulic oil

Product description

Regular assembly
These Instructions for Assembly and Use describe the standard assembly of the Self-Climbing System ACS G as a self-climbing formwork system.
One climbing unit consists of
- one work platform (level +1) including suspended external and internal formwork,
- one work platform (level 0),
- climbing platform and finishing platform,
- Hydraulic Unit ACS,
- Climbing Device ACS 100,
- Climbing Rail ACS,
- one pair of climbing shoes per concreting section.

The system is a bracket-type frame construction and is designed as falsework in accordance with DIN EN 12812 (formerly DIN 4421) to support wall formwork.
A climbing unit consists of 2 console discs with cantilever beams, platform beams and struts, which are connected to the platforms (work platform, climbing platform and finishing platform).
The platforms consist of planking mounted on girders. The work and climbing platforms are mounted on the cantilever beams of the console bracket. The finishing platform is mounted on the finishing platform beam.
The climbing formwork is formed by connecting the suspended formwork and the climbing scaffold. This is then moved as a climbing unit by making use of the hydraulic self-climbing climbing devices.

Features
- Self-Climbing System ACS G with suspended formwork that is open at the top for straightforward reinforcement configuration.
- Stable work platforms carry heavy loads, e.g. for the purposes of material storage.
- The climbing units consisting of formwork and platforms are moved using the integrated hydraulic system.
- Simultaneous climbing of several climbing units ensures fewer leading edges thus resulting in increased workplace safety.
- Crane-independent, fast working operations.
- Large console bracket spacing reduces the need for climbing ties and thus reduces the number of interference points in the wall.
- Finishing platforms facilitate straightforward dismantling of recoverable tie components.
- Loads are safely transferred to the structure via the climbing rail, climbing shoe and climbing ties.
- Weather-independent work procedures. Platforms with optional enclosures protect staff from the elements.
- As a rule, use of these enclosures becomes cost-effective when at least 25 concreting sections are to be carried out.

Technical data
- Formwork height up to 5.1 m.
- Up to four climbing units can be coupled with each hydraulic unit. Two units can be coupled using a special-purpose remote control device.
- Project-specific planning will determine the total weight.
- Temperature range: -20 °C to +45 °C.

Intended use
- Formwork scaffolding in building construction projects.
- To form in-situ concrete walls.
- To provide anti-fall protection for site personnel.
- To protect workers from falling objects.
- To protect workers against the effects of the weather (only with enclosure).

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

Foreseeable misuse
- Transportation of loads and persons.

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.

Only ever use approved and calculated components.

Operation with damaged or incomplete load-carrying equipment is not permissible.

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

- The description of the assembly and operation of the assemblies and components in these Instructions for Assembly and Use is intended as an example.
- For use on the construction site, a project-specific assembly plan is required.
- The project-related assembly plan from PERI is binding for assembly operations.

Cleaning and maintenance instructions

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

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

Spray components of the climbing system that are exposed to concrete contamination with concrete release agent before each use; this makes them 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 climbing system with water immediately after concreting; this avoids any time-consuming and costly cleaning operations.

When used continuously, spray the formlining elements with concrete release agent immediately after striking; then clean by means of a scraper, brush or rubber lip scraper.
Important: do not clean formlining made of plywood with high-pressure equipment. This could result in the formlining being damaged.

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.

When placing bundles of reinforcement bars or other heavy objects on horizontally stored formwork units, suitable support, e.g. square timbers, is to be used: this prevents impressions and damage to the formlining to a large extent.

Internal concrete vibrators should be fitted with rubber caps if possible; as a result, any damage to the formlining is reduced if the vibrator is accidentally inserted between the reinforcement and formlining.

Mechanical components, e.g. climbing rails in the sliding area of the climbing shoes, spindles or gear mechanisms, must be cleaned of dirt or concrete residue before and after use, and then greased with a suitable lubricant.

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.

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.

Wear suitable protective equipment when cleaning components with high water pressure, such as
- safety helmet,
- safety shoes,
- safety gloves,
- safety goggles.

Cross-system

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

General
The contractor must guarantee 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. However, these Instructions for Assembly and Use do not replace the risk assessment!

Observe and comply with the safety instructions and permissible loads.

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

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

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

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

When on slab formwork, scaffolds and working platforms:
- do not jump,
- do not run,
- do not throw anything off them.

Components provided by the contractor must comply with the requirements 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.
- scaffold tubes: galvanised steel tubing with minimum dimensions Ø 48.3 x 3.2 mm according to EN 12811-1:2003 4.2.1.2.
- scaffold 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 if required, if the risk assessment and resulting measures to be implemented are made available.

Nails and wood screws must not protrude.
Only allow other connecting components to protrude to the extent that is necessary. If necessary, mark protruding components or fit them with protective material.

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

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

Assembly, modification and dismantling work
Assembly, modification or dismantling of climbing 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 climbing unit.

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

is available and used as intended.

For work at a higher level, use an approved ladder or platform system, or an assembly scaffold.

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

The contractor must
- provide safe working areas for site personnel, which are to be reached through the provision of safe access ways. Danger zones must be cordoned off and clearly marked.
- 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 climbing systems to be used, is responsible for ensuring that the equipment is in good condition.

If the climbing 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.

Notes for use
- Working areas must remain free of any tripping hazards.
- Do not walk on components and assembly units, always ensure that they are in a secure position.
- Always keep components and assembly units free of dirt, ice and snow. In wet weather conditions in particular, there is an increased risk of slipping.
- Always keep work platforms clean.
- Do not remain in the danger zone created by the moving parts.
- Avoid installing working areas and access routes in danger zones.
- Cordon off danger zones.
- Ensure that the guardrails and edge covers are fully installed.

System-specific

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

Make sure that the guardrails and/or edge covers at building openings and projections are fully installed before accessing the climbing system. Check that the platform deck is fully installed and look out for hazard areas before accessing the climbing system.

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

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

Inspection of the anchoring and associated components must be carried out by the party responsible.

As a result of the relocation procedure, falling edges are formed between the platforms. Such affected areas are to be cordoned off.

Building materials or tools must not be transported as part of the climbing operation. Exceptions to this can be determined through the operational working and assembly instructions.

The transport of persons during the climbing process is strictly prohibited. This does not apply to the operating personnel required for climbing operations.

Working areas at great heights are to be secured by means of appropriate measures to prevent objects from falling down.

The enclosure of the platform or mounting of additional surfaces exposed to the wind changes the degree of stability and must be rechecked. If necessary, additional measures must be implemented.

Use a guide rope to ensure that assembly units suspended from the crane are fully under control when being moved.

Welding and/or abrasive cutting work must not be carried out on the platforms.

Reliable lightning conduction must be ensured by the contractor.

Assembly work
The contractor must ensure that the user has an appropriate and sufficient number of tools, lifting equipment and slings, suitable and sufficient space for assembly and storage as well as adequate crane capacity at his disposal.

During the transportation procedure, only use the specified attachment points for components.

Avoid standing under suspended loads. If work under suspended loads cannot be avoided, come up with suitable safety measures and apply them. Avoid standing between a fixed object and an object that is drawing near.

Secure interim assembly states by means of temporary supports in order to prevent any items from toppling over.

The contractor must make a level assembly area with sufficient load-bearing capacity available.

Unexpected hazards can always arise when assembly work is carried out. Assess the degree of risk in each individual case and, if necessary, take measures to prevent or minimise the risk.

If anti-fall protection cannot be used or has to be removed due to operational reasons, safety equipment must be installed in its place in order to prevent falls from any height.
If the use of anti-fall equipment is deemed to be inappropriate, personal protection equipment (PPE) can be used if suitable fixing points are available.

Site personnel are forbidden to remain in areas below where assembly work is being carried out, unless the danger zone has been provided with sufficient protection against falling, overturned, sliding or rolling objects and masses. Cordon off and clearly mark any danger zones and check that these are in place and complete every time work is commenced.

Do not walk on components and assembly units.
Find a secure standing position next to the components or assembly units. Use assembly scaffolds.

Always keep components and assembly units free of dirt, ice and snow.

Means of 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 as access routes. 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 hatches 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 relocation procedure, ensure that site personnel can still use the emergency escape route.

In case the access hatches are blocked when retracting the formwork, ensure that site personnel can still use the emergency escape route.

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 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.

Components that are likely to become unstable components
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.

Loitering in the tipping range is prohibited. 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.

Climbing procedure
Take into consideration the permissible wind speed limit for the climbing procedure.

Personnel, building materials or tools must not be transported as part of the climbing operation. Exceptions to this can be determined through the operational working and assembly instructions on the basis of a corresponding risk analysis.

The climbing procedure must be monitored by a competent and qualified person.

During the climbing procedure, clamping and crushing hazards are brought about by moving components.

The individuals carrying out the climbing procedure must be fully informed about all possible hazards.

All persons who are not required to carry out the climbing procedure must leave the danger zones.

When climbing with the hydraulic climbing device, specifications regarding the arrangement of the hydraulic hoses must be observed.
If the standard arrangement is not possible, an authorised person must determine a safe and secure alternative.

As a result of the moving procedure, open edges are formed between the platforms as well as at building openings. If work is carried out in this area, site personnel must be protected to prevent them from falling, e.g. with temporary anti-fall protection or by having them wear PPE.

Secure all resulting shearing edges by means of covers. Cordon off danger zones during the climbing procedure.

In case of a malfunction, lower the platform to the next possible position. Personnel are to leave the climbing unit in a safe and secure manner and a person who is authorised to give instructions is to be notified immediately.

The climbing system cannot be mounted for the next concreting section until the required concrete strength has been achieved.

Maintenance and repairs
The components of the climbing system are to be inspected before every use to ensure that they are in flawless condition.
Only flawless materials may be used.
Have the climbing units checked monthly for signs of damage by competent persons who are authorised to give instructions.

Remove any loose concrete residue.

Immediately remove any dirt that impairs functionality.
Remove and replace damaged components.

In case of overload or damage, stop work on and under the platforms, determine the cause, set down and replace damaged components.

If the maximum permissible wind speed has been exceeded, temperatures are outside the area of application or after any extraordinary event has taken place such as a fire or earthquake, the functionality and load-bearing capacity of all safety components as well as the supporting structure must be checked.

Safety components:
- A visual inspection is to be carried out by authorised personnel before each climbing procedure.
- Before each climbing procedure or each assembly procedure, a functionality check is carried out by qualified personnel.
- If parts need to be replaced, only PERI original components may be used.
- Repairs are to be carried out by qualified PERI personnel only.
- In the case of overloading or recurrent damage, stop work operations on and under the platforms, determine the cause and rectify.

Supporting structure:
- A visual inspection is to be carried out by authorised personnel before initial use.
- Only PERI original components are to be used for repairs or replacement.
- In the case of overloading or recurrent damage, stop work operations on and under the platforms, determine the cause and rectify.

Other components:
- Repairs are carried out by authorised personnel and the person authorised to give instructions is to be informed.
- In the event of frequently recurring damage, determine the cause and remedy it.
- Route hydraulic lines and power cables in such a way that they cannot be disconnected or sheared off, and that they do not pose a tripping hazard.

Hydraulic components
Visual inspections are to be carried out by authorised personnel at regular intervals.
Qualified personnel are to carry out a functionality check before every working cycle or before assembly takes place.
If any defects are discovered, repairs are only allowed to be carried out by qualified personnel.

Hydraulic hoses have an expiry date. Observe the manufacturer-specific information.

Do not suspend any objects from the hydraulic hoses.

Observe the manufacturer-specific information regarding inspection and maintenance of the hydraulic unit.

For correct use and disposal of the hydraulic oil, observe the manufacturer-specific instructions.

Thicken spilled hydraulic oil immediately with oil binder and mop it up.

Wear safety goggles and suitable protective gloves when working on the hydraulic system.

PERI recommends the use of an oil pan to collect hydraulic oil from the hydraulic unit.

Always switch off the power to the hydraulic unit and prevent it from being switched on again as soon as the moving procedure involving the climbing system has been completed. This safety measure also applies to the following:
- Assembly.
- Maintenance.
- Repairs.
- Inspections.
- Disassembly.

Approval for use is the responsibility of the operating personnel.

Electrical components

Danger
High electric voltage at the hydraulic unit!
Death or serious injury can result from an electric shock.
⇒ Connection only by qualified personnel.
⇒ Only qualified personnel may carry out work and repairs on the electrical components of the systems.
⇒ Only approved, undamaged and tested connecting cables should be used.

Only operate the hydraulic unit using the current and voltage specified on the type plate.

Do not suspend any objects from the electrical lines.

Storage and transportation

Store and transport components in such a way that no unintentional change in their position is possible. Detach lifting accessories and 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 lifting accessories and gears and only those load-bearing points provided on the component.

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

Pre-assembled assemblies 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.

In the case of hydraulic components, follow the instructions found in the Assembly Instructions for "ACS 100 Climbing Device and Hydraulics".

Component overview and tool list

Pos. no.	Component name	Article no.
	System components	
14	Guardrail Post Holder Multi	126088
15	Guardrail Post PD 8	019040
16	Guardrail Post RCS 226	109720
17	Guardrail Post RCS/SRU 184	114328
18	IPE 200, special length	
20	Girder VT 20	
21	Formwork Girder GT 24	
30	Push-Pull Prop RS	
41	Console Bracket ACS-G	057053
42	Compression strut for Cross Bracing ACS	
43	Diagonal Bracing DW 15 ACS	057083
44	Clamp GT 24 ACS	057038
45	Vertical Post Intermediate 1200 ACS	057067
46	Vertical Post Top 2100 ACS	057016
47	HV-Bolt Set M20x75	057021
48	Gallows 1430 ACS-G	057059
49	Gallows 3325 ACS-G	057058
50	Panel Beam 1110 ACS	057040
51	Counterplate 100x100x10 ACS	057073
52	Trolley HTP	
53	Connector AV ACS	057051
54	Ladder Cage Connection VT 20 ACS	057039
55	Finishing Platform Beam 1365 ACS-G	057057
56	Finishing Platform Vertical 3300 ACS-G	057056
57	Platform Post 5900 IPBL 240 ACS	057032
58	Platform Beam 870-1170 ACS	057072
59	Supporting Spindle ACS	057034
60	Adapter DW 20 ACS	057049
61	Kicker Brace AV	028110
62	Wedge headpiece	028060
63	Clamp VT 20 ACS	057037
64	Bolt 25 x 180	710894
65	Plain Washer 18 DIN 434	710880
	Climbing technology	
140	Climbing Device ACS 100	051738
141	Hydraulic Unit ACS 100	
142	Remote Controller ACS 100	
143	Climbing Rail ACS	
144	Spacer cpl.	051736
145	Ledger ACS	051729
146	Pressure Point Spindle M42 ACS	057054
149	Expander ACS	051737
159	Plain bearing grease	

Pos. no.	Component name	Article no.
	Tie technology	
160	Climbing Shoe-2 I ACS	057875
161	Climbing Shoe II ACS	051726
162	Climbing Shoe IV ACS	057568
163	Tie Tube ACS, right	051727
164	Tie Tube ACS, left	051774
165	Tie Shoe-V ACS	057567
166	Tie Shoe-H ACS	057566
167	Climbing tie	
168	Screw-On Cone M30/DW 26	057257
169	Threaded Anchor Plate DW 26	030870
170	Climbing Cone-2 M30/DW 20	030920
171	Threaded Anchor Plate DW 20	030860
172	Tie Rod DW 20	030700
173	Anchor Positioning Plate M30	029380
174	Hex. Wood Screw DIN 571 6 x 20	029440
175	Positioning Screw M30	029450
176	Leading Tie Plate ACS 399	057869
177	Anchor Positioning Stud M30	026450
178	Wire nail 3 x 80	710312
179	Bolt ISO 4017 M30 x 80-10.9	123843
180	Cyl. Bolt ISO 4762 M30 x 110-10.9	051728
181	Bolt Ø 35 x 525 ACS	057570
182	Bolt Ø 30 x 280 ACS	057569
199	KK Concrete Cone M30-80/52	031653
	Fastener	
200	Torx 6 x 40	024540
201	Torx 6 x 60	024470
202	Torx 6 x 80	024690
203	Squared timber angle bracket 90°	123478
204	Torx 5 x 20	111437
205	Spax 6 x 20	129711
206	Cotter pin 4/1	018060
207	Cotter pin 5/1	022230
208	Bolt ISO 4017 M16 x 110-8.8	710233
209	Washer ISO 7089 200 HV, A 16	711074
210	Nut ISO 7040 M16-8	070890
211	Bolt ISO 4014 M16 x 90-8.8	721729
212	Washer ISO 7094 100 HV, A 16	113349
213	Nut ISO 4032 M16-8	710229
214	Bolt ISO 4017 M16 x 50-8.8	710252
215	Betomax 20	090003
216	Suspended Tube 530 ACS	057050
217	Hex. Nut DW 20, AF 36/60	030580

Component overview and tool list

PERI

Pos. no.	Component name	Article no.
218	Formwork Suspension VARIO GT24, Ø 60	125823
219	Binding wire	
220	Formwork tie	
221	F.H. Bolt DIN 603 M8 x 200 MU	024390
222	F.H. Bolt DIN 603 M8 x 100 MU	710240
225	Washer ISO 7089 200 HV, A 8	780354
226	Washer ISO 7093 200 HV, A 8	710342
227	Torx 6 x 100	024950
232	F.H. Bolt DIN 603 M8 x 60 MU	710326
233	F.H. Bolt DIN 603 M8 x 70 MU	024140
238	F.H. Bolt DIN 603 M8 x 45 MU	710295
239	F.H. Bolt DIN 603 M8 x 65 MU	710709
240	Bolt ISO 4014 M20 x 130-8.8	711078
241	Nut ISO 7042 M20-8	130341
242	Bolt ISO 4014 M8 x 100-8.8	710285
243	Bolt ISO 4014 M20 x 180-8.8	113766
244	Nut ISO 7042 M8-8	
245	Hex. Wood screw DIN 571 8 x 60	024270
246	Fire hose	
251	Spax 6 x 70-SK-TX30	
252	Spax 5 x 40	
	Timber components	
260	Platform beam	
261	Platform decking	
262	Planking	
263	Toe board	
264	Guardrail board	
266	Safety net	
267	Counter-batten	
268	Ladder cage	
269	Shim VT 20	
270	Formlining	
271	Squared timber	
272	Timber wedge	
273	Formwork unit	
274	Squared timber 6/6	
275	Squared timber 8/8	
276	Board 4 x 10 cm	
277	Profiled timber	
278	Hinged hatch	

Pos. no.	Component name	Article no.
	Ladder access	
280	Hatch 55 x 60-2	126431
281	Bolt ISO 4017 M12 x 40-8.8	710224
282	Nut ISO 7040 M12-8	710381
283	Ladder 180/6	051410
284	Ladder 220/6	051420
285	Access Ladder 180/2	103724
286	Adjustable Ladder Base 30	109105
287	Ladder base	051460
288	Ladder hook	103718
289	Ladder Cage 75	104132
290	Ladder Cage 150	051450
291	L-bracket RCS 120 x 120 x 200	110289
292	Washer ISO 7089 200 HV, A 14	725574
293	Bolt ISO 4014 M12 x 80-8.8	710220
294	Washer ISO 7094 100 HV, A 12	113348
295	Nut ISO 4032 M12-8	104526
	Tools/aids	
	Hammer 500 g	
	Open-End Wrench AF 27	
300	Cordless Screwdriver-Set ACS	133372
301	Tool Set ACS	051761
302	Hydraulics service case	115581
303	Crane Splice 24	070760
304	Climbing beam 9 t	127320
	Transport containers	
	Crate Pallets 80 x 120	065068
	Pallets RP-2	103434
	Pallets RP-2	103429
	Hardware Boxes 80 x 120	025660

Tool name	Article no.
Hammer 500 g	
Open-End Wrench AF 27	
Cordless Screwdriver-Set ACS	133372
Tool Set ACS	051761
Hydraulics service case	115581

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:

Scaffold tube coupling	50 Nm
Clamping plate for the slab tie gauge	120 Nm

Climbing unit

The assembly process for the climbing units is determined by the
- Concreting height.
- Type of formwork.
- Type of guardrail.

The climbing unit and climbing rails (**143**) are supported by climbing shoes (**161**), which are mounted on sections of the structure that have already been assembled.
The work platform (level 0), climbing platform (level -1) and the gallows with the formwork system are mounted on the console bracket (**41**). An optional work platform (level +1) can be mounted on the gallows (**49**).
The finishing platform (level -2) is suspended below the climbing platform (level -1).

The hydraulic unit is positioned on the climbing platform (level -1).
The hydraulic unit and climbing devices are operated from the climbing platform (level -1).

The guardrail consists of guardrail boards or is designed as a closed enclosure.

The following variants are execution examples.

Variant 1
With work platform on opposite side
- Gallows 3325 ACS-G with work platform (level +1).
- VARIO formwork on the console bracket side and opposite side.
- Suspended work platform (level 0) on the opposite side.
- Concreting height (h_B) = 3.6 m.

(Fig. A1.01)

Main components

15 Guardrail Post PD 8
20 Girder VT 20
41 Console Bracket ACS-G
45 Vertical Post Intermediate 1200 ACS
46 Vertical Post Top 2100 ACS
47 HV-Bolt Set M20x75
49 Gallows 3325 ACS-G
50 Panel Beam 1110 ACS
52 Trolley HTP
53 Connector AV ACS
54 Ladder Cage Connection VT 20 ACS
55 Finishing Platform Beam 1365 ACS-G
56 Finishing Platform Vertical 3300 ACS-G
57 Platform Post 5900 IPBL 240 ACS
58 Platform Beam 870-1170 ACS
59 Supporting Spindle ACS
61 Kicker Brace AV
140 Climbing Device ACS 100
141 Hydraulic Unit ACS 100
143 Climbing Rail ACS
144 Spacer, cpl.
146 Pressure Point Spindle M42 ACS
161 Climbing Shoe-II ACS
164 Tie Tube ACS, left
167 Climbing tie
267 Counter-batten
268 Ladder cage
269 Shim VT 20
273 Formwork unit
278 Hinged hatch

A1 System overview

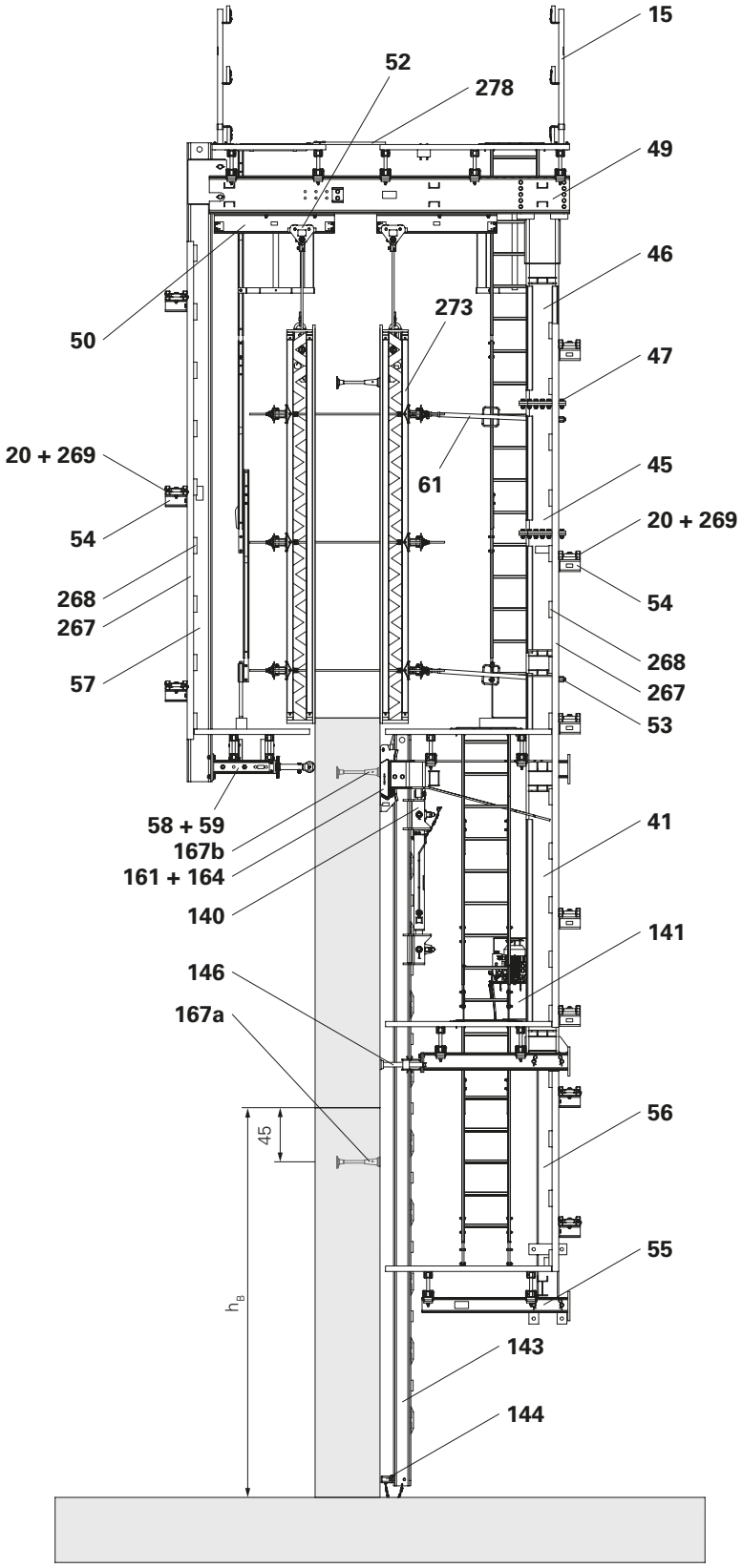


Fig. A1.01

Variant 2
With formwork on the opposite side

- Gallows 3325 ACS-G with work platform (level +1).
- VARIO formwork on the console bracket side and opposite side.
- Concreting height (h_B) = 3.6 m.

(Fig. A1.02)

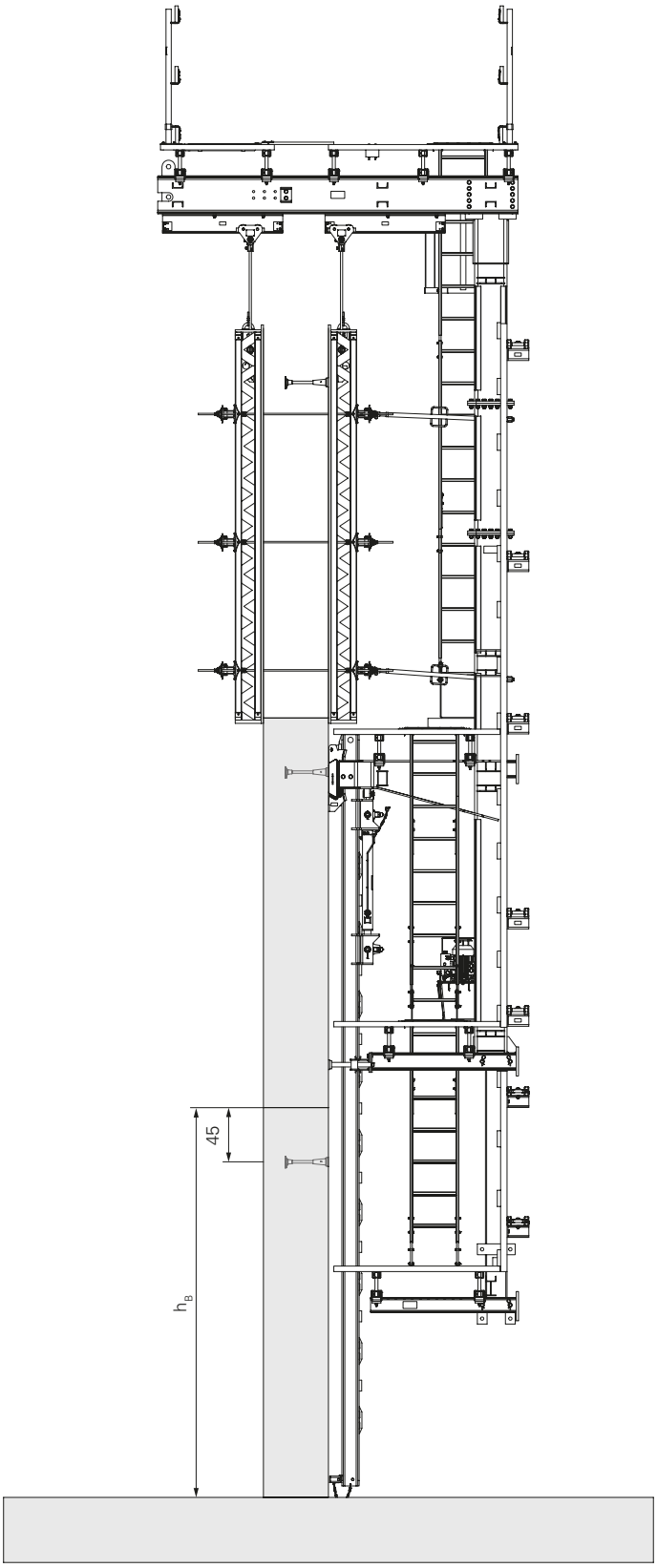


Fig. A1.02

Variant 3
Without formwork on the opposite side

- Gallows 1430 ACS-G with work platform (level +1).
- VARIO formwork on the console bracket side.
- Concreting height (h_B) = 3.6 m.

(Fig. A1.03)

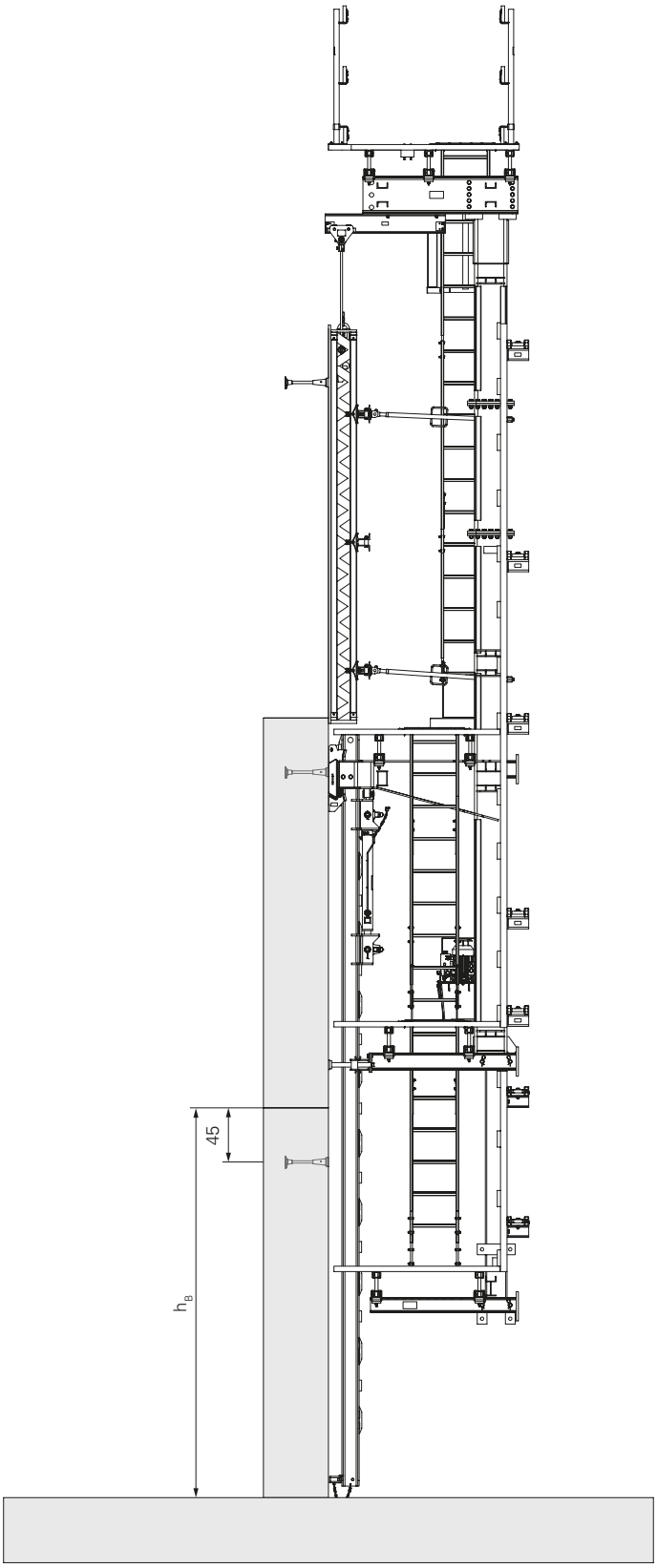


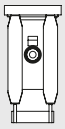
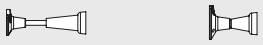
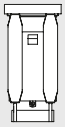
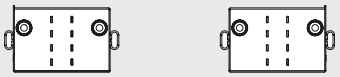
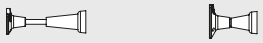
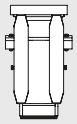
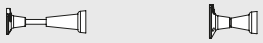
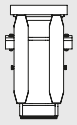
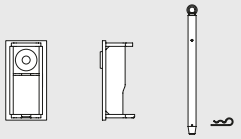
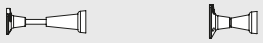
Fig. A1.03

Climbing shoes

Purpose of the climbing shoe

- Guides and supports the Climbing Rail ACS.
- The climbing unit is attached to the climbing shoes.
- It takes vertical loads and transfers them into the structure by way of the anchoring.
- It takes horizontal loads and transfers them into the structure by way of the anchoring.

The respective application determines the type of climbing shoes used.

Climbing shoe – tie components arrangement		
Climbing shoe	Tie components	Climbing tie[2)]
Climbing Shoe-2 I ACS 		Climbing cone or screw-on cone 
Climbing Shoe II ACS 	Tie Tube ACS, left + right[1)] 	Climbing cone or screw-on cone 
Climbing Shoe IV ACS 	Tie Shoe-H ACS 	Climbing cone or screw-on cone 
Climbing Shoe IV ACS 	Tie Shoe-V ACS 	Climbing cone or screw-on cone 

[1)] Always use Tie Tube ACS left + right in pairs.
[2)] For the screws for fastening the components to the climbing tie, see table A3.03.

Tab. A2.01

Climbing Shoe-2 I ACS
The Climbing Shoe-2 I ACS is screwed onto the climbing tie directly.
(Fig. A2.01)

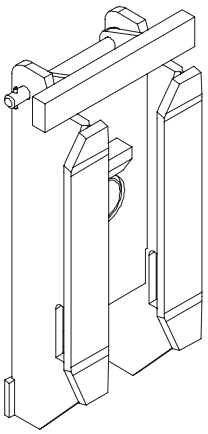


Fig. A2.01

Climbing Shoe II ACS
The Climbing Shoe II ACS is designed for heavier loads. It is pushed onto the Tie Tube ACS. This facilitates axial compensation.
(Fig. A2.02 + A2.03)

!

Always use Tie Tube ACS right and Tie Tube ACS left in pairs. This stops the Climbing Shoe II ACS from sliding out of the Tie Tube ACS.
(Fig. A2.03)

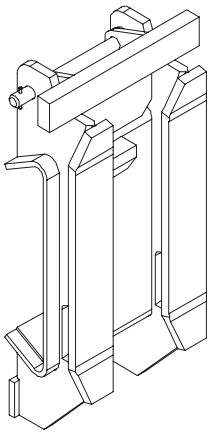


Fig. A2.02

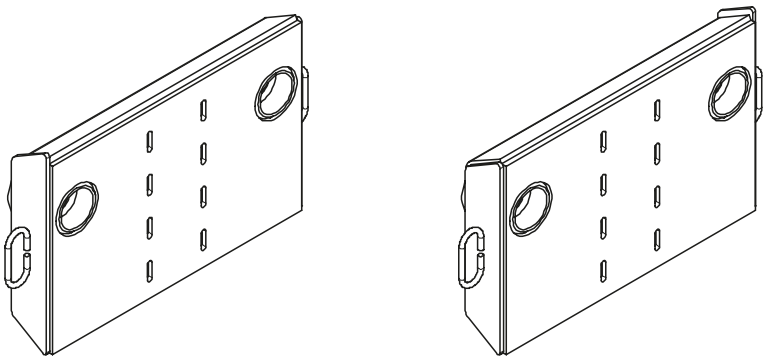


Fig. A2.03

Climbing Shoe IV ACS
Climbing Shoe IV ACS, in combination with Tie Shoe-H ACS, allows the climbing shoe to be tilted by +7°. This makes it possible to climb over a wall offset if the structure has wall offsets. (Fig. A2.04)

For further information, see section "Climbing in the case of wall offsets" on page 132.

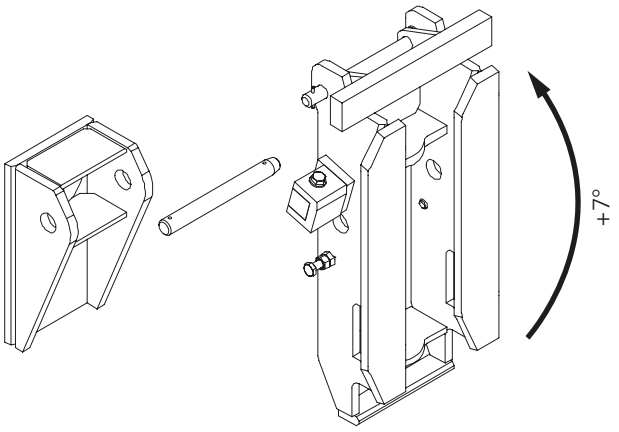


Fig. A2.04

Climbing Shoe IV ACS, in combination with Tie Shoe-V ACS, allows the climbing shoe to be rotated by ±15°. This makes it possible to climb structures with a rounded geometry. (Fig. A2.05)

For further information on rounded structures, see section "Round building shape" on page 139.

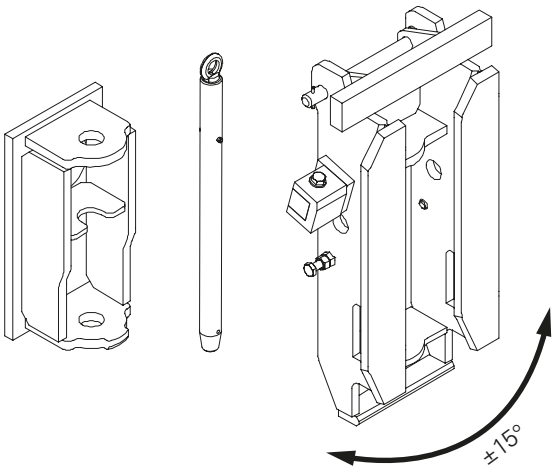


Fig. A2.05

Climbing device and hydraulics

The components of the climbing device and the hydraulics are described in detail in the Assembly Instructions for the "ACS 100 Climbing Device and Hydraulics". These include:

- Climbing Device ACS 100
- Hydraulic Unit ACS 100
- Remote Controller ACS 100
- Climbing Rail ACS
- Critical climbing heights

Only use Instructions for Assembly and Use in conjunction with the Assembly Instructions for the "ACS 100 Climbing Device and Hydraulics".

General information

The anchoring is used to fasten the climbing shoe. The climbing shoe used, the forces that occur and the respective wall thickness determine the tie system that is used.

Climbing tie

The climbing tie transfers horizontal and vertical forces into the structure. There are two variants of climbing ties. One climbing tie consists of:

- Screw-on Cone M30/DW 26 (**168**)
  Threaded Anchor Plate DW 26 (**169**)
  (Fig. A3.01)

or

- Climbing Cone-2 M30/DW 20 (**170**)
  Threaded Anchor Plate DW 20 (**171**)
  Tie Rod DW 20 (**172**)
  (Fig. A3.02)

The anchoring is selected according to the project-specific requirements.

The climbing tie is also referred to as a leading tie during the assembly process for the next concreting section.

Influencing factors
Figure A3.03 + A3.05 + A3.06 and table A3.01 provide an overview of the influencing factors.

Climbing tie variants

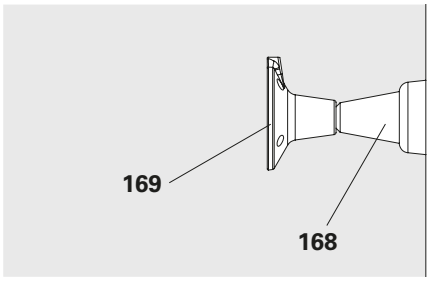


Fig. A3.01

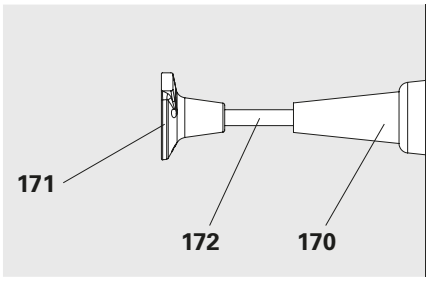


Fig. A3.02

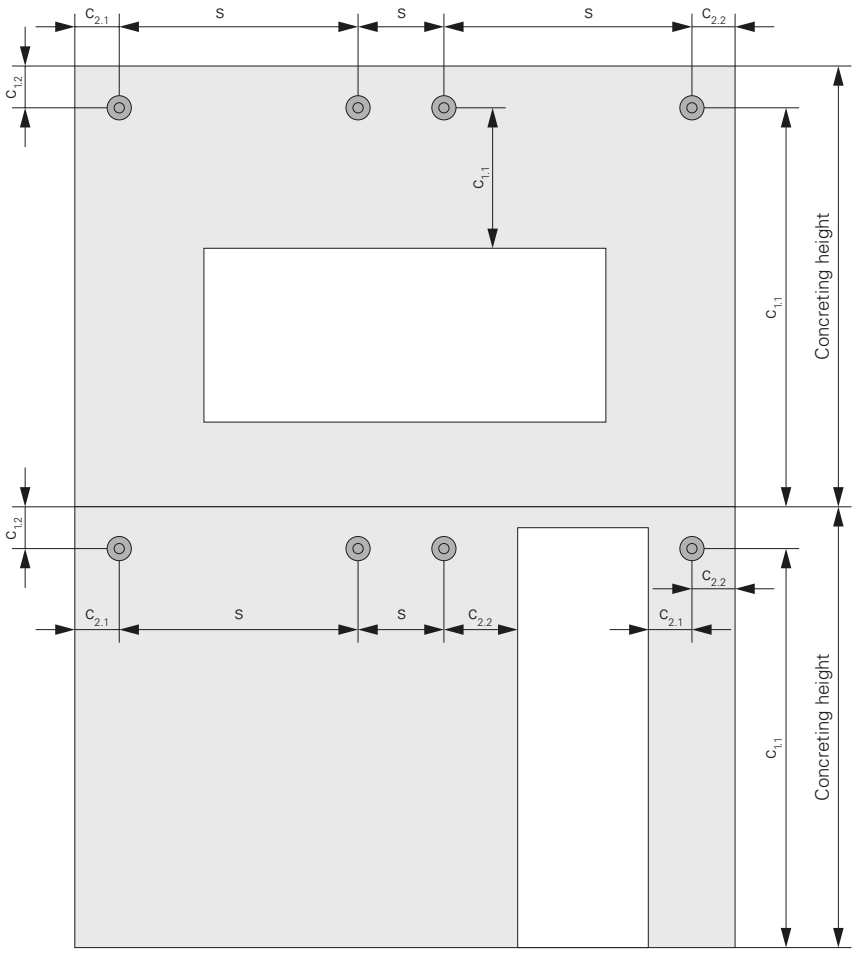


Fig. A3.03

Overview of the influencing factors	
Wall thickness	D
Anchoring depth	h
Edge distance to the upper concrete joint	$c_{1.2}$
Edge distance to the openings below	$c_{1.1}$
Distance to side edge	$c_{2.1}$, $c_{2.2}$
Centre distance between two climbing ties	s
Concreting height	h_B

Tab. A3.01

Safety instructions

Danger

If the anchoring is installed or operated incorrectly, the climbing unit may collapse!
A collapsing climbing unit can cause serious injuries or even death.

⇒ Each climbing unit must have its own anchoring.
⇒ Loosening or removing the anchoring must only be possible from the load transfer side.
⇒ Do not install two cones against each other. (Fig. A3.04)
⇒ For minimum edge distances c, minimum wall thickness D and other design requirements, refer to the separate PERI product information and the project-specific planning and do not go below these values. (Fig. A3.06)
⇒ Do not apply a load to the anchoring until the anchor base has sufficient load-bearing capacity.

- If $h_1 + h_2 > D$:
  Use an offset arrangement for the anchoring. (Fig. A3.05 + A3.06)
- Use an anchoring variant that meets the structural or design requirements.
- Observe the following component approvals:
  – Z-21.6-1766
  – Z-21.6-1767

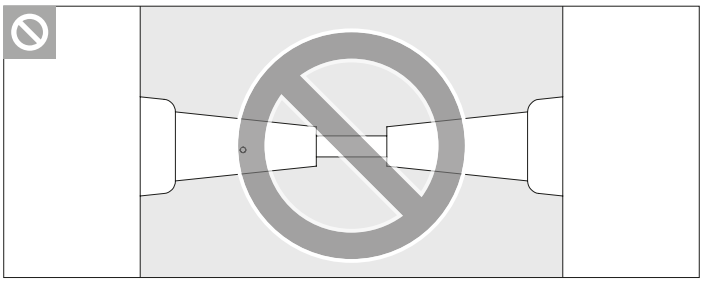


Fig. A3.04

Top view

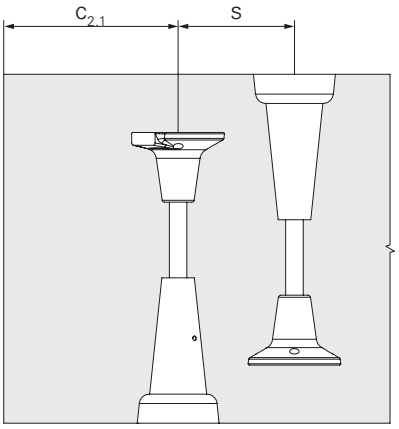


Fig. A3.05

Lateral view

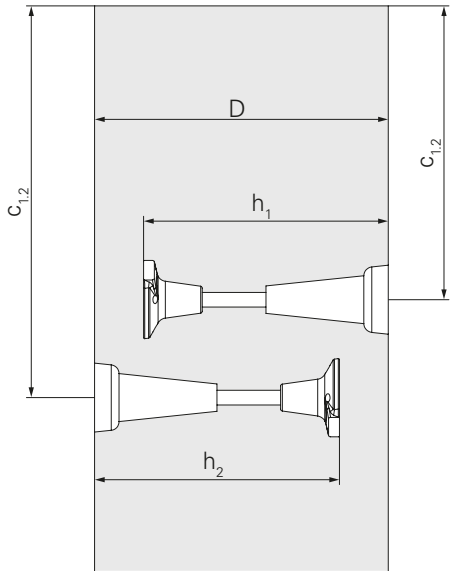


Fig. A3.06

Assembly information

The tie systems are installed on the inside of the formlining. Tables A3.02 and A3.03 show the permissible combinations of tie systems and their fixings.

- Damaged tie components must not be used.
- Always screw the Threaded Anchor Plate DW 26 onto the Screw-On Cone M30/DW 26 as far as it will go.
- Always screw the Tie Rod DW 20 into the Threaded Anchor Plate DW 20 and the Climbing Cone-2 M30/DW 20 as far as it will go.

The threaded anchor plate and tie rod remain in the wall after the concreting process. They are lost tie components. The cones are unscrewed after concreting and can be used again once they have been inspected.

Carefully grease the surfaces of the climbing cone that come into contact with concrete and the internal thread for the tie rod with suitable grease. This simplifies the process of removing the recoverable climbing cones.

Inspecting the anchoring

Checking the tie components

- Tie rod:
  - Length
  - Weld spatter
  - Bending
- Climbing cone/screw-on cone:
  - Rough-running threads
  - Deformed cone cup
  - Rough or scratched cone surface

Checking the assembly work

- Height
- Spacings s
- Anchoring depth h
- Alignment according to specifications

Verifying the tie forces

Verification of the transfer of the horizontal and vertical reaction forces into the structure and down to the subsoil must be carried out by the client.

Acceptance protocol

- Check that the anchoring has been installed correctly (position and anchoring depth in accordance with planning specifications) prior to concreting, and log this.
- If cone types with differing installation lengths are used, each anchoring point must be checked and logged prior to concreting.
- Keep records for concrete strength verification.
- The acceptance protocol must be available on the construction site throughout the construction process and must be presented upon request.

Anchoring and reinforcement measures can be checked at the same time.

Tie systems in general

Permissible combination of tie systems

Climbing shoe	Tie Tube ACS[1)]	Climbing tie		Tie rod		Threaded Anchor Plate	
	Tie Tube ACS right and Tie Tube ACS left	Climbing Cone-2 M30/DW 20	Screw-On Cone M30/DW 26	DW 20	B 20	DW 20	DW 26
Climbing Shoe-2 I ACS		x		x	(x)	x	
			x				x
Climbing Shoe II ACS	x	x		x	(x)	x	
	x		x				x
Climbing Shoe IV ACS Tie Shoe-H ACS Ø 30 x 280 ACS		x		x	(x)	x	
			x				x
Climbing Shoe IV ACS Tie Shoe-V ACS Ø 35 x 525 ACS		x		x	(x)	x	
			x				x

Default: x

Optional: (x)

[1)] Always use tie tubes in pairs.

Tab. A3.02

Permissible combination of leading tie plate to formwork fixing

Climbing shoe	Fixing for leading tie plate		
	Leading Tie Plate ACS 399	Anchor Positioning Plate M30 and Positioning Screw M30	Anchor Positioning Stud M30
Climbing Shoe-2 I ACS		x	(x)[2)]
Climbing Shoe II ACS	x	x	
Climbing Shoe IV ACS		x	(x)[2)]

Default: x

Optional: (x)

[2)] Ideally, secure the climbing cone with Anchor Positioning Plate M30.

Tab. A3.03

Fixing for tie components on climbing ties

Component	Permitted screw type	Tightening torque
Climbing Shoe-2 I ACS	Cyl. Bolt ISO 4762 M30 x 110-10.9	Screw the component onto the climbing tie without play.
Tie Tube ACS	Cyl. Bolt ISO 4762 M30 x 110-10.9	
Tie Shoe ACS	Bolt ISO 4017 M30 x 80-10.9	

Tab. A3.04

Tie rod

PERI supplies the tie rod cut to length. The tie rod is delivered to the construction site together with the threaded anchor plates.

The length L of the tie rod is calculated for Climbing Shoe-2 I according to the following formula:
$L = h_{nom} - 77$ mm

The length L of the tie rod is calculated for Climbing Shoe II according to the following formula:
$L = h_{nom} - 85$ mm

Tolerance: 0 to +5 mm
(Fig. A3.07 + A3.08)

Leading tie for Climbing Shoe-2 I

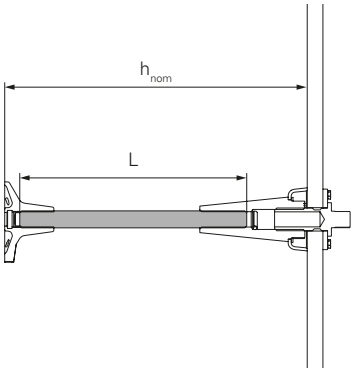


Fig. A3.07

Leading tie for Climbing Shoe II

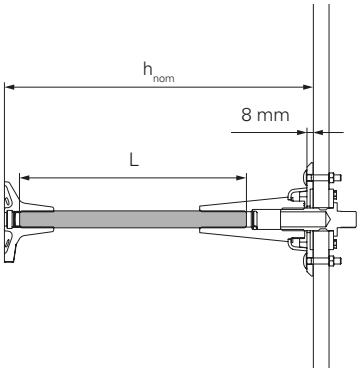


Fig. A3.08

Tie system for Climbing Shoe-2 I

Components

160 Climbing Shoe-2 I ACS
170 Climbing Cone-2 M30/DW 20
171 Threaded Anchor Plate DW 20
172 Tie Rod DW 20
173 Anchor Positioning Plate M30
174 Hex. Wood Screw DIN 571 6 x 20
175 Positioning Screw M30
180 Cyl. Bolt ISO 4762 M30 x 110-10.9
270 Formlining

Following assembly, the components 170 – 172 form the climbing tie (**167**).

Fitting the climbing tie

1. Align the Anchor Positioning Plate M30 (**173**) on the formlining (**270**) and screw it into place with Hex. Wood Screw DIN 571 6 x 20 (**174**).
2. Screw the Tie Rod DW 20 (**172**) into the Climbing Cone-2 M30/ DW 20 (**170**) as far as it will go.
3. Screw the Threaded Anchor Plate DW 20 (**171**) onto the Tie Rod DW 20 (**172**) as far as it will go.
4. Screw the climbing ties onto the formlining with the Positioning Screw M30 (**175**).

(Fig. A3.09)

Checking the assembly work

- Height
- Spacing
- Anchoring depth h
- Alignment according to specifications
- Climbing cone greased

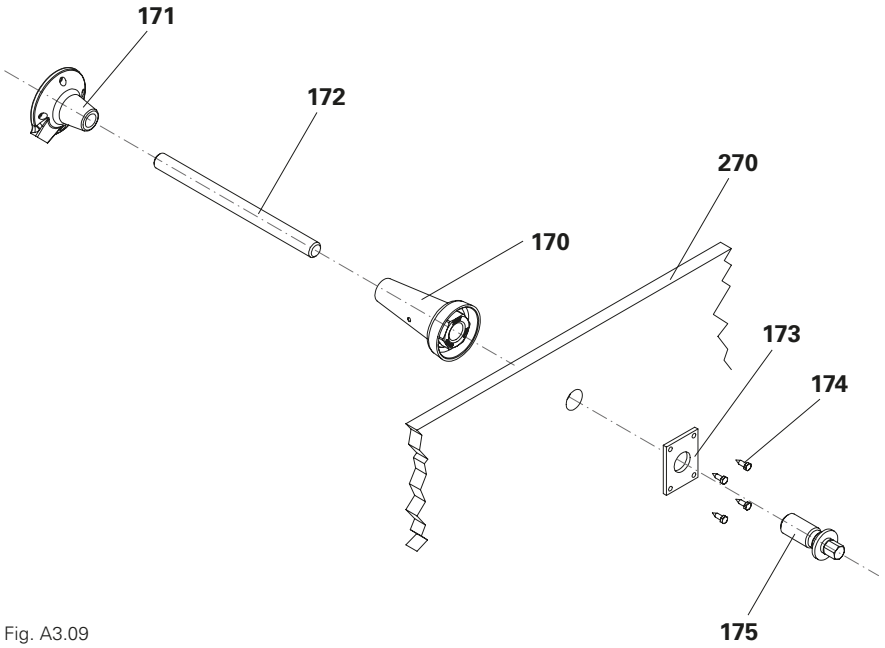


Fig. A3.09

Fitting the climbing shoe

1. Screw Climbing Shoe-2 I ACS (**160**) onto the climbing tie (**167**) using cyl. bolt ISO 4762 M30 x 110-10.9 (**180**).

(Fig. A3.10)

- The bearing surface for the climbing shoe must be level.
- The climbing shoe must lie flush with the concrete wall.

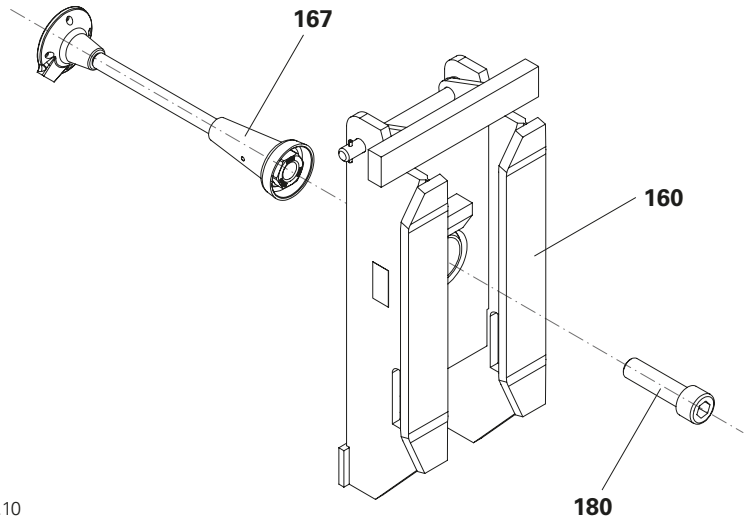


Fig. A3.10

Tie system for Climbing Shoe II

Components

161 Climbing Shoe-II ACS
163 Tie Tube ACS, right
164 Tie Tube ACS, left
170 Climbing Cone-2 M30/DW 20
171 Threaded Anchor Plate DW 20
172 Tie Rod DW 20
173 Anchor Positioning Plate M30
174 Hex. Wood Screw DIN 571 6 x 20
175 Positioning Screw M30
176 Leading Tie Plate ACS 399
180 Cyl. bolt ISO 4762 M30 x 110-10.9
201 Torx 6 x 60
238 F.H. Bolt DIN 603 M8 x 45 MU
270 Formlining

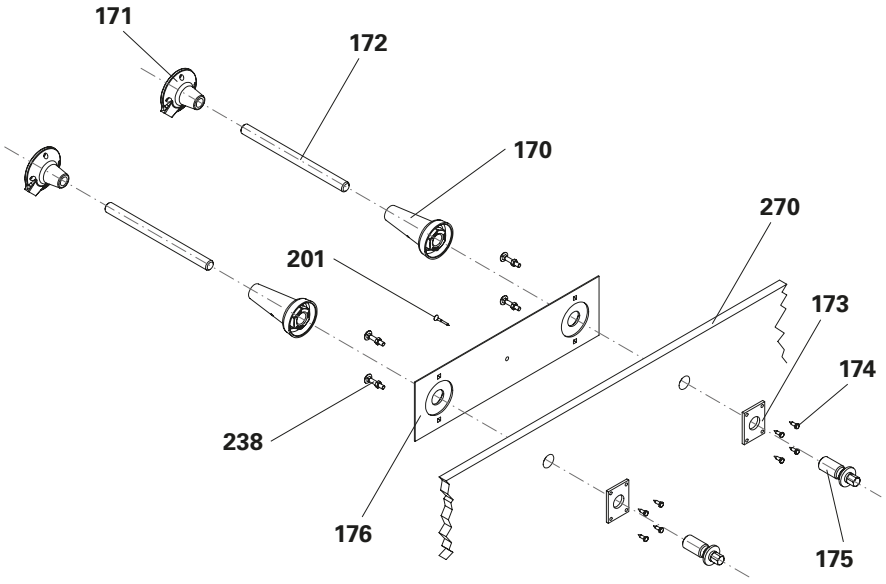


Fig. A3.11

The process for fitting the Leading Tie Plate ACS 399 (**176**) and Anchor Positioning Plate M30 (**173**) is described in the section "Preparing the formwork" on page 102.

Following assembly, the components 170 – 172 form the climbing tie (**167**).

Fitting the climbing tie

1. Screw the Tie Rod DW 20 (**172**) into the Climbing Cone-2 M30/ DW 20 (**170**) as far as it will go.
2. Screw the Threaded Anchor Plate DW 20 (**171**) onto the Tie Rod DW 20 (**172**) as far as it will go.
3. Screw the climbing ties onto the formlining with the Positioning Screw M30 (**175**).

(Fig. A3.11)

Checking the assembly work

- Height
- Spacing
- Anchoring depth h
- Alignment according to specifications
- Climbing cone greased

Fitting the climbing shoe

1. Screw tie tubes (**163**) and (**164**) onto the climbing tie (**167**) using cyl. bolt ISO 4762 M30 x 110-10.9 (**180**).
2. Push Climbing Shoe II ACS (**161**) onto tie tube (**163**) or (**164**), align and fix with the clamping screw (**161.1**).

(Fig. A3.12 + A3.13)

- The bearing surface for the tie tube must be level.
- The tie tube must lie flush with the concrete wall.
- The end plates (**163.1 + 164.1**) of the two tie tubes (**163 + 164**) must point towards or away from each other. (Fig. A3.14)

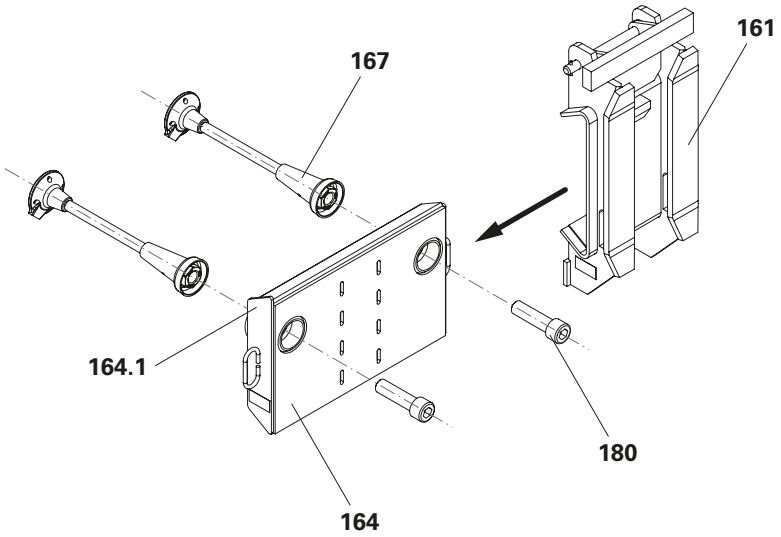


Fig. A3.12

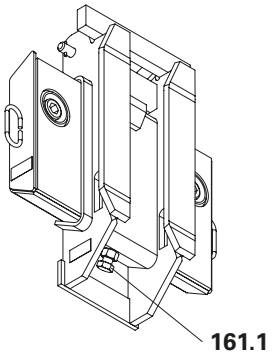


Fig. A3.13

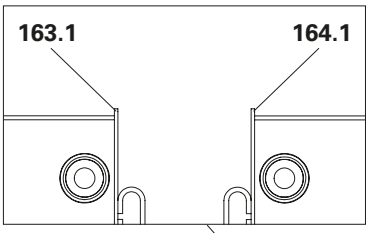


Fig. A3.14a

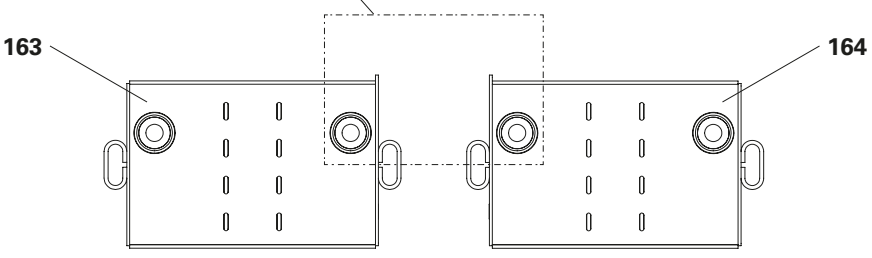


Fig. A3.14

Tie system for rotatable Climbing Shoe IV

Components

162 Climbing Shoe IV ACS
165 Tie Shoe-V ACS
170 Climbing Cone-2 M30/DW 20
171 Threaded Anchor Plate DW 20
172 Tie Rod DW 20
173 Anchor Positioning Plate M30
174 Hex. Wood Screw DIN 571 6 x 20
175 Positioning Screw M30
179 Bolt ISO 4017 M30 x 80-10.9
181 Bolt Ø 35 x 525 ACS
207 Cotter pin 5/1
270 Formlining

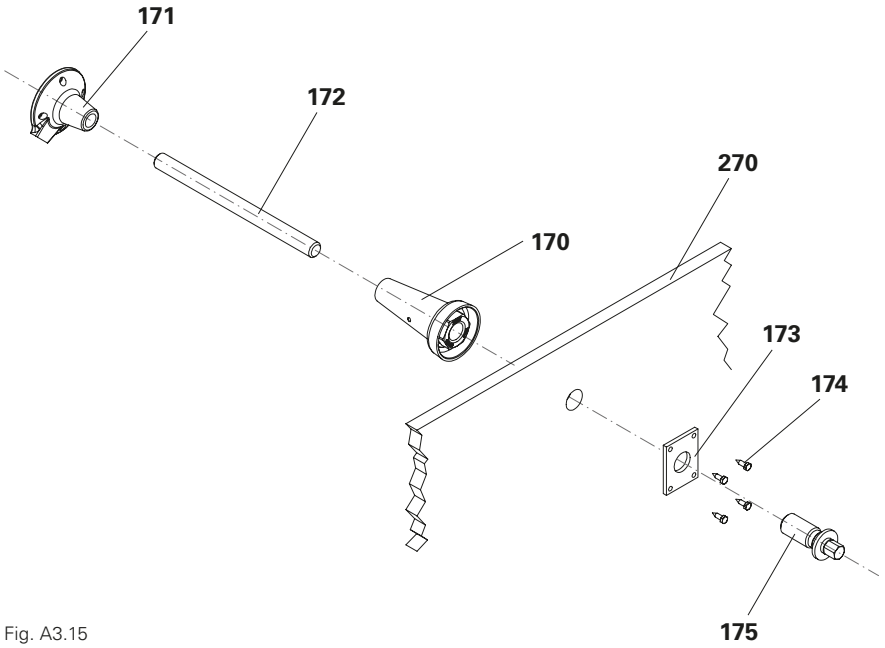


Fig. A3.15

Following assembly, the components 170 – 172 form the climbing tie (**167**).

Fitting the climbing tie

1. Align the Anchor Positioning Plate M30 (**173**) on the formlining (**270**) and screw it into place with Hex. Wood Screw DIN 571 6 x 20 (**174**).
2. Screw the Tie Rod DW 20 (**172**) into the Climbing Cone-2 M30/ DW 20 (**170**) as far as it will go.
3. Screw the Threaded Anchor Plate DW 20 (**171**) onto the Tie Rod DW 20 (**172**) as far as it will go.
4. Screw the climbing ties onto the formlining with the Positioning Screw M30 (**175**).

(Fig. A3.15)

Checking the assembly work

- Height
- Spacing
- Anchoring depth h
- Alignment according to specifications
- Climbing cone greased

Fitting the climbing shoe

1. Screw Tie Shoe V ACS (**165**) onto the climbing tie (**167**) using bolt ISO 4017 M30 x 80-10.9 (**179**).
2. Push Climbing Shoe IV ACS (**162**) onto Tie Shoe-V ACS (**165**).
3. Fasten with bolt Ø 35 x 525 ACS (**181**) and secure with cotter pins 5/1 (**207**).

(Fig. A3.16)

- The bearing surface for the tie shoe must be level.
- The tie shoe must lie flush with the concrete wall.

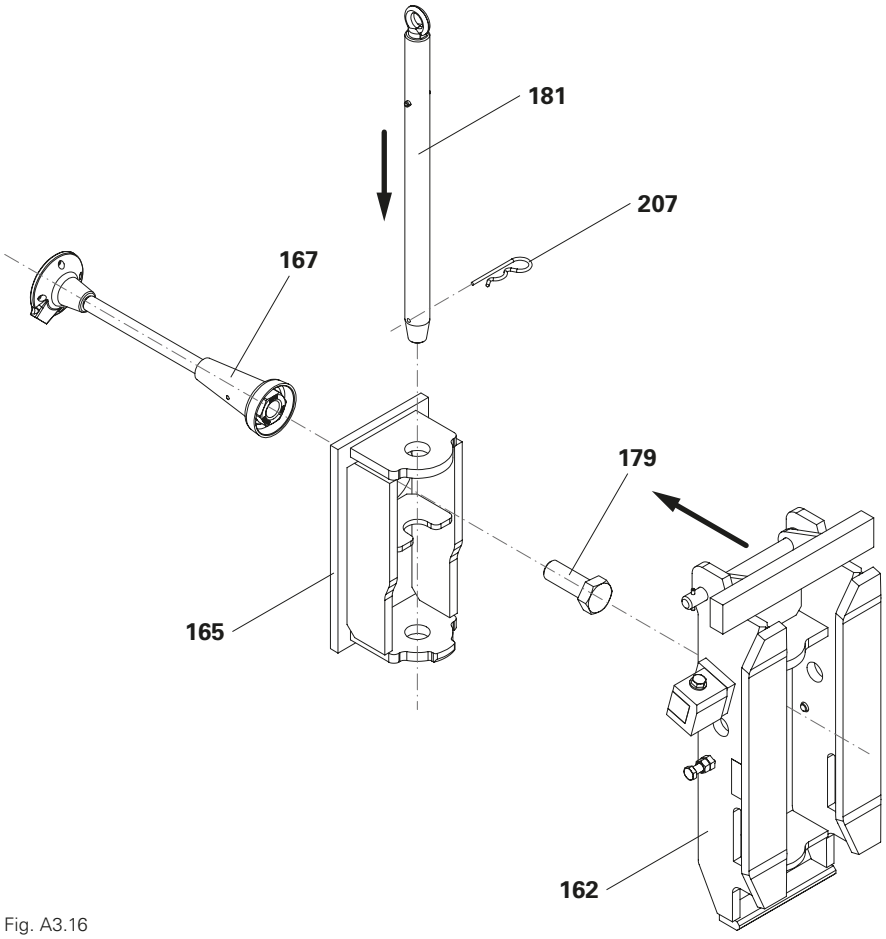


Fig. A3.16

Tie system for pivotable Climbing Shoe IV

Components

162 Climbing Shoe IV ACS
166 Tie Shoe-H ACS
170 Climbing Cone-2 M30/DW 20
171 Threaded Anchor Plate DW 20
172 Tie Rod DW 20
173 Anchor Positioning Plate M30
174 Hex. Wood Screw DIN 571 6 x 20
175 Positioning Screw M30
179 Bolt ISO 4017 M30 x 80-10.9
182 Bolt Ø 30 x 280 ACS
207 Cotter pin 5/1
270 Formlining

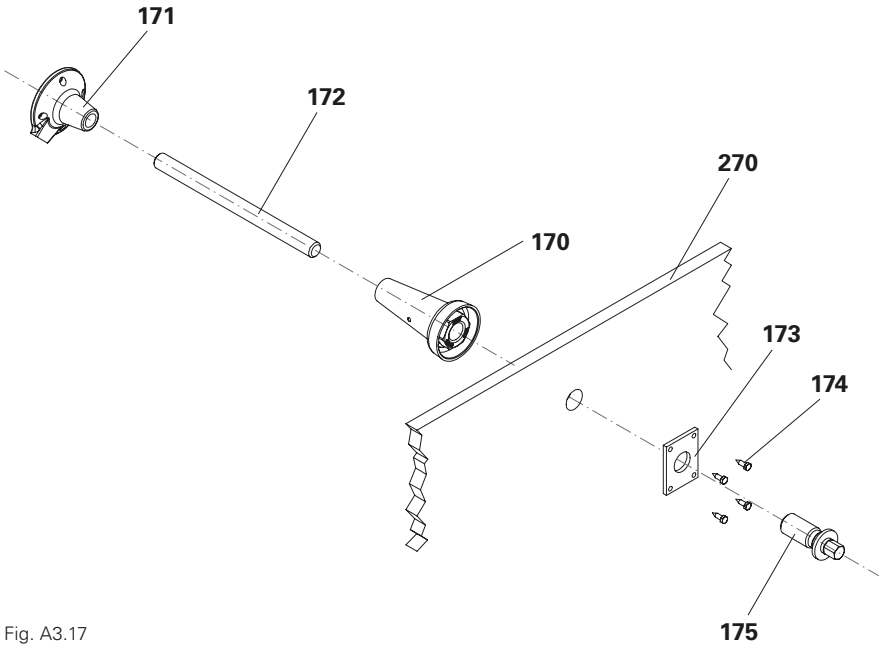


Fig. A3.17

Following assembly, the components 170 – 172 form the climbing tie (**167**).

Fitting the climbing tie

1. Align the Anchor Positioning Plate M30 (**173**) on the formlining (**270**) and screw it into place with Hex. Wood Screw DIN 571 6 x 20 (**174**).
2. Screw the Tie Rod DW 20 (**172**) into the Climbing Cone-2 M30/ DW 20 (**170**) as far as it will go.
3. Screw the Threaded Anchor Plate DW 20 (**171**) onto the Tie Rod DW 20 (**172**) as far as it will go.
4. Screw the climbing ties onto the formlining with the Positioning Screw M30 (**175**).

(Fig. A3.17)

Checking the assembly work

- Height
- Spacing
- Anchoring depth h
- Alignment according to specifications
- Climbing cone greased

Fitting the climbing shoe

1. Screw Tie Shoe H ACS (**166**) onto the climbing tie (**167**) using bolt ISO 4017 M30 x 80-10.9 (**179**).
2. Push Climbing Shoe IV ACS (**162**) onto Tie Shoe-H ACS (**166**).
3. Fasten with bolt Ø 30 x 280 ACS (**182**) and secure with two cotter pins 5/1 (**207**).

(Fig. A3.18)

- The bearing surface for the tie shoe must be level.
- The tie shoe must lie flush with the concrete wall.

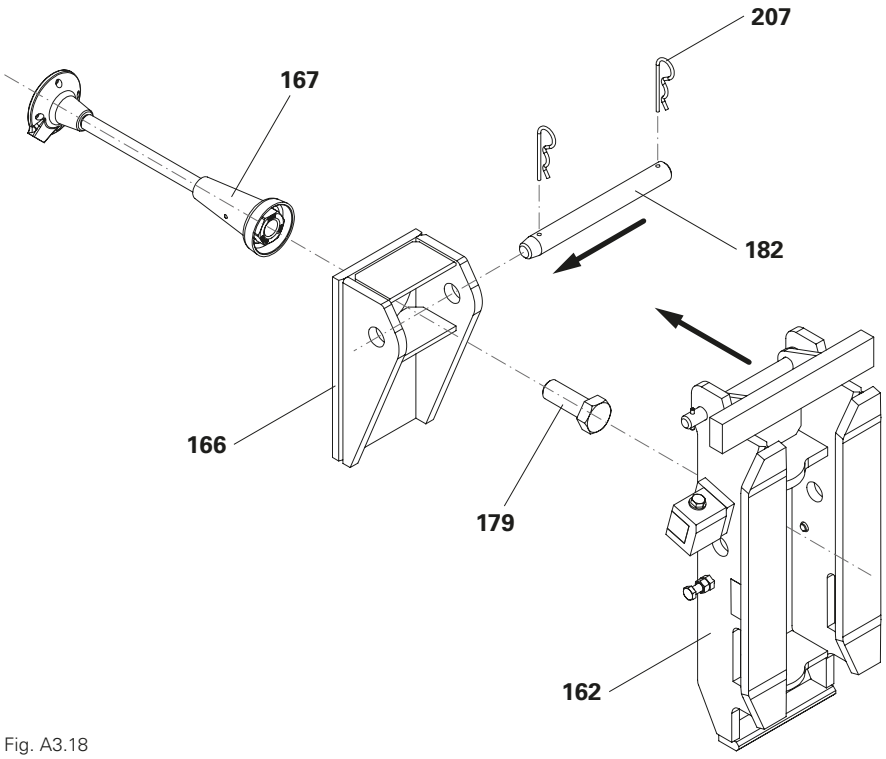


Fig. A3.18

Screw-On Cone M30/DW 26

The Screw-On Cone M30/DW 26 (**168**) can also be used as a climbing tie.
It is installed and used in the same way as the Climbing Cone-2 M30/DW 20 as described on the previous pages.

The same instructions for assembly and safety apply!

Components

168	Screw-On Cone M30/DW 26	
169	Threaded Anchor Plate DW 26	

Assembly

1. Screw the Threaded Anchor Plate DW 26 (**169**) onto the Screw-On Cone M30/DW 26 (**168**) as far as it will go.

(Fig. A3.19)

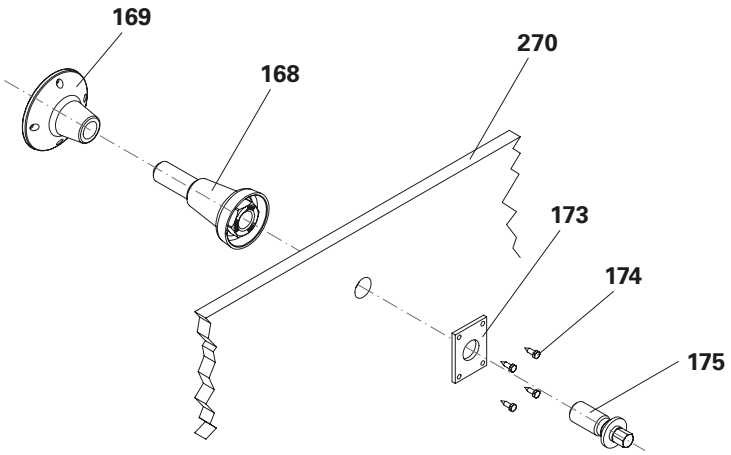


Fig. A3.19

Additional assembly positions

Formwork units are usually delivered to the construction site prefabricated by PERI, including all drill holes. Add further assembly positions if required.

Components per tie

173	Anchor Positioning Plate M30	1x
174	Hex. Wood Screw 6 x 20	4x

Assembly

1. Check the required space for the Anchor Positioning Plate M30 (**173**). Lateral spacings of 3 cm or 4 cm are required. (Fig. A3.20 + A3.21)
2. Determine the assembly position and drill ø 32 mm hole from the front of the formwork.
3. Fit Anchor Positioning Plate M30 (**173**) onto the rear of the formlining using Hex. Wood Screw 6 x 20, AF 10 (**174**).

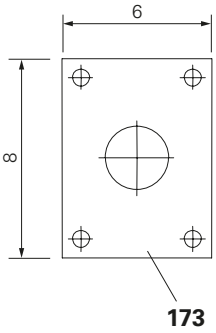


Fig. A3.20

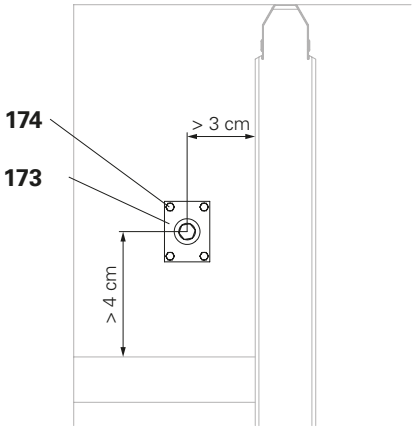


Fig. A3.21

Fitting the climbing tie with Anchor Positioning Stud M30

If space is limited, fit the climbing tie with the Anchor Positioning Stud M30. Climbing cones or screw-on cones can be used as climbing ties.
The assembly shown in the example involves the screw-on cone.

Components per tie

167	Climbing tie	1x
177	Anchor Positioning Stud M30	1x
178	Wire nail 3 x 80	4x

Assembly

1. Fix the Anchor Positioning Stud M30 (**177**) to the marked position with wire nails 3 x 80 (**178**). (Fig. A3.22)
2. Fold the wire nails over on the back of the formlining.
3. Screw the pre-assembled climbing ties (**167**) onto the Anchor Positioning Stud M30 (**177**) tightly. (Fig. A3.23 + A3.24)

- A more stable fixing is achieved by fitting the Anchor Positioning Plate M30.
  In this case, the distance between the hole and the formwork struts must be sufficiently large.
- Firmly connect the Threaded Anchor Plate DW 26 (**169**) to the reinforcement to ensure a secure position.

Checking the assembly work

- Height
- Spacing
- Anchoring depth h
- Alignment according to specifications
- Screw-on cone greased

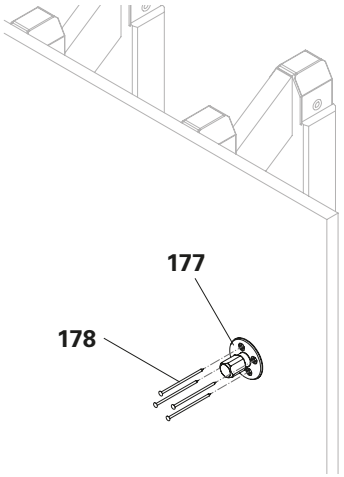


Fig. A3.22

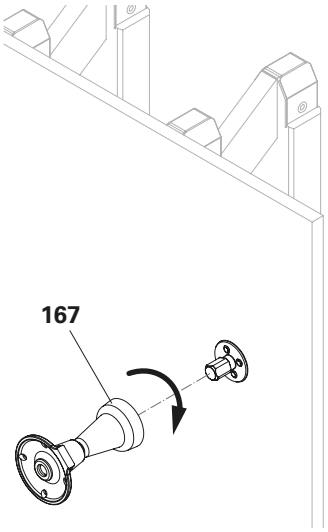


Fig. A3.23

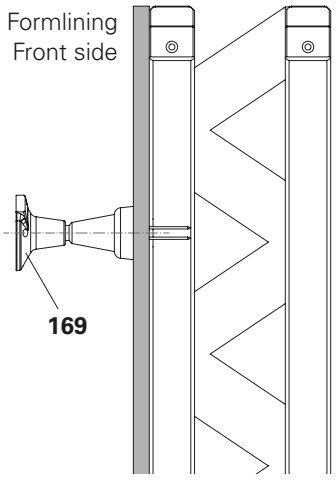


Fig. A3.24

Disassembly process with Anchor Positioning Plate M30

Detaching the formwork

1. Release and remove Positioning Screw M30 (**175**).
2. Detach the formwork from the wall and retract it.

(Fig. A3.25)

Removing the climbing cone

After climbing to the next concreting section, the climbing cone is removed from the finishing platform.

1. Unscrew the Climbing Cone-2 M30/ DW 20 (**170**) with a ratchet wrench and socket AF 46.

(Fig. A3.26)

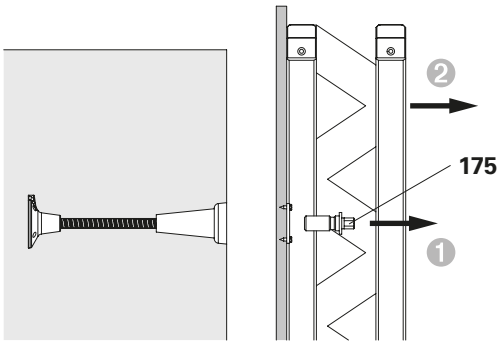


Fig. A3.25

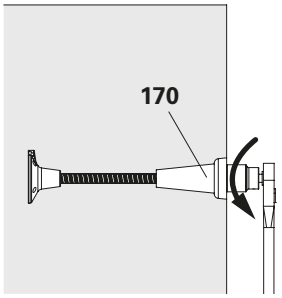


Fig. A3.26

Disassembly process with Anchor Positioning Stud M30

Detaching the formwork

1. Straighten wire nails Ø 3 x 80 (**178**).
2. Detach the formwork from the wall.
   → Pull wire nails Ø 3 x 80 (**178**) out of the formlining.
3. Formwork retracted.

(Fig. A3.27)

4. Bend over wire nails Ø 3 x 80 (**178**) in order to protect hands.
5. Remove Anchor Positioning Stud M30 (**177**) using Allen key AF 14.

(Fig. A3.28)

Removing the climbing cone

After climbing to the next concreting section, the climbing cone is removed from the finishing platform.

1. Unscrew the Climbing Cone-2 M30/ DW 20 (**170**) with a ratchet wrench and socket AF 46.

(Fig. A3.29)

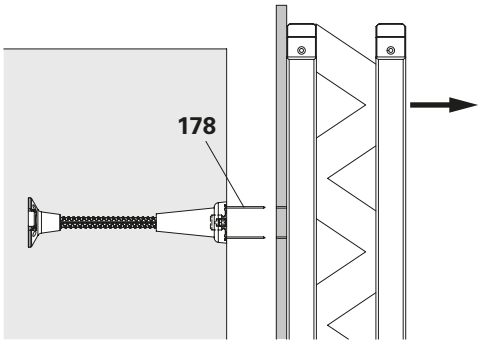


Fig. A3.27

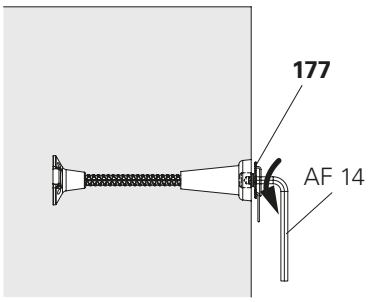


Fig. A3.28

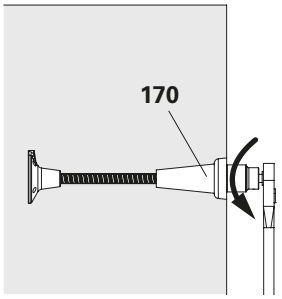


Fig. A3.29

Aligning climbing shoes

Use a spirit level or a plumb bob to align the Climbing Shoes ACS with the lower climbing shoe.

Tolerances

- Climbing Shoe-2 I: ±2 mm (Fig. A3.29)
- Tie tube: ± 2 cm (Fig. A3.30)
- Climbing Shoe II: ±2 mm (Fig. A3.31)
- Climbing Shoe IV: ±2 mm (Fig. A3.32)

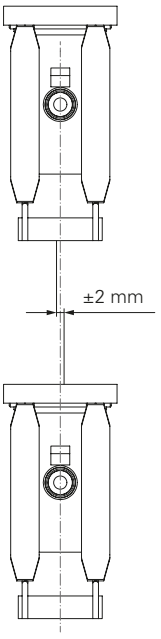


Fig. A3.29

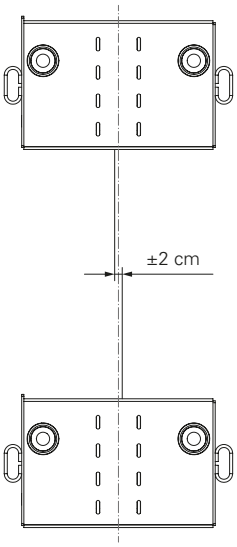


Fig. A3.30

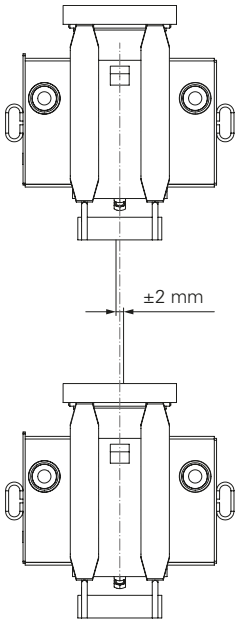


Fig. A3.31

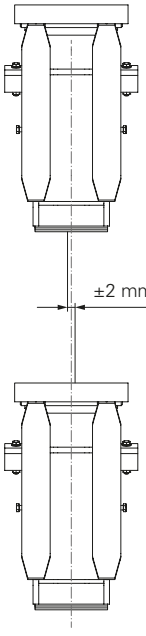


Fig. A3.32

A4 Operating states and loads

Operating status: Working
All work on the climbing unit:
- Clean the formwork, carry out reinforcement work, close the formwork, carry out concreting and striking work, carry out inspections and maintenance.
  → Platforms must be freely accessible for the required work to be carried out.
- Move the formwork forwards and backwards.
- Dynamic wind pressure: $q \leq 0.25$ kN/m^2.

Loads are evenly distributed.

Operating status: Climbing
Move the climbing unit with the hydraulic climbing device.
- Formwork retracted.
- Remove non-planned loads from the platforms.
- Operating personnel required for climbing usually work on the climbing platforms.
- Dynamic wind pressure: $q \leq 0.12$ kN/m^2.

Only the operating personnel are allowed to be on the climbing unit during the climbing process.

Non-operational
During longer work breaks, overnight.
- Dynamic wind pressure: $q \leq 0.5$ kN/m^2.
- Move the formwork into the concreting position and secure it with formwork ties so that it is tension and compression-proof.
- Remove materials and equipment from the platforms.
- If the permissible wind loads are exceeded, carry out a visual inspection of all parts and a functional test of all safety-relevant parts.

Storm
In the event of a storm warning.
- Dynamic wind pressure: $q > 0.5$ kN/m^2.
- Accessing the platforms is prohibited during storms.
- In the event of sudden storms or lightning hazards, only put the safety measures in place if this does not pose a danger to personnel. Otherwise leave the climbing units immediately.
- If a storm warning has higher wind speeds than originally stated, the site management must be informed. Remove any enclosure tarpaulins that may be attached.
- The wind speed to be assumed in the event of a storm depends on the height of operation, wind zone and terrain category. Take into consideration country-specific standards and regulations.
- Move the formwork into the concreting position and secure it with formwork ties so that it is tension and compression-proof.
- Remove materials and equipment from the platforms.
- On the instructions of authorised site personnel, the climbing unit can be climbed down to reach the storey below. For this, additional instructions are required. Remove materials and equipment from the platforms.
- Once the storm has passed, carry out a visual inspection of all parts and a functional test of all safety-relevant parts.

Overview of exemplary live loads

Combination of possible permissible live loads							
Platform	**Work**				**Climbing**	**Non-operational**	**Storm**
Concreting platform (level +1)	150 kg/m²	–	–	–	–	–	–
Intermediate formwork platform (level +0.5)	–	150 kg/m²	–	–	–	–	–
Work platform (level 0)	150 kg/m²	150 kg/m²	–	240 kg/m² [2)]	–	150 kg/m²	150 kg/m²
Climbing platform (level -1) [1)]	7.5 kN	7.5 kN	150 kg/m² + 7.5 kN	7.5 kN [2)]	7.5 kN	7.5 kN	7.5 kN
Finishing platform (level -2)	–	–	–	–	–	–	–
Dynamic wind pressure q [3)]	≤ 0.25 kN/m²				≤ 0.12 kN/m²	≤ 0.5 kN/m²	> 0.5 kN/m²
Formwork position	Retracted or concreting position				Retracted	Concreting position	Concreting position

[1)] Live load evenly distributed on the platform.
[2)] Live load valid for the USA.
[3)] The values for the dynamic wind pressure q can vary from project to project and are definitive in these cases.

Tab. A4.01

Mounting the Climbing Unit

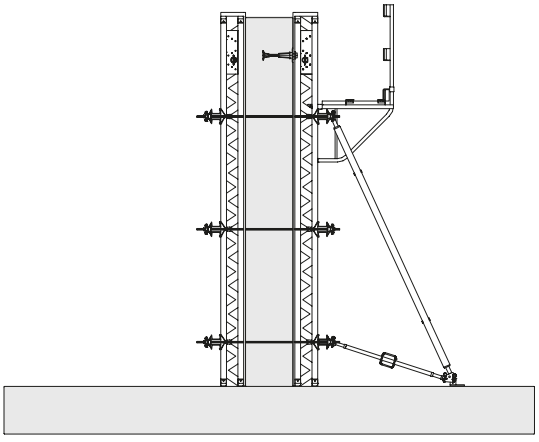


Fig. A5.01

Precondition
The starter is concreted, hardened and approved for the further work steps. (Fig. A5.01)

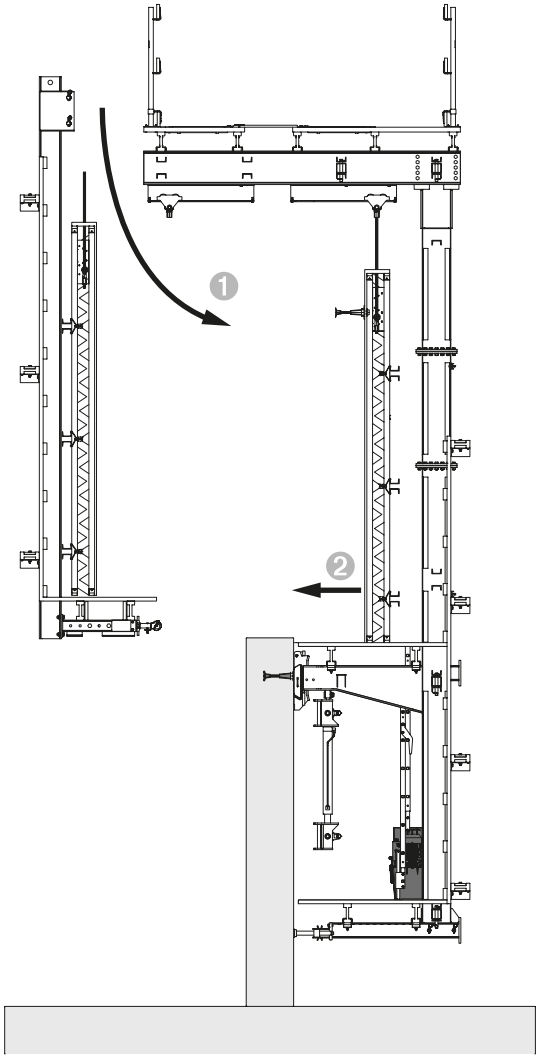


Fig. A5.02

1st work cycle
Attach climbing unit to the 1st concreting section without a finishing platform and prop it with a pressure point spindle. Attach the opposite side. Fit the formwork. Fit and reinforce the climbing ties. Close the formwork and concrete the 2nd section.

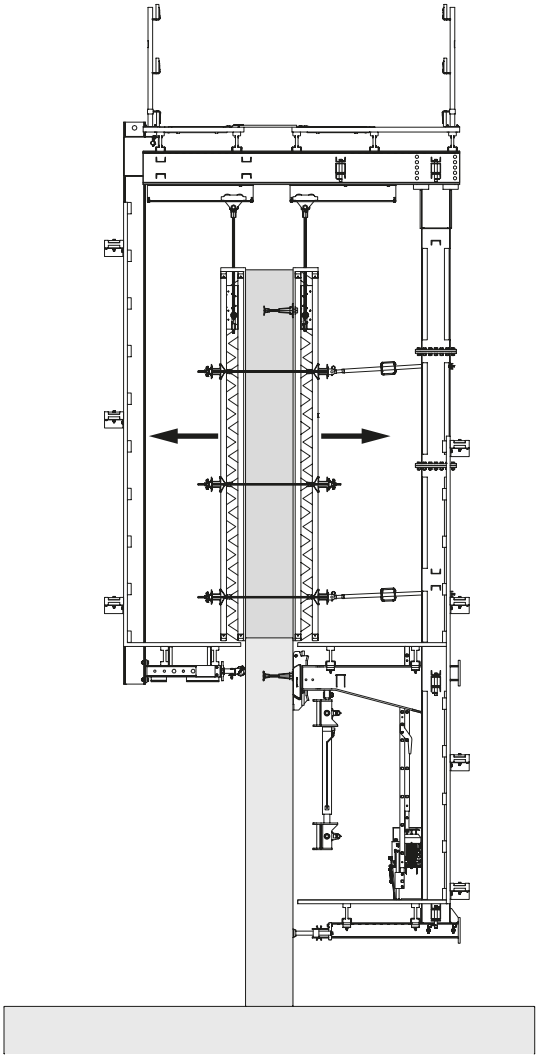


Fig. A5.03

2nd work cycle
Formwork retracted. Install the hydraulic system and put it into operation.

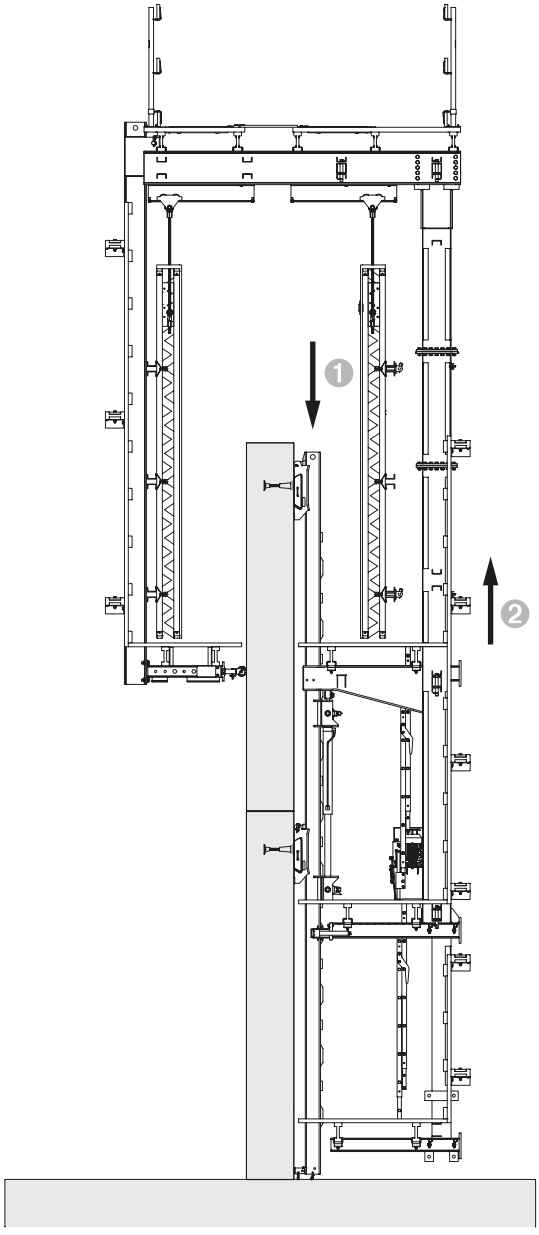


Fig. A5.04

3rd work cycle
Attach the climbing shoe to the climbing tie and insert the climbing rail. Retract the pressure point spindle and move the climbing unit to the 2nd concreting section. Prop with the pressure point spindle and attach the finishing platform.

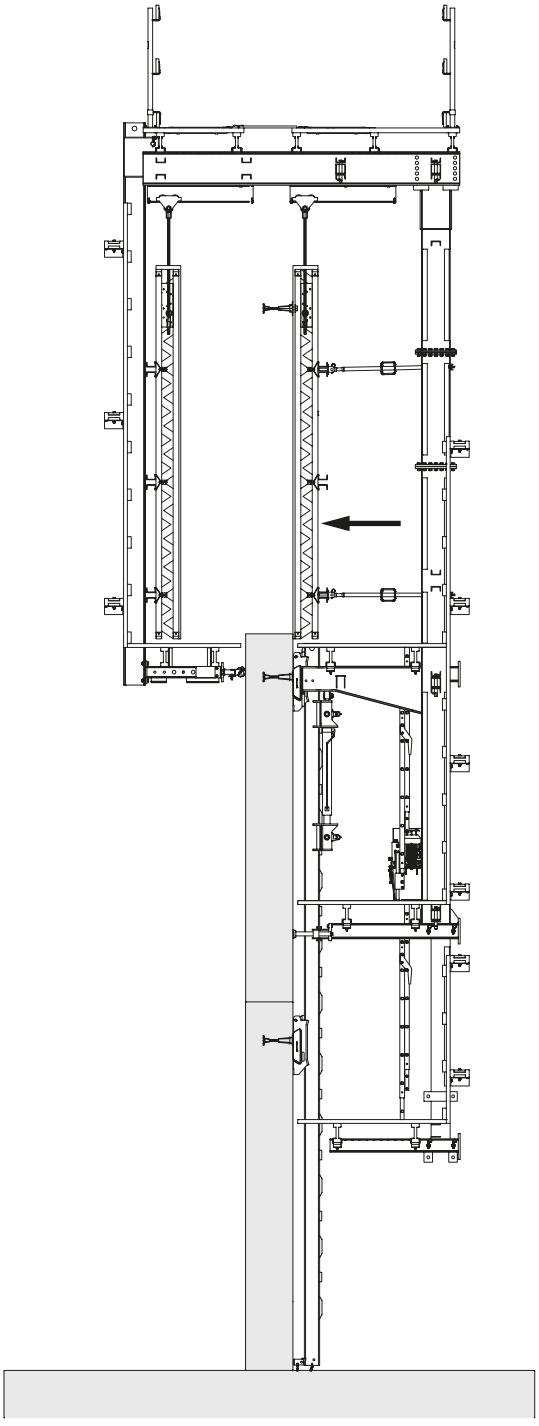


Fig. A5.05

4th work cycle
Fit and reinforce the climbing ties. Close the formwork and concrete the 3rd section.

Concreting the standard section

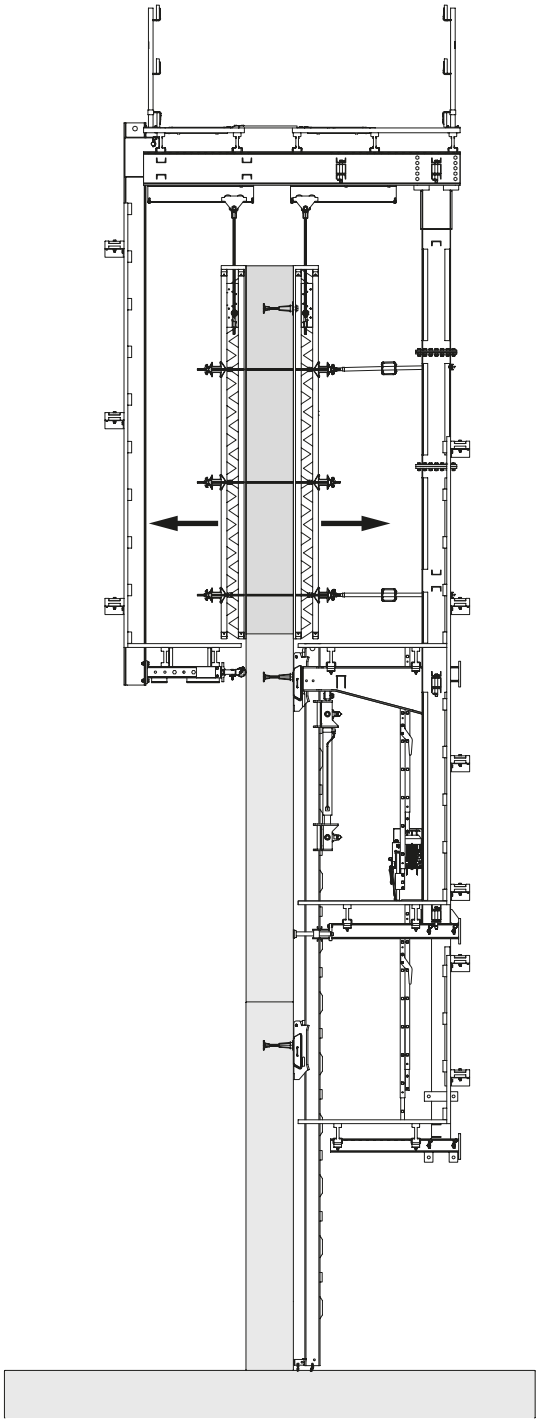


Fig. A5.06

5th work cycle
Formwork retracted.

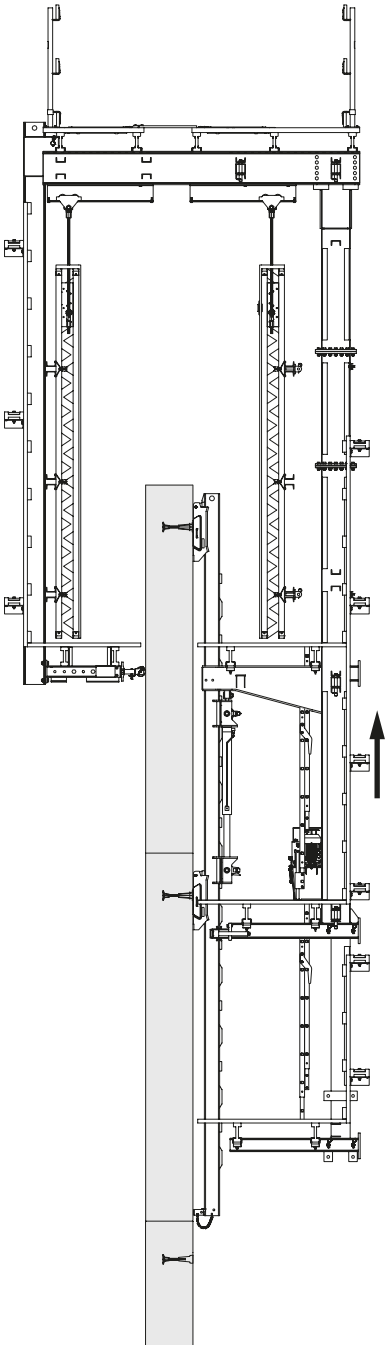


Fig. A5.07

6th work cycle
Attach climbing shoe to climbing tie. Move the climbing rail to the 3rd concreting section. Remove the finishing climbing shoe and climbing cone, seal with concrete cones. Move the climbing unit to the 3rd concreting section.

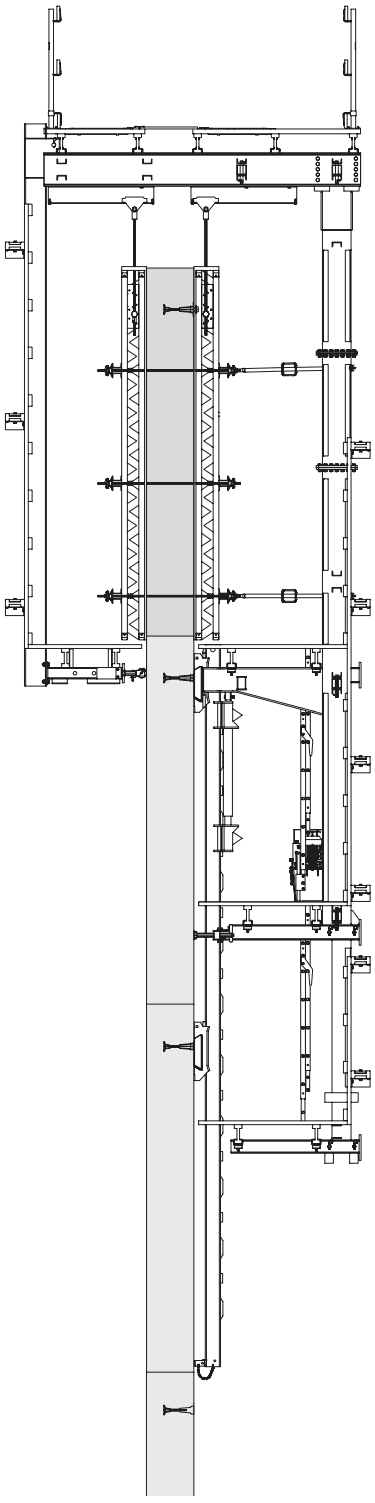


Fig. A5.08

7th work cycle
Fit and reinforce the climbing ties. Close the formwork and concrete the 4th section.

8th work cycle
Work cycles 5 – 7 are repeated.

Preparing for assembly

Measures prior to assembly

- Check the completeness of the technical documentation:
  - Assembly plans
    - Formwork
    - Climbing systems (all levels and cross-sections)
  - General arrangement drawings
    - Formwork
    - Climbing systems
    - Hydraulic plan
    - Parts list
- Site personnel to familiarise themselves with the system using the available documentation.

- The project-related assembly plan from PERI is binding for assembly operations.
- Refer to the project-related assembly plan for the installation positions of the components.
- Prepare a level assembly surface with sufficient load-bearing capacity.
- A crane or other lifting device with sufficient load-bearing capacity is required for the assembly process.
- Secure interim assembly states correctly by means of temporary supports in order to prevent any items from toppling over.
- Bolts that are fitted vertically should be screwed in from top to bottom.
- For bolts that are fitted horizontally, no fitting direction is prescribed. PERI recommends that you always fit the bolts in the same direction.
- All bolts must be secured using the appropriate cotter pins.

- Reserve an adequate space for temporary storage of components and assemblies.
- Properly aligned and calibrated attachment aids will ensure that the assembly process is swift and straightforward.

Load-bearing capacity

Attach assemblies to the crane using the specified attachment points, fitting pins or with lifting straps.

- Be mindful of the project-specific weight of the assemblies.
- Use round slings with the appropriate load-bearing capacity.
- Always attach components and assemblies to the crane in a positive-locking manner.
- PERI recommends using the Climbing Beam 9 t whenever possible.

Safety instructions

Danger

Heavy moving components can fall down or overturn!
During assembly, there is a risk of hands and other body parts being crushed.

⇒ Do not stand under suspended loads.
⇒ Use guide ropes when moving components.
⇒ Maintain an appropriate safety distance.
⇒ Do not stand between moving elements.

Attachment points

Attachment points for crane

- The size of climbing units may be restricted by the permissible load of the attachment point. For this, determine the weight of the elements during the planning phase.
- Specify the weight of the climbing units or assemblies in the general arrangement drawings.
- Use component and project-specific attachment points.
- In the case of assemblies or missing attachment points, take a trial-and-error approach to determining the attachment points that will ensure that the load is correctly positioned.
- In the case of supplied parts, use the attachment points specified by the manufacturer.
- Observe the load-bearing capacity of the attachment points.

General information

- Form the platform decking in the correct manner and in accordance with the applicable safety regulations.
- The material quality must comply with the standards.
- Avoid – or at least cover – tripping hazards, unnecessary recesses and gaps in the deck.
- The distance between the lowest decking and the structure must not exceed 5 cm. Gaps in the deck must not exceed 2 cm.
- Fix immovable covering over any gaps between the decks of adjacent platforms when work is being carried out, or safety nets with a mesh size of max. 2 cm.
- Any openings in the deck that are required for normal working procedures must be covered with suitable immovable materials.
- If necessary, install intermediate platforms so that tie points can be operated safely.
- None of the decks on any of the platforms are designed to act as safety scaffolds. If decks are to act as safety scaffolds, these must be designed and verified accordingly for the specific project. See DIN 4420-1 and DIN EN 12811-1.

- For M8 truss-head screws, pre-drill the platform beam with a Ø 9 mm hole.
- For Ø 8 wood screws, pre-drill the platform beam with a Ø 5 mm hole.
- In the case of Torx 6 x 80, do not pre-drill the platform beam.

Platform decking of the work platform
Working scaffold of Load Class 4.
Max. load 240 kg/m² according to DIN EN 12811-1, Table 3.
Solid Wood Strength Class C24 – EN 338; Coniferous Wood Grade S10.
Minimum dimensions of the planking:
t x w = 4 × 24 cm or 4.5 x 20 cm.

PERI recommends bolting the individual planking sections to transverse squared timber at the cantilever arm and in the centre of the bay if the plank thickness is less than 45 mm.
Minimum dimensions:
t x w = 4 x 12 cm.

Alternatively:
Strength Class C16 for solid wood according to EN 338. Minimum dimensions of the planks:
t x w = 5 x 24 cm.

Platform decking of the climbing platform, finishing platform, concreting platform
Working scaffold of Load Class 2.
Max. load 150 kg/m² according to DIN EN 12811-1, Table 3.
Solid Wood Strength Class C24 – EN 338; (Coniferous Wood Quality Grade S10).
Minimum dimensions of the planking:
t x w = 4 x 20 cm.

PERI recommends bolting the individual planking sections to transverse squared timber at the cantilever arm and in the centre of the bay if the plank thickness is less than 45 mm.
Minimum dimensions:
t x w = 4 x 12 cm.

Alternatively:
Strength Class C16 for solid wood according to EN 338. Minimum dimensions of the planks:
t x w = 5 x 24 cm.

When using planking with a lower strength class or plywood boards, static verification is required.

Depending on the structural requirements, Formwork Girders GT 24, Girders VT 20 or Beams IPE are used as platform beams.

Formwork Girder GT 24 as platform beam

When using Formwork Girders GT 24, a distinction is made between a
- Single girder position.
- Double girder position.

The platform decking is placed on the Formwork Girders GT 24 (**21**) directly and bolted to each formwork girder. (Fig. B2.01 + B2.02)

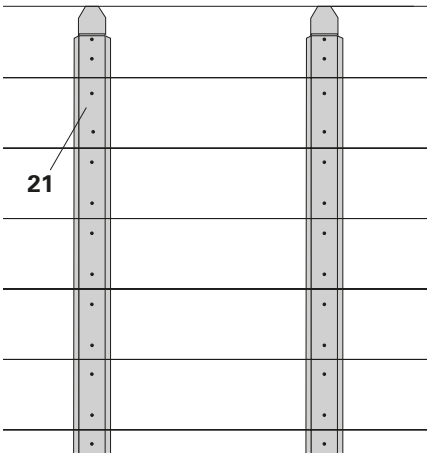


Fig. B2.01

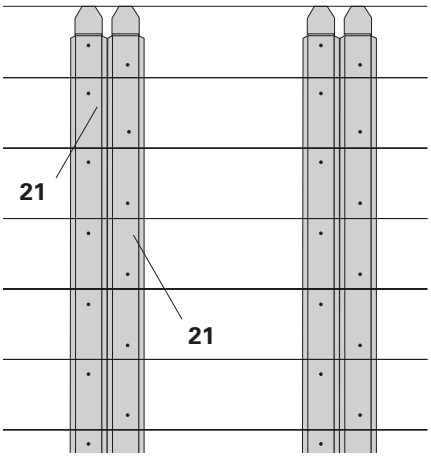


Fig. B2.02

Fixing the platform beams

Variant 1
1. For each support point, slide 2x Clamps GT 24 ACS (**44**) onto the Formwork Girder GT 24 (**21**).
2. Place the Formwork Girder GT 24 (**21**) on the cantilever beams of the Console Bracket ACS-G.
3. Slide the Clamps GT 24 ACS (**44**) over the cantilever beams and screw them tight.

(Fig. B2.03)

Figures B2.04a and B2.04b show the Clamp GT 24 ACS as an example.

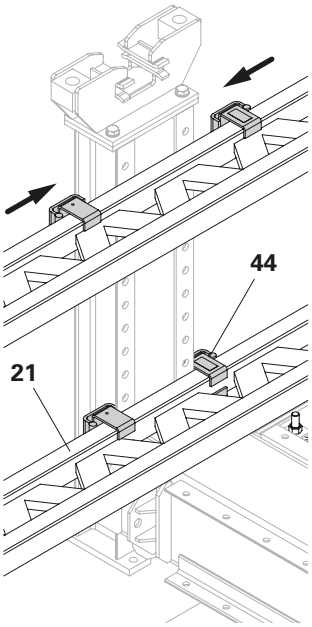


Fig. B2.03

View from above

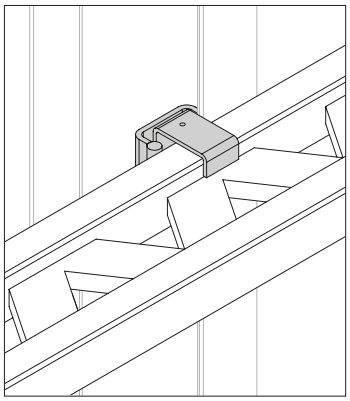


Fig. B2.04a

View from below

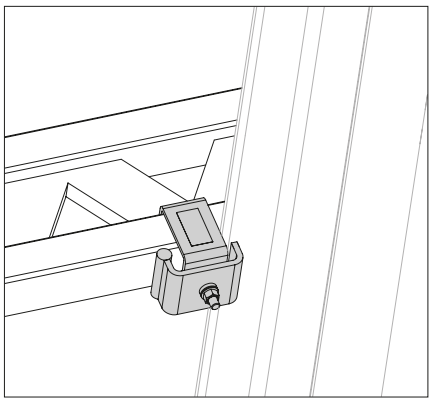


Fig. B2.04b

Variant 2
The Formwork Girders GT 24 (**21**) are placed on the platform beams and fastened to metal components on the platform beam with truss-head screws, shown here with metal lugs as an example.
The number of fasteners given relates to one support point.

Single girder position
Fasten with 2x F.H. bolts DIN 603 M8 x 100 MU (**222**) and washers (**225**).
(Fig. B2.05)

Double girder position
Fasten with 2x F.H. bolts DIN 603 M8 x 200 MU (**221**) and washers (**225**).
(Fig. B2.06)

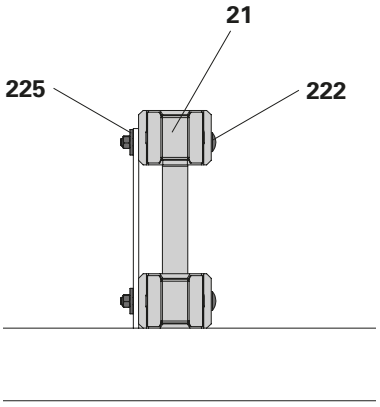


Fig. B2.05

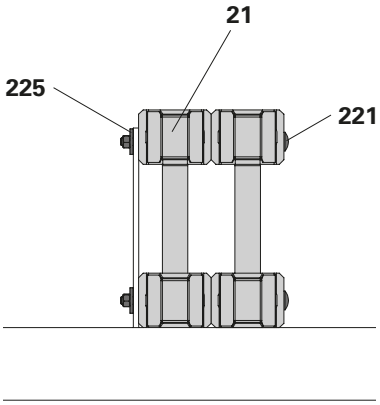


Fig. B2.06

Beam IPE as platform beam

The Beams IPE are manufactured in a project-specific manner and are furnished with all the necessary holes for assembly.
To assemble the platform decking, an intermediate layer of timber is screwed onto the Beam IPE.
The platform decking is placed on the intermediate layer and screwed down. (Fig. B2.07)

Components

18 IPE 200, special length
65 Plain Washer 18 DIN 434
202 Torx 6 x 80
213 Nut ISO 4032 M16-8
214 Bolt ISO 4017 M16 x 50-8.8
226 Washer ISO 7089 -16 200 HV
239 F.H. Bolt DIN 603 M8 x 65 MU
251 Spax 6 x 70-SK-TX30
262 Planking
276 Board 4 x 10 cm

Assembly

1. Place the Beam IPE 200 (**18**) on the cantilever beams of the Console Bracket ACS-G or finishing platform girder.
2. Screw the Beam IPE 200 (**18**) down tight by fixing a bolt ISO 4017 M16 x 50-8.8 (**214**), washer ISO 7089-16 200 HV (**226**), plain washer 18 DIN 434 (**65**) and nut ISO 4032 M16-8 (**213**) to each hole.
3. Place the board 4 x 10 cm (**276**) on Beam IPE 200 (**18**) and secure with F. H. bolt DIN 603 M8 x 65, MU (**239**).
4. Lay out the planking (**262**) and screw down with Spax 6 x 70-SK-TX30 (**251**).

(Fig. B2.07a)

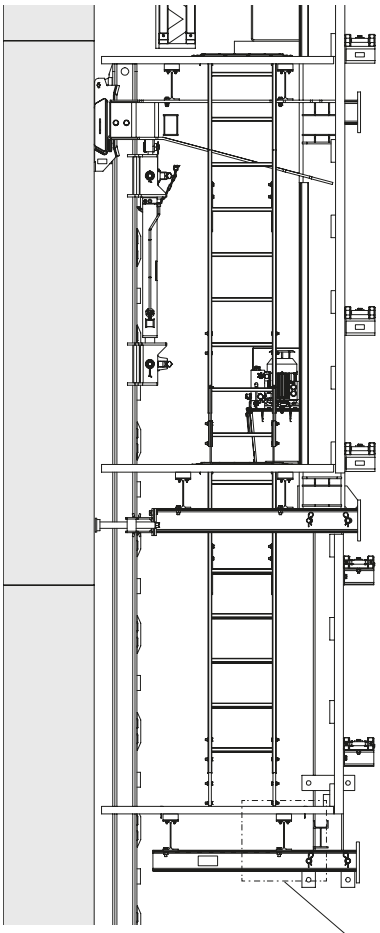


Fig. B2.07

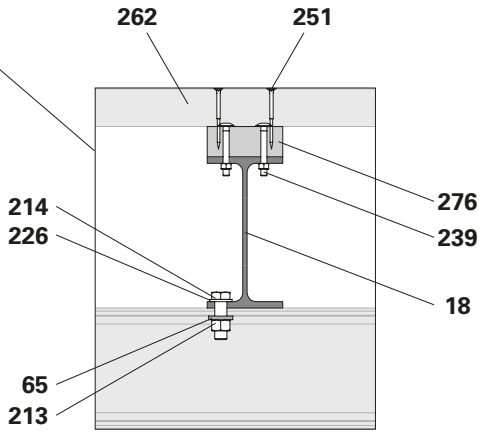


Fig. B2.07a

Platform decking

Assembly
Screw down each piece of planking (**262**) at each intersection with a platform beam (**260**) using 2x Torx 6 x 80 (**202**).
e = 120 mm.
(Fig. B2.08 + B2.09)

- Prevent cantilevered planking and platform beams from lifting off using suitable fasteners.
- Fit multi-layer plywood sheets in the cantilevered area.
- In mitred and cut-out areas, where support for the planking on both sides is not guaranteed, fit multi-layer plywood sheets.
- Fit compensation planks in the centre of the platform.
  (Planking w < 24 cm)

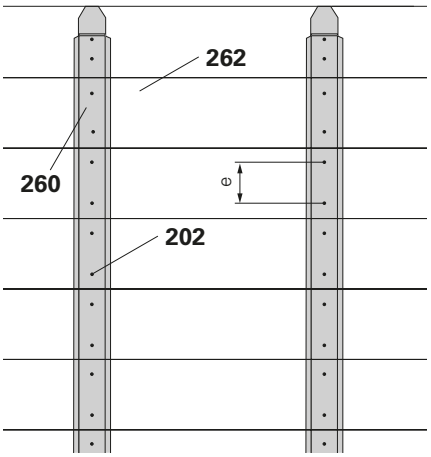


Fig. B2.08 Top view

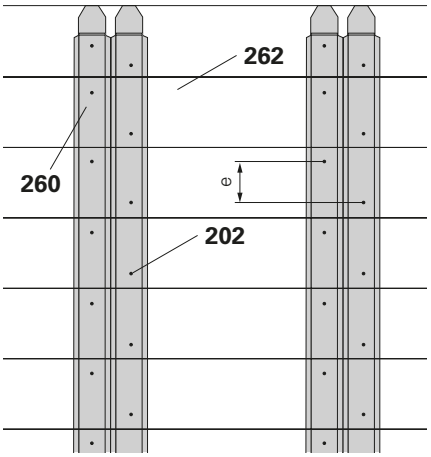


Fig. B2.09 Top view

Toe boards

Requirements:
Toe boards made of solid wood C24.
Minimum dimensions t/w = 3/15 cm.

Components

202 Torx 6 x 80
263 Toe board
267 Counter-batten

Assembly
1. Align toe board (**263**) on the inside of the counter-batten (**267**).
2. Screw toe board (**263**) onto the counter-batten (**267**) using Torx 6 x 80 (**202**).

(Fig. B2.10)

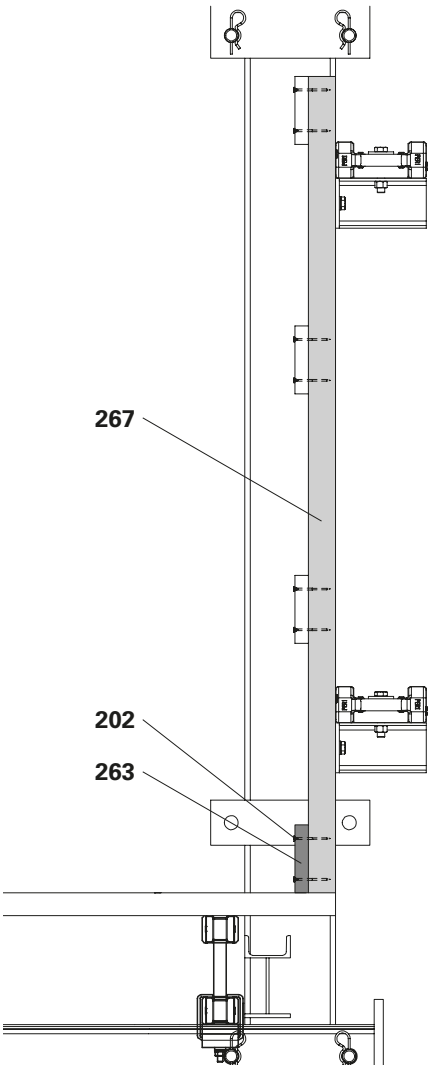


Fig. B2.10

Alternative 1

1. Screw down the toe board (**263**) with end-to-end squared timber 6/6 cm (**274**) and screws Torx 6 x 80 (**202**) and Torx 6 x 100 (**227**) at a distance of approx. 50 cm.

(Fig. B2.11)

Alternative 2

1. Screw the 90° squared timber angle bracket (**203**) tightly onto the toe board (**263**) with 4x Torx 5 x 20 (**204**) at a distance of approx. 1 m. Screw each squared timber angle bracket onto the platform decking with 4x Torx 5 x 20 (**204**).

(Fig. B2.12 + B2.13)

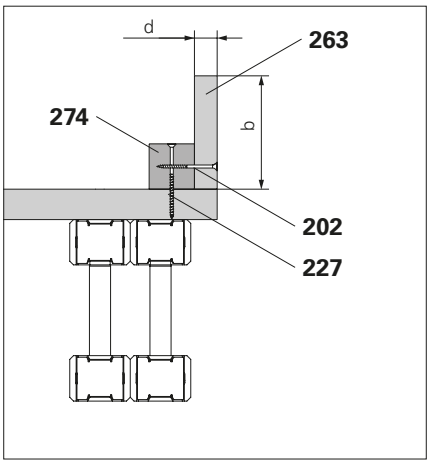


Fig. B2.11

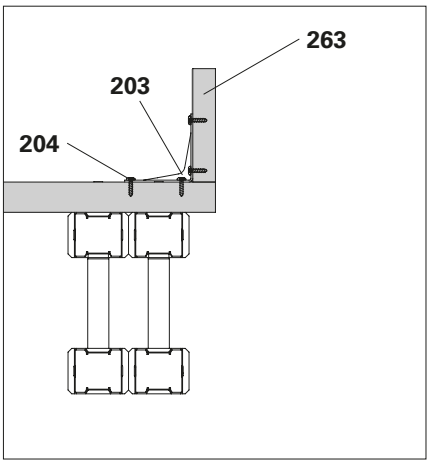


Fig. B2.12

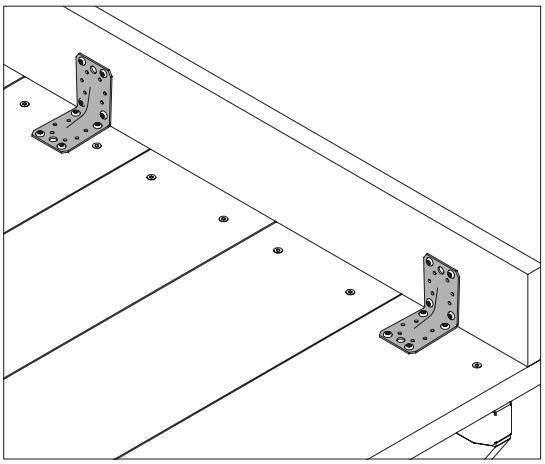


Fig. B2.13

Guardrail

General requirements
Guardrails and lateral protection must be fitted according to valid safety regulations.
Guardrails must be fitted onto all leading edges and on all platform levels.
High working positions must be secured in order to prevent objects falling to the ground. To this end, fit safety nets or lateral protection with closed protection panels.
The following can be used as lateral protection:
- Guardrail boards.
- Squared timber with enclosure made of netting, tarpaulin, plywood or trapezoidal metal sheeting.

(Fig. B2.14)

Never climb on the guardrail, always use a ladder.

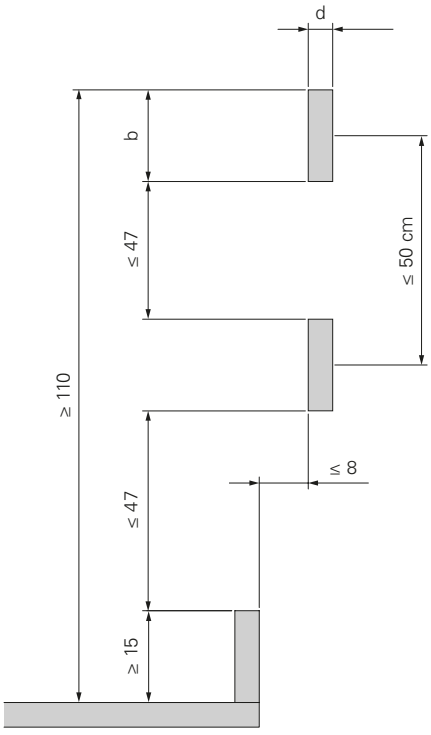


Fig. B2.14

Ladder cage with guardrail boards

Requirements:
Guardrail boards (**264**) made of solid wood C24
Dimensions t/w = 3/15, 4/12 or 5/12 cm or according to the static verification.

Components

202 Torx 6 x 80
264 Guardrail board
267 Counter-batten

Assembly
1. Align guardrail board (**264**) on the inside of the counter-batten (**267**).
2. Screw guardrail board (**264**) onto the counter-batten (**267**) using Torx 6 x 80 (**202**).

(Fig. B2.15)

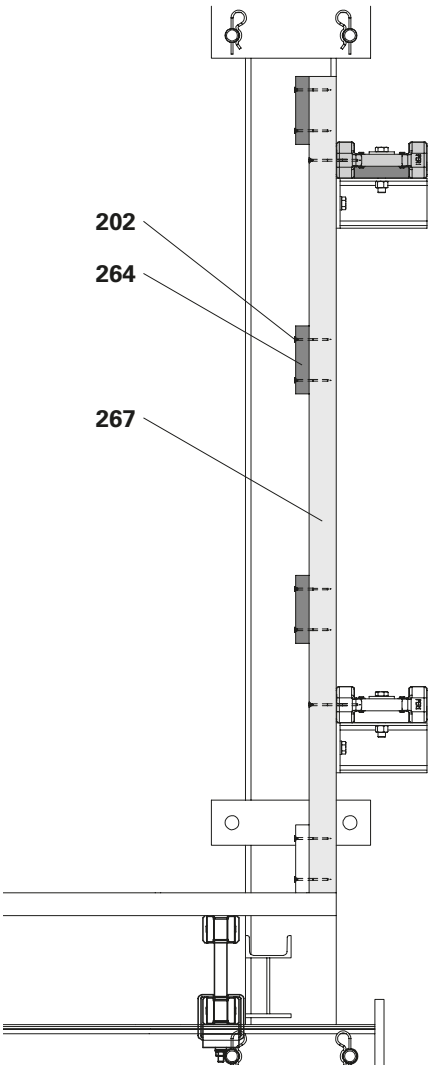


Fig. B2.15

Girder VT 20 for the ladder cage

When carrying out the assembly process for the ladder cage, two Shims VT 20 (**269**) are required for each Girder VT 20 for lining between Girder VT 20 (**20**) and the Ladder Cage Connection VT 20 ACS (**54**). (Fig. B2.16)

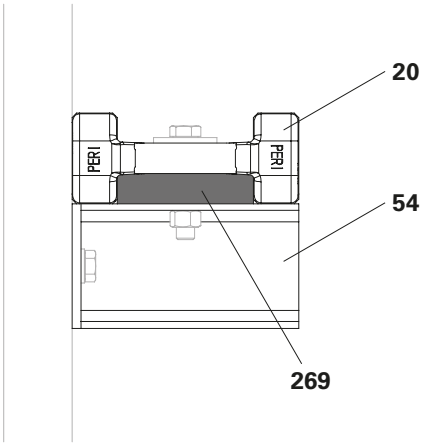


Fig. B2.16

For assembly of the Girders VT 20 (**20**) on the Ladder Cage Connection VT 20 ACS (**54**), see:
"Installing the ladder cage" on page 75.
"Installing the ladder cage" on page 89.
"Assembling the rear section" on page 93.

Components

20 Girder VT 20
200 Torx 6 x 40
269 Shim VT 20

Preparing for assembly

1. Saw 2x board 300 x 118 x 27 mm as a Shim VT 20 (**269**) for the Girder VT 20 (**20**).
2. To attach Girder VT 20 (**20**) to Ladder Cage Connection VT 20 ACS, mark the holes for the installation position.

(Tab. B2.01+ Fig. B2.17)

3. Place the Shim VT 20 (**269**) in the Girder VT 20 (**20**) and align it centrally at the installation position.
4. Screw the Shim VT 20 (**269**) onto the Girder VT 20 (**20**) with Torx 6 x 40 (**200**).

(Fig. B2.18)

5. Drill an Ø 18 mm hole through Shim VT 20 (**269**) and Girder VT 20 (**20**) at the installation position.

(Fig. B2.19)

Installation position or Shim VT 20	
Console bracket spacing	c
Console Bracket ACS-G	½ c + 18.5
Finishing Platform Vertical 3300 ACS-G	½ c + 8.5
Platform Post 5900 IPBL 240 ACS	½ c + 6

Tab. B2.01

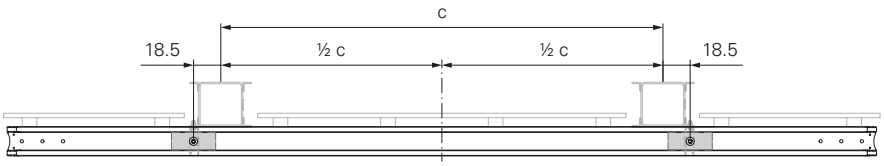


Fig. B2.17a

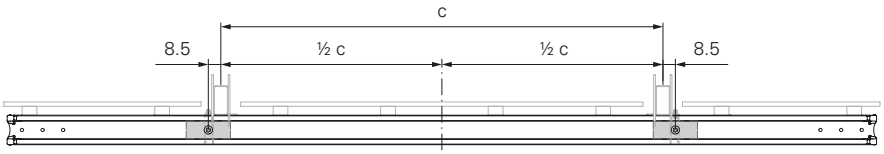


Fig. B2.17b

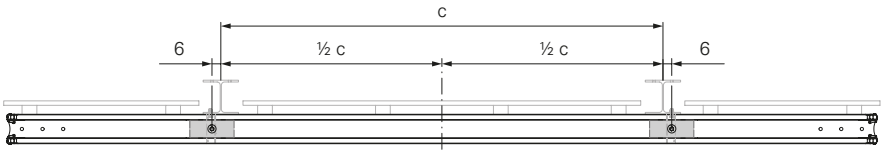


Fig. B2.17c

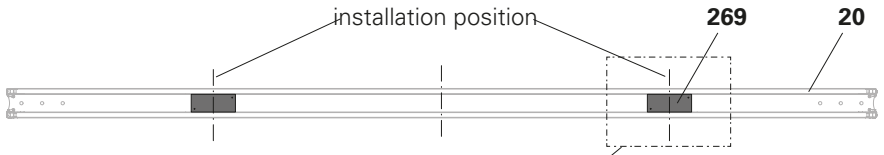


Fig. B2.18

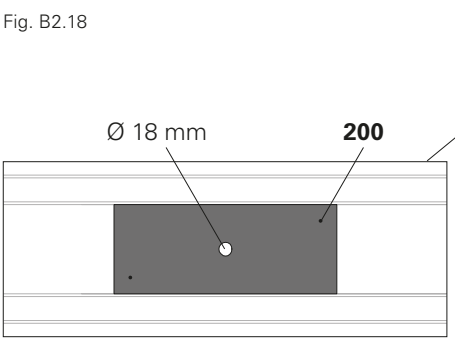


Fig. B2.19

Fitting safety nets

1. Attach the safety net (**266**) according to the manufacturer information.
2. Guide the lower edge of the safety nets to the front edge of the platform decking.
3. Ensure that there is a sufficient overlap with other parts of the enclosure.

(Fig. B2.20)

- Mesh size for enclosure nets ≤ 20 mm.
- Distance between guardrail boards a ≤ 50 cm.

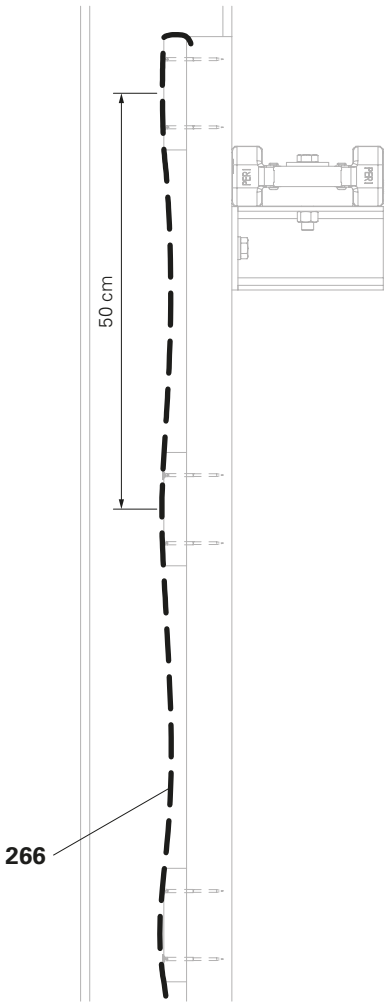


Fig. B2.20

Lateral protection
Lateral protection is always necessary if leading edges are formed.

The execution of the lateral protection is individually adapted to the requirements and geometry of the platforms.
The assembly process for the lateral protection is described individually for each platform in the following chapters.

Temporary lateral protection
Leading edges are formed during the attachment, moving and disassembly processes. Safeguard these leading edges with temporary anti-fall protection, e.g. with the Guardrail Post PD 8.

Components

15 Guardrail Post PD 8
245 Hex. Wood Screw DIN 571 8 x 60
252 Spax 5 x 40
264 Guardrail board
272 Timber wedge

Assembly
1. Screw Guardrail Post PD 8 (**15**) onto the platform decking with hex. wood screw 8 x 60 (**245**).
2. Place wooden wedges (**272**) behind the guardrail boards (**264**).
3. Fit the guardrail boards and screw them onto the Guardrail Post PD 8 (**15**) with Spax 5 x 40 (**252**).

(Fig. B2.21)

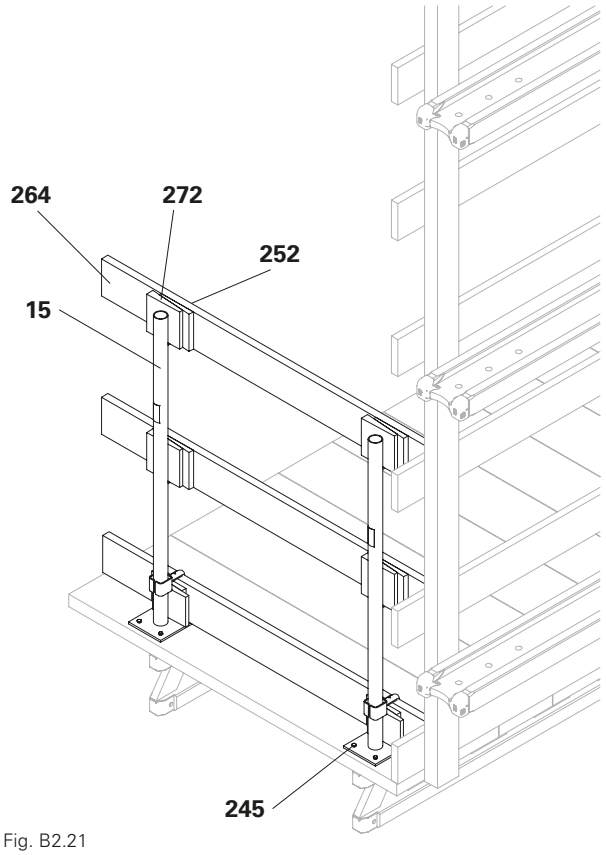


Fig. B2.21

Fitting the descent hatch

Components

200	Torx 6 x 40	20x
280	Hatch 55 x 60-2, foldable	1x

Assembly

1. Saw out a 57 x 72 cm recess at the installation position.
(Fig. B3.01)
2. Place the hatch (**280**) in the recess.
3. Screw the hatch frame onto the platform decking tightly with Torx 6 x 40 (**200**).
(Fig. B3.02)

- Minimum plank width: w_{min} > 10 cm. If the minimum plank width is not reached, move the descent hatch to the side.
- If the plank can only be fixed to one platform beam, fit a transition piece in order to fix the planking. (Fig. B3.03)

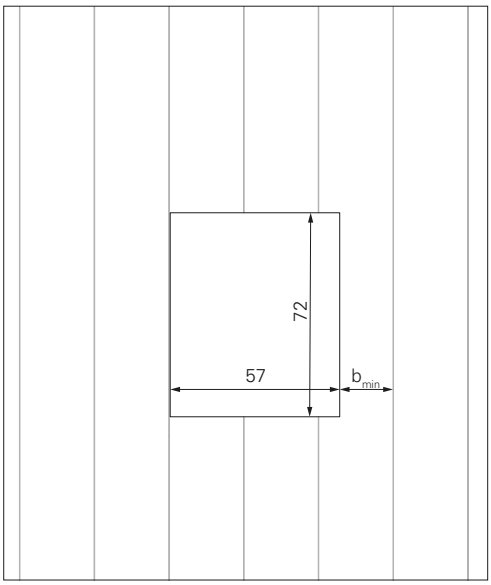


Fig. B3.01

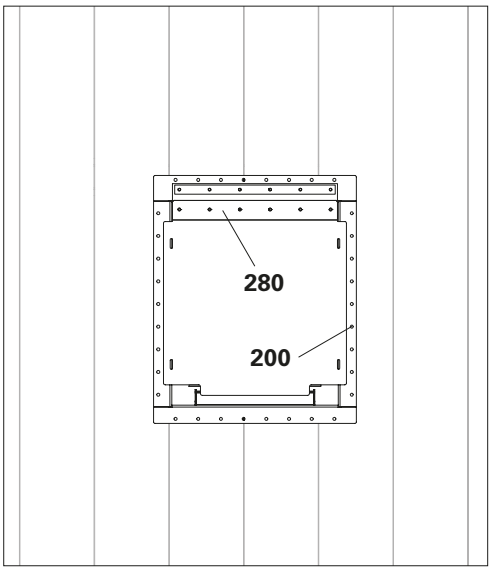


Fig. B3.02

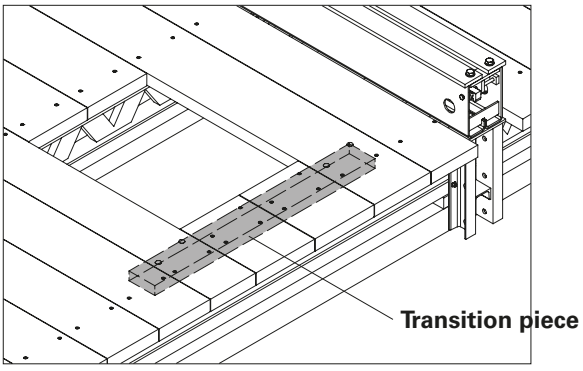


Fig. B3.03

Fitting the ladder

Do not use the ladder until it is securely attached at the top and bottom, and the ladder cage has been mounted. The required ladder elements are specific to the project.

Components

200 Torx 6 x 40
281 Bolt ISO 4017 M12 x 40-8.8
282 Nut ISO 7042 M12-8
283 Ladder 180/6
284 Ladder 220/6
285 Access Ladder 180/2
286 Ladder Base 30, adjustable
288 Ladder hook
289 Ladder Safety Cage 75
290 Ladder Safety Cage 150

Pre-assembly of ladder

- Permanently mounted ladder:

1. Push top ladder 220/6 (**284**) with the connector (**284.1**) as far as possible into the bottom ladder 180/6 (**283**).
2. Secure the bottom ladder to the connecting piece using the 4 bolts M12 x 40 and nuts (**281+ 282**) which have been provided.
3. Install the ladder base (**286**) in the same manner with 4x bolts M12 x 40 (**281**) and nuts onto the connecting piece (**283.1**) of the lower ladder. (Fig. B3.04)

- Bottom ladder as hook-in ladder:

1. Secure the ladder hook (**288**) to the 2 bottom holes on the ladder rail using the 4 bolts M12 x 25 and nuts (**288.1+ 288.2**) which have been provided.
2. Securely mount the ladder base (**286**). See above.
3. Attach hook-in ladder to the top ladder.

(Fig. B3.05 + B3.06)

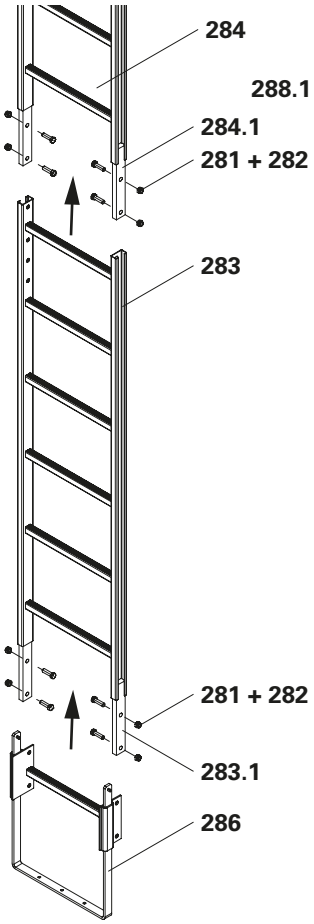


Fig. B3.04

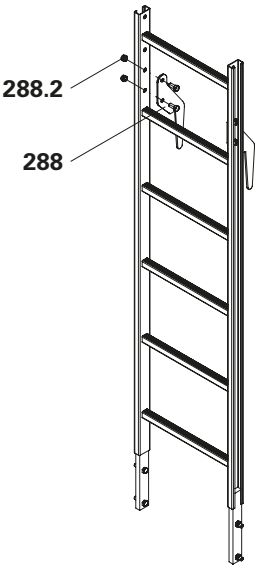


Fig. B3.05

The rungs of the hook-in ladder and top ladder must be positioned at the same height.
If they are not, screw the ladder hooks into the correct drill holes.

Fig. B3.06

Fitting the ladder on the hatch

1. Open the hatch cover (**280.1**) and lift in the ladder using the crane. Lower ladder through hatch opening (**280**).
2. Fix ladder to the hatch from above using 2 bolts M12 x 40 and nuts (**281 + 282**).

(Fig. B3.07)

Alternatively:

Attaching the Access Ladder 180/2

1. Open the hatch cover (**280.1**).
2. Lift pre-assembled ladders (**283 + 285**) with the crane into the hatch (**280**) and lower so that the top rung of the ladder lies in the U-section of the hatch.

(Fig. B3.08)

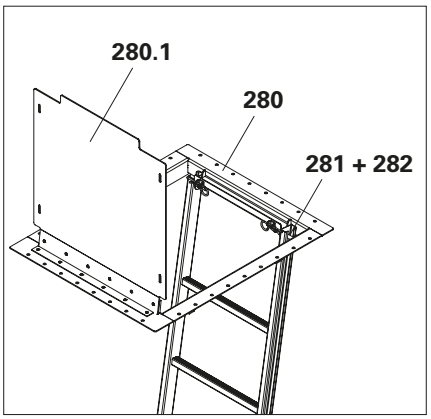


Fig. B3.07

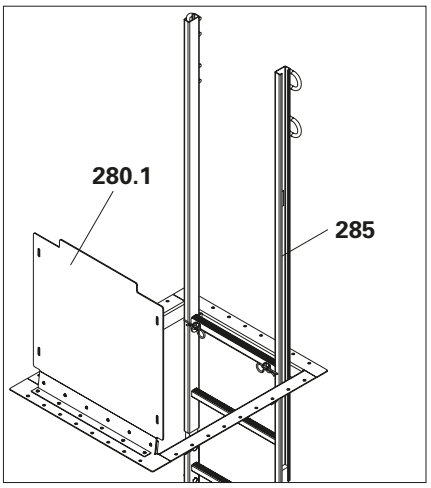


Fig. B3.08

Fixing the ladder base

1. Pull out the bracket (**286.1**) of the ladder base (**286**) as far as the platform decking. Secure the bracket to the platform decking using 3 Torx 6 x 40 screws (**200**).

Installing the ladder cage

- The distance from the platform decking to the ladder cage ranges from 2.2 m to 3.0 m.
- The opening between two ladder cages must not exceed 50 cm.
- Fly in the ladder cage with the finishing platform, as it does not fit through the hatch and needs to be mounted from below.

1. Pull the ladder cage (**289**) upwards using a rope, move it into position and hold it there.
2. Slightly loosen 4x bolts M12 x 25 on the clamping plate (**289.1**), position clamping plate on the ladder rail (**284**), turn and tighten bolts.

(Fig. B3.09)

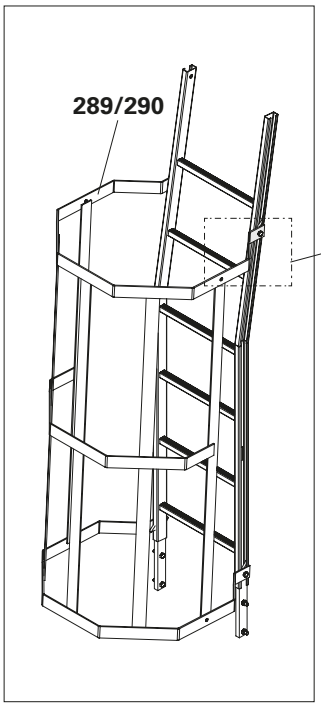
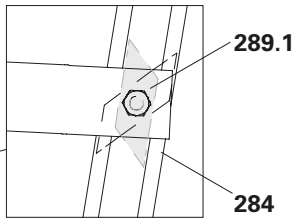
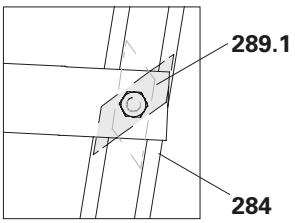


Fig. B3.09



Insertion position



Clamping length

- The ladder can be used up to a platform distance of 7.0 m, according to the criteria of DIN EN 131-2.
- Maximum inclination $\alpha < 15°$.

B4 Installing the Console Bracket ACS-G

General information

The Console Bracket ACS-G brings the work platform (level 0) and climbing platform (level -1) together into a single structure.
The work platform (level 0) is the main platform of the climbing unit.
The formwork is operated and reinforcement work carried out from the work platform (level 0).
The work platform (level 0) is usually circumferential. From the work platform (level 0) you have access to the concreting platform (level +0.5) or the work platform (level +1) above and the climbing platform (level -1) below. (Fig. B4.01)

The climbing platform (level -1) is located beneath the work platform (level 0). The hydraulic system is installed on the climbing platform.
The climbing devices and the hydraulic unit are operated from there.
The climbing platform (level -1) is usually circumferential. From there you have access to the work platform (level 0) above and the finishing platform (level -2) below. (Fig. B4.02)

Recommended platform decking distance

- To the structure 5 cm.
- To adjacent platforms 5 cm (**25 mm shorter than the formwork on both the left and right**).

Do not fit planking that is narrower than 10 cm at the edge of the platform decking.

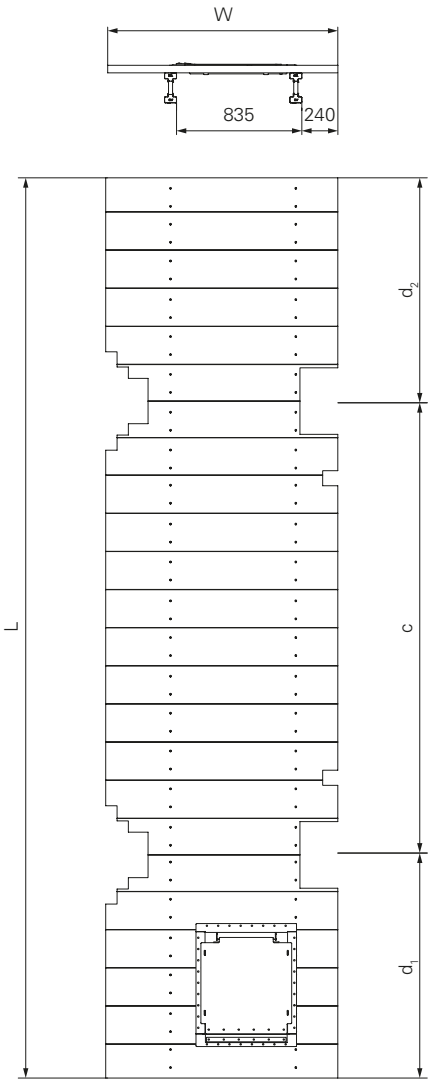


Fig. B4.01

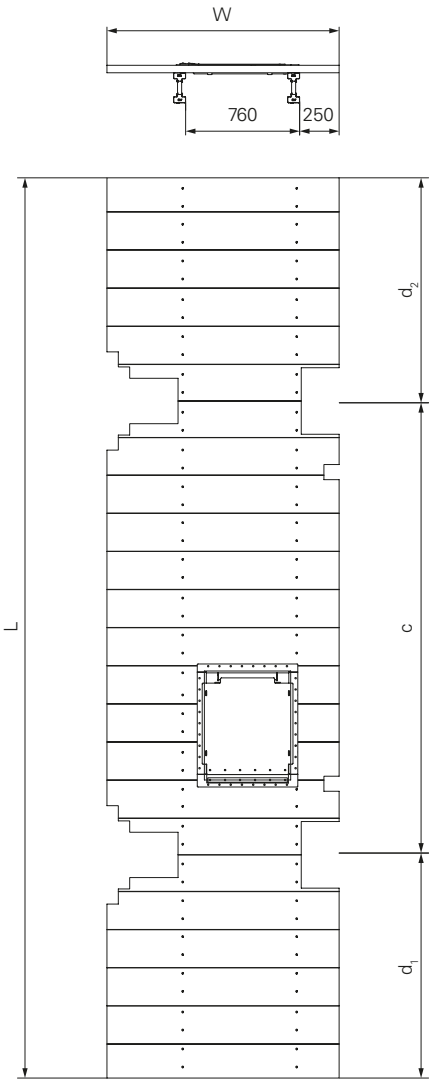


Fig. B4.02

Platform parameters	
L	Length of climbing unit
W	Width of work platform
c	Console bracket spacing
d	Cantilever arm

B4 Installing the Console Bracket ACS-G

Assembling platforms

Components

21 Formwork Girder GT 24
41 Console Bracket ACS-G
42 Compression strut for Cross Bracing ACS
43 Diagonal Bracing DW 15 ACS
44 Clamp GT 24 ACS
202 Torx 6 x 80
262 Planking

- As assembly aids, prepare two squared timbers with a stop aid. The dimension c corresponds to the bracket spacing. Lay out the squared timbers at the assembly area and align them parallel to each other.
- Height of the squared timbers > 25 cm.
- Height of the stops ≤ 4.5 cm.

Caution

Heavy components can tip over!
There is a risk of bruising on the arms and legs.
⇒ Prop up the Console Bracket ACS-G (**41**) temporarily.

Assembly

1. Set the Console Bracket ACS-G (**41**) down on its rear side while observing the console bracket spacing. (Fig. B4.03)
2. Bolt the compression strut for Cross Bracing ACS (**42**) at the installation position with the fixing materials provided.
   Make sure that the connection lugs are positioned correctly. (Fig. B4.04)

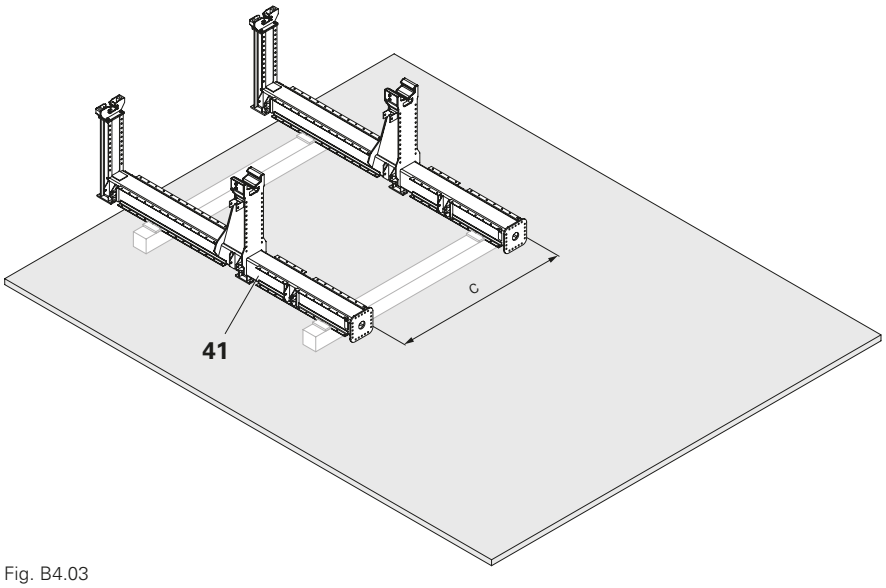


Fig. B4.03

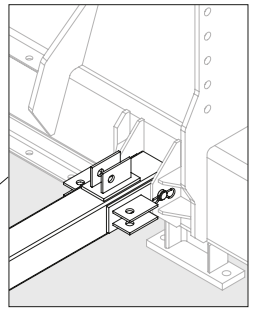


Fig. B4.04a

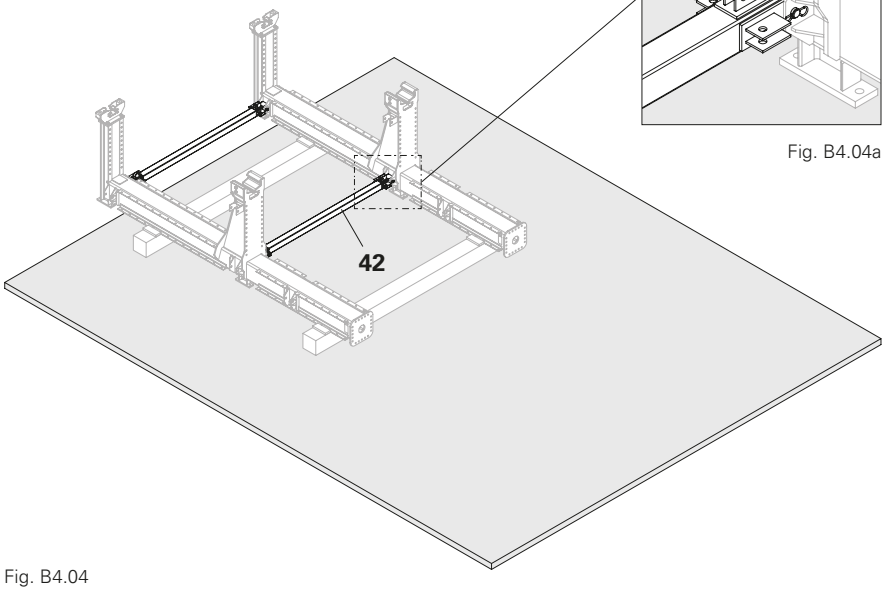


Fig. B4.04

3. Remove Tie Rod DW 15 from Diagonal Bracing DW 15 ACS (**43**) and replace it with a project-specific Tie Rod DW 15 (**43.2**).
4. Screw the Diagonal Bracing DW 15 ACS (**43**) onto the compression strut for Cross Bracing ACS (**42**) with the fixing materials provided.
5. Measure the diagonal bracing and align the Console Brackets ACS-G (**41**) if necessary.
6. Tension cross bracing with Turnbuckle CB.

(Fig. B4.05)

7. Slide 4x Clamps GT 24 ACS (**44**) onto the Formwork Girder GT 24 (**21**).
8. Lift the Formwork Girder GT 24 (**21**) into the Console Bracket ACS-G (**41**), align it and screw it onto the Console Bracket ACS-G (**41**) with the Clamp GT 24 ACS (**44**).

(Fig. B4.06)

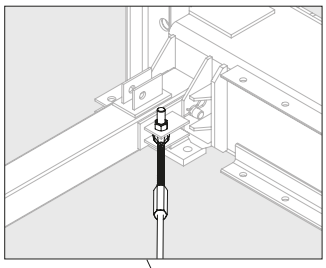


Fig. B4.05a

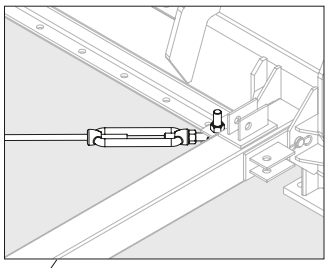


Fig. B4.05b

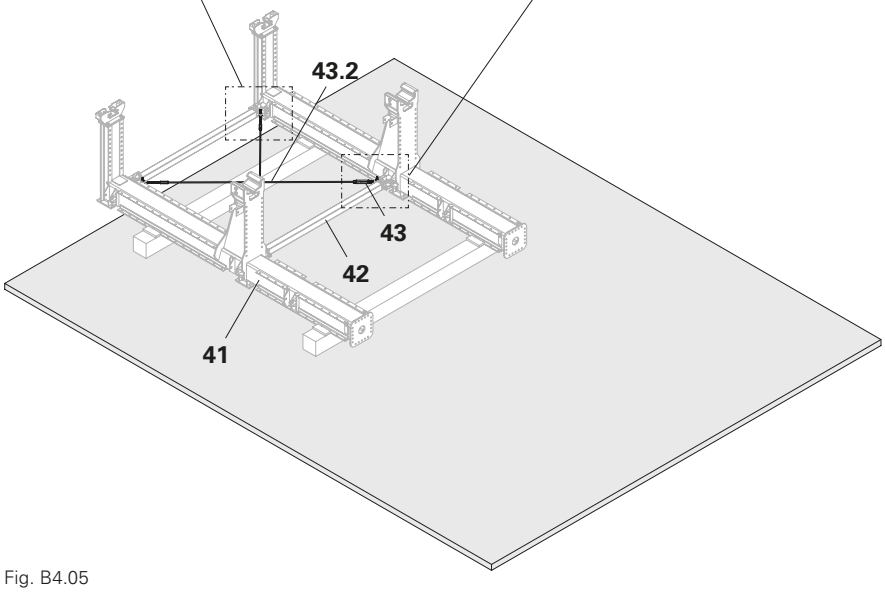


Fig. B4.05

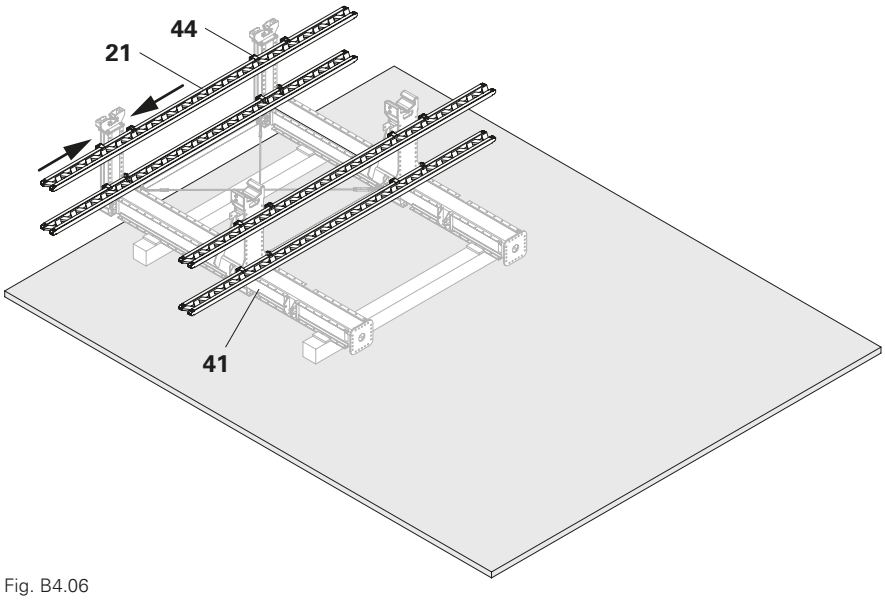


Fig. B4.06

9. Saw the planking to length.
10. Saw recesses in the platform decking for the work platform (level 0).

(Fig. B4.07 – B4.10).

The dimensions x_1 – x_5 are project-specific.

Platform decking for work platform (level 0)

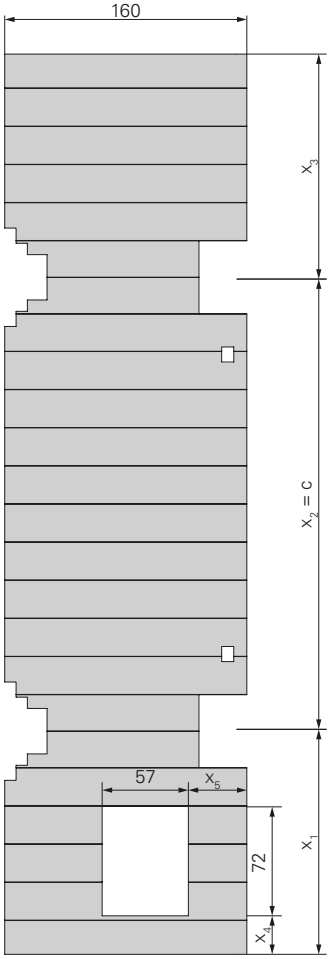


Fig. B4.07

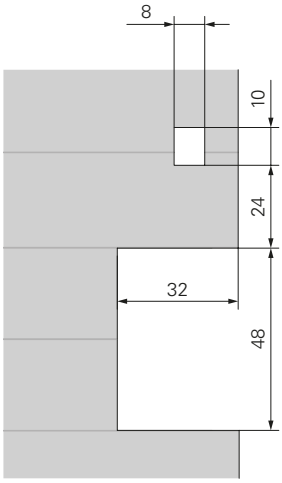


Fig. B4.08

Climbing Shoe-2 I ACS

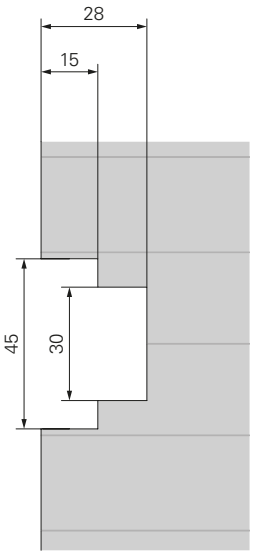


Fig. B4.09

Climbing Shoe II ACS

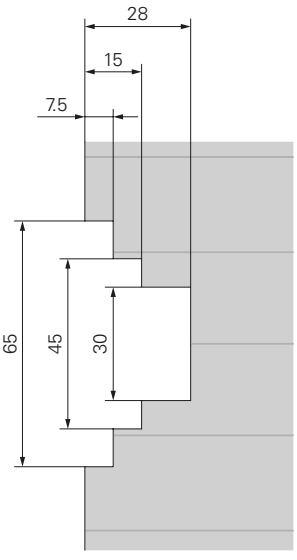


Fig. B4.10

11. Saw recesses in the platform decking for the climbing platform (level -1).

(Fig. B4.11 – B4.14).

The dimensions $x_1 – x_5$ are project-specific.

Platform decking for climbing platform (level -1)

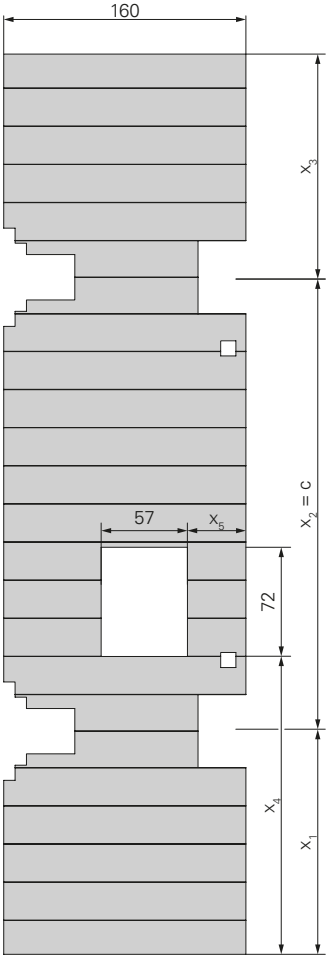


Fig. B4.11

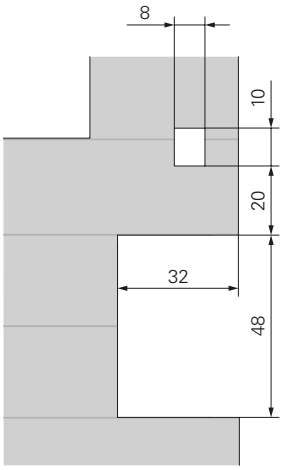


Fig. B4.12

Climbing Shoe-2 I ACS

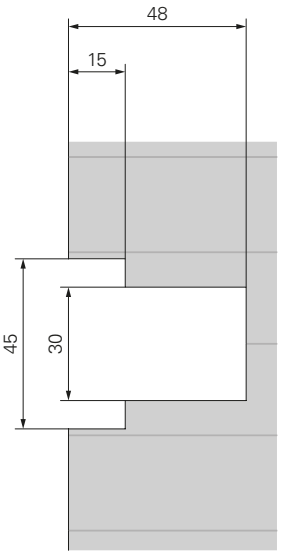


Fig. B4.13

Climbing Shoe II ACS

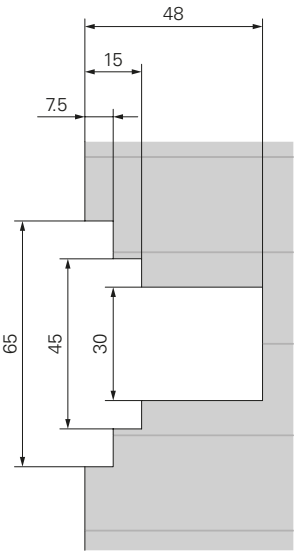


Fig. B4.14

12. Place the planking (**262**) on the Formwork Girders GT 24, align them and screw them tight with 2x Torx 6 x 80 (**202**) for each girder. (Fig. B4.15)
13. Fit the hatch (**280**), see "Fitting the descent hatch" on page 61. (Fig. B4.16)

- If necessary, fix the planking at the descent hatch as well as at the transition piece.
- Place the Formwork Girder GT 24 of the climbing platform so far back that the lower climbing head of Climbing Device ACS 100 can extend fully.

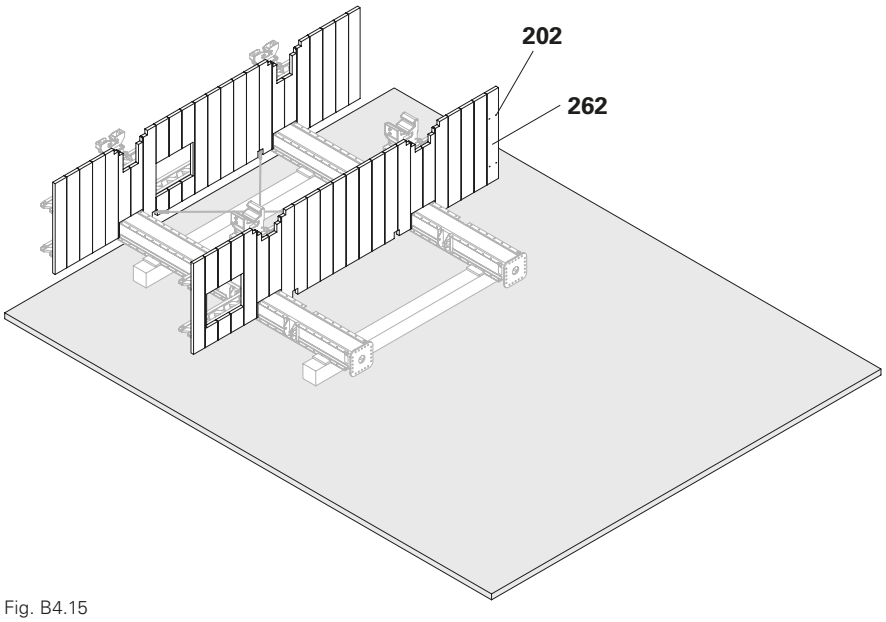


Fig. B4.15

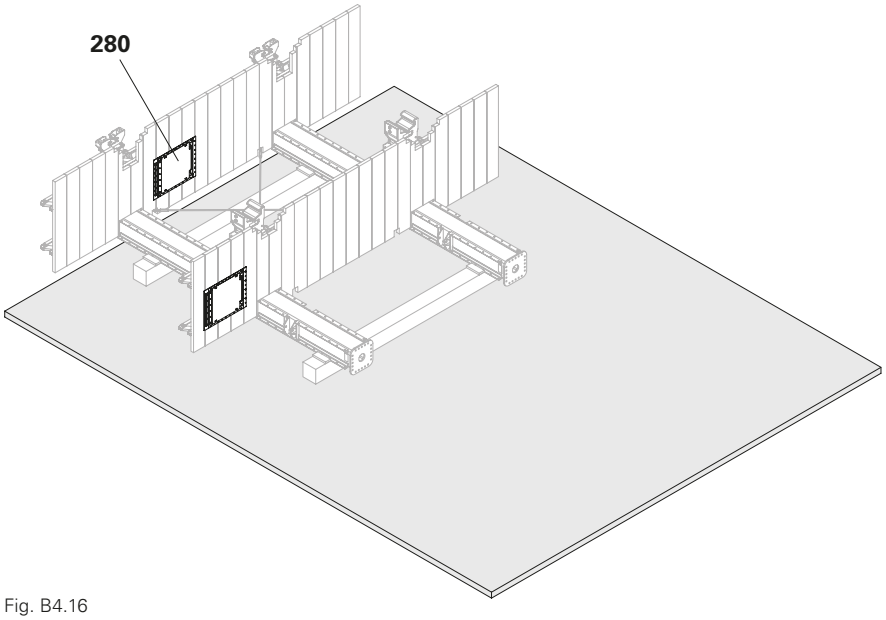


Fig. B4.16

Installing the vertical post intermediate

Components per console bracket

45 Vertical Post Intermediate 1200 ACS
47 HV-Bolt Set M20x75

Assembly

1. Screw the Vertical Post Intermediate 1200 ACS (**45**) onto the head end of the Console Bracket ACS-G (**41**) with the HV-Bolt Set M20x75 (**47**). (Fig. B5.01)

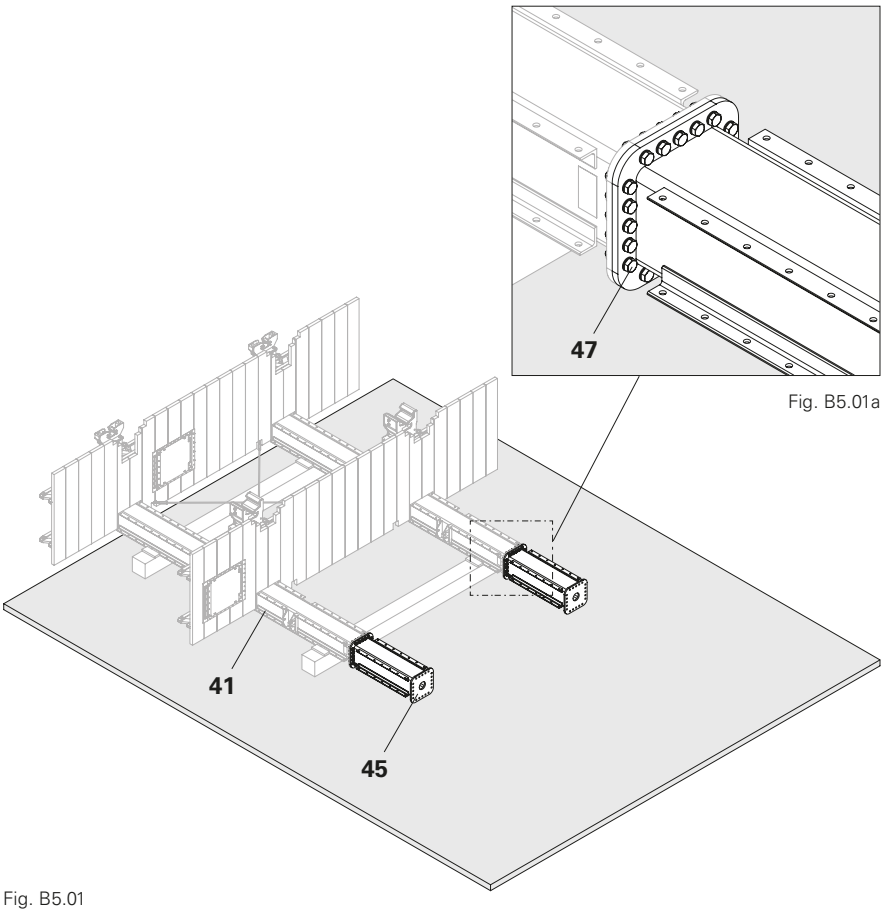


Fig. B5.01a

Fig. B5.01

Fitting the vertical post top

Components per console bracket

46 Vertical Post Top 2100 ACS
47 HV-Bolt Set M20x75

Assembly

1. Screw the Vertical Post Top 2100 ACS (**46**) onto the Vertical Post Intermediate 1200 ACS (**45**) with the HV-Bolt Set M20x75 (**47**). (Fig. B5.02)

Support the Vertical Post Top 2100 ACS (**46**) with additional squared timber.

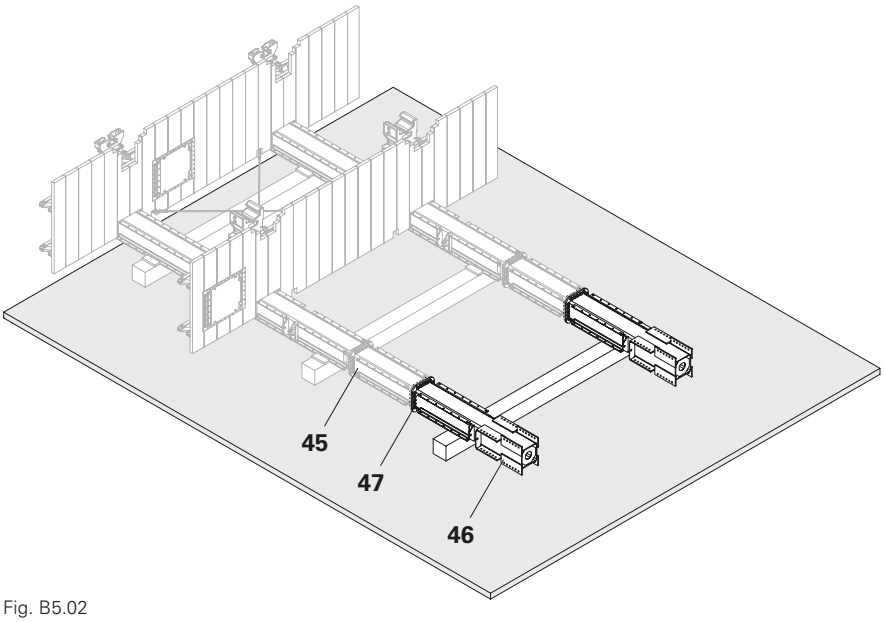


Fig. B5.02

Installing the gallows

Variant 1
By using long gallows for assembly, it is possible to install two formwork units. One formwork unit on the console bracket side and one formwork unit on the opposite side.

Components

42 Compression strut for Cross Bracing ACS
43 Diagonal Bracing DW 15 ACS
49 Gallows 3325 ACS-G
50 Panel Beam 1110 ACS
51 Counterplate 100x100x10 ACS
52 Trolley HTP
60 Adapter DW 20 ACS
64 Bolt 25 x 180
207 Cotter pin 5/1
208 Bolt ISO 4017 M16 x 110-8.8
209 Washer ISO 7089 200 HV, A 16
210 Nut ISO 7040 M16-8

Assembly
1. Screw the Gallows 3325 ACS-G (**49**) onto the Vertical Post Top 2100 ACS (**46**) with the fixing materials provided. (Fig. B5.03)
2. Bolt the compression strut for Cross Bracing ACS (**42**) at the installation position with bolt 25 x 180 (**64**) and cotter pin 5/1 (**207**).
   Make sure that the connection lugs are positioned correctly. (Fig. B5.04)

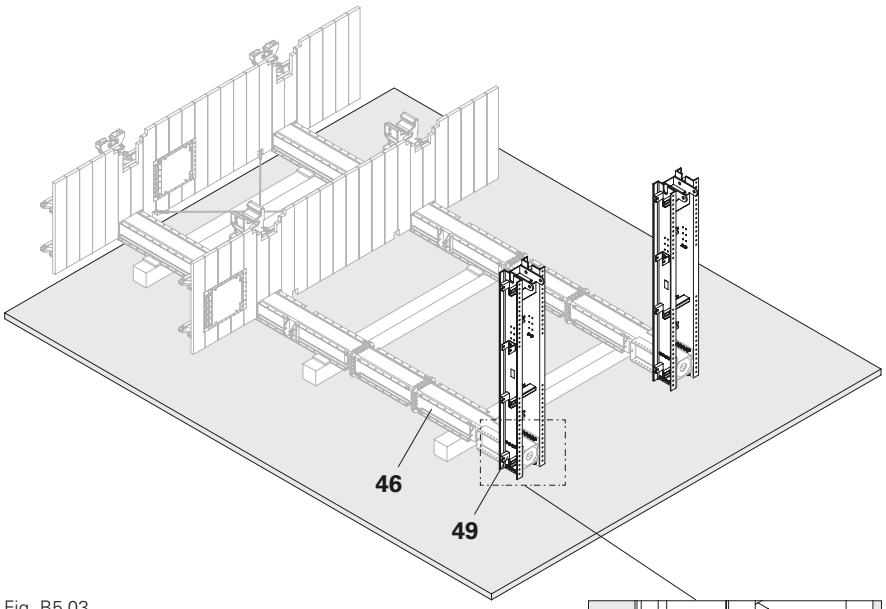


Fig. B5.03

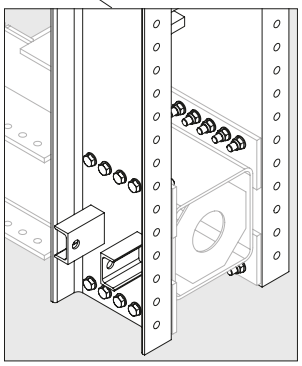


Fig. B5.03a

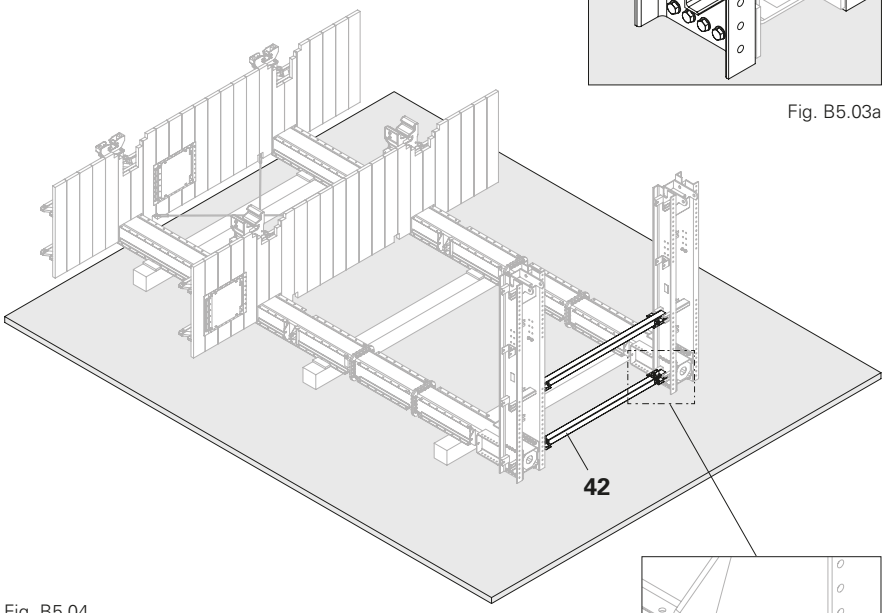


Fig. B5.04

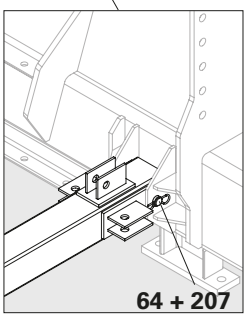


Fig. B5.04a

3. Remove Tie Rod DW 15 from Diagonal Bracing DW 15 ACS (**43**) and replace it with a project-specific Tie Rod DW 15 (**43.2**).
4. Screw the Diagonal Bracing DW 15 ACS (**43**) onto the compression strut for Cross Bracing ACS (**42**) with the fixing materials provided.
5. Calibrate the diagonal bracing and tension the cross connector with Turnbuckle CB.

(Fig. B5.05)

6. For each set of Gallows 3325 ACS-G (**49**), screw 2x Panel Beams 1110 ACS (**50**) into the installation position of Gallows 3325 ACS-G (**49**) with 2x Counterplate 100x100x10 ACS (**51**), 4x Bolt ISO 4017 M16 x 110-8.8 (**208**), Washer ISO 7089 200 HV, A 16 (**209**) and Nut ISO 7040 M16-8 (**210**) in each case. Ensure that the installation position is correct.

(Fig. B5.06 + B5.07)

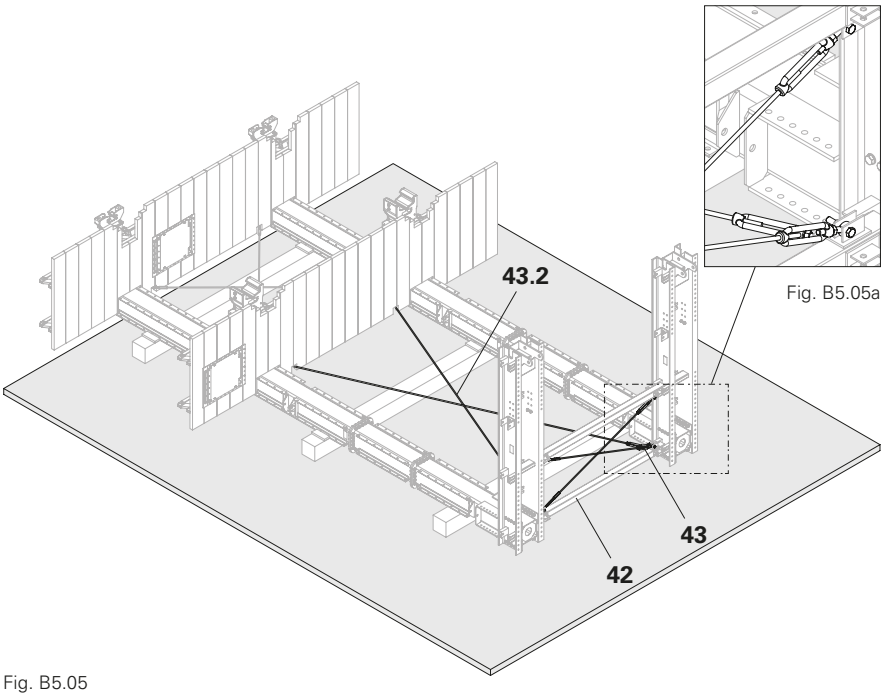


Fig. B5.05a

Fig. B5.05

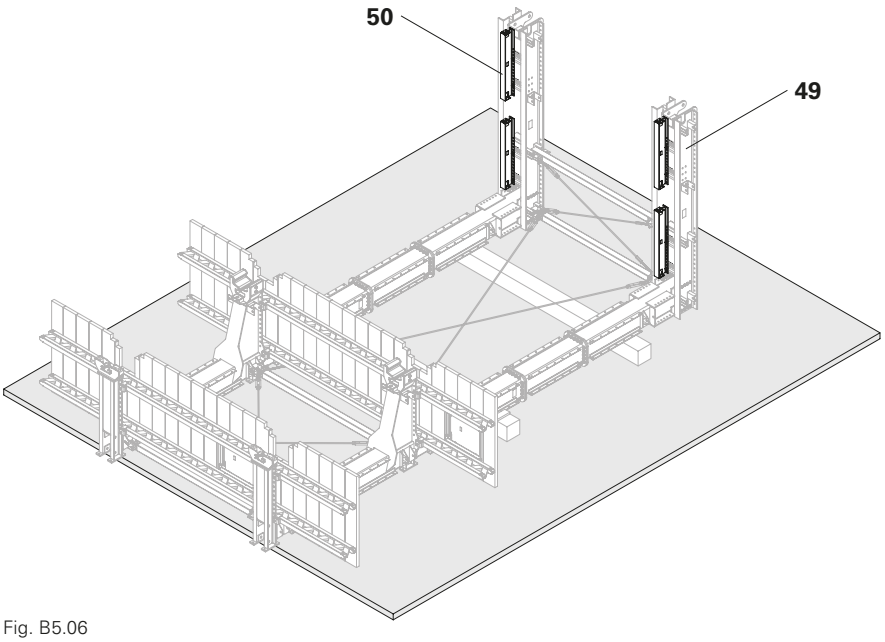


Fig. B5.06

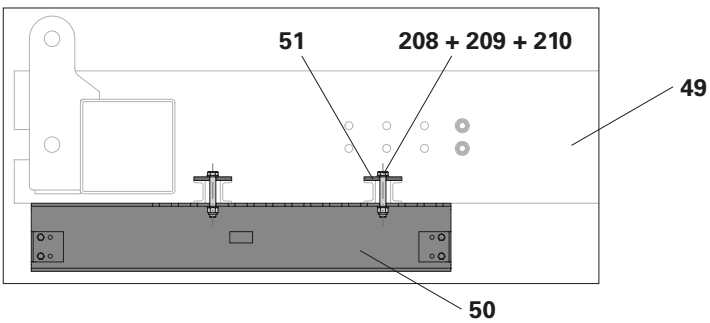


Fig. B5.07

7. Spindle out the clevis load bar (**52.1**) from the Trolley HTP (**52**) and slide the Trolley HTP (**52**) onto the Panel Beam 1110 ACS (**50**).
8. Tighten the clevis load bar (**52.1**) until the rollers (**52.2**) are in contact with the flange of the Panel Beam 1110 ACS (**50**).
9. Turn the clevis load bar (**52.1**) back one turn.

(Fig. B5.08 – B5.12)

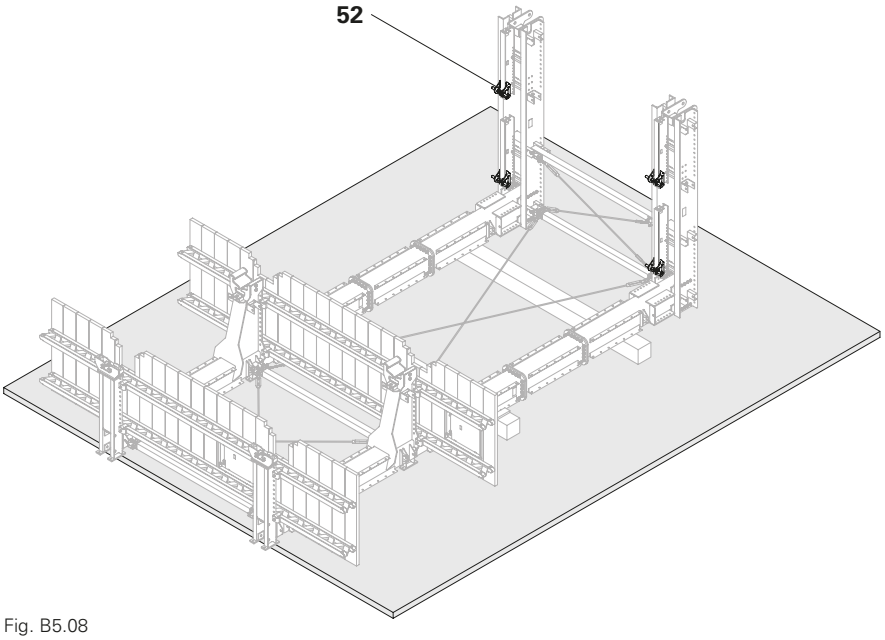


Fig. B5.08

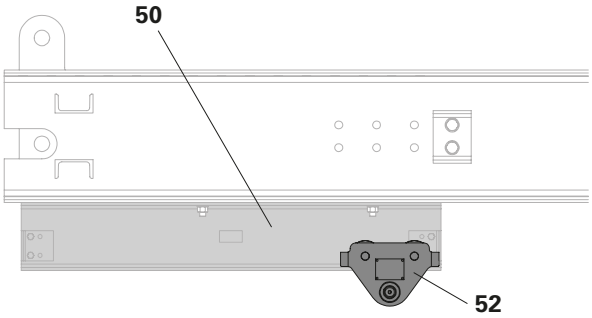


Fig. B5.09

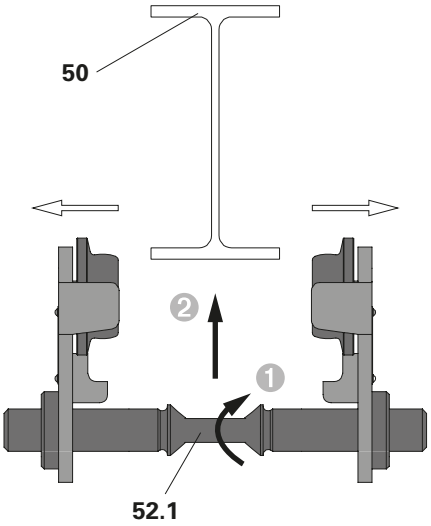


Fig. B5.10

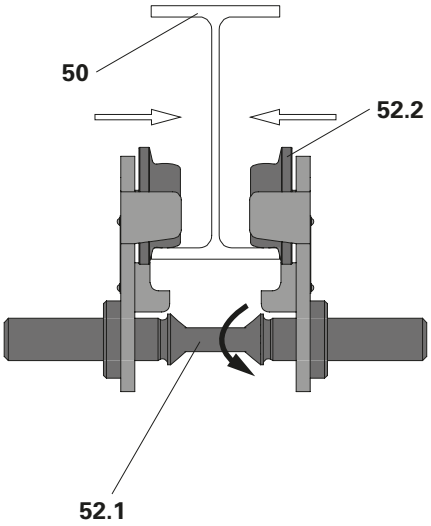


Fig. B5.11

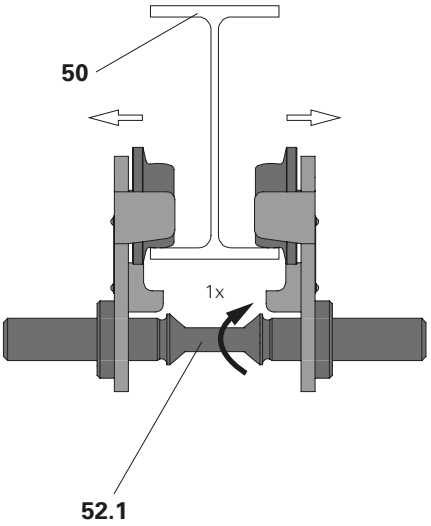


Fig. B5.12

10. Screw Adapter DW 20 ACS (**60**) onto the clevis load bar (**52.1**) of Trolley HTP (**52**).
(Fig. B5.13)

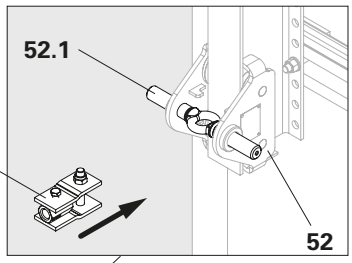


Fig. B5.13a

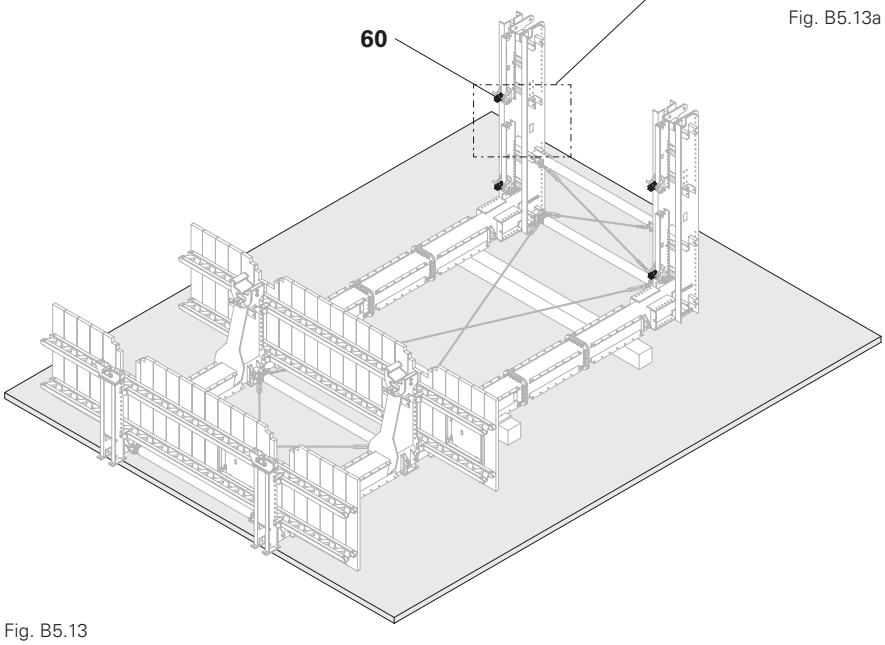


Fig. B5.13

Variant 2
By using short gallows for assembly, it is possible to install one formwork unit on the console bracket side.
(Fig. B5.14)
The assembly process corresponds to that of variant 1.

Components

- **42** Compression strut for Cross Bracing ACS
- **43** Diagonal Bracing DW 15 ACS
- **48** Gallows 1430 ACS-G
- **50** Panel Beam 1110 ACS
- **51** Counterplate 100x100x10 ACS
- **52** Trolley HTP
- **60** Adapter DW 20 ACS
- **64** Bolt 25 x 180
- **207** Cotter pin 5/1
- **208** Bolt ISO 4017 M16 x 110-8.8
- **209** Washer ISO 7089 200 HV, A 16
- **210** Nut ISO 7040 M16-8

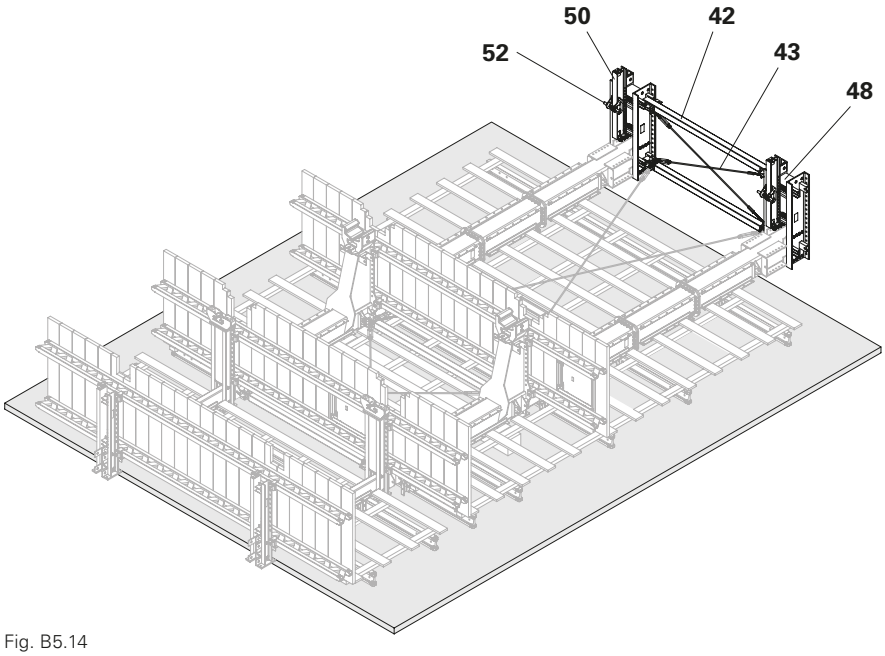


Fig. B5.14

Installing the ladder cage

Components

20 Girder VT 20
53 Connector AV ACS
54 Ladder Cage Connection VT 20 ACS
211 Bolt ISO 4014 M16 x 90-8.8
212 Washer ISO 7094 100 HV, A 16
213 Nut ISO 4032 M16-8
269 Shim VT 20

Assembly

1. Bolt the Connector AV ACS (**53**) at the installation position with the fixing materials provided.
2. Bolt the Ladder Cage Connection VT 20 ACS (**54**) at the installation position with the fixing materials provided.

(Fig. B6.01)

3. Prepare Girder VT 20 (**20**) with Shim VT 20 (**269**). See "Girder VT 20 for the ladder cage" on page 57.
4. Screw the Girder VT 20 (**20**) onto the Ladder Cage Connection VT 20 ACS (**54**) using Bolt ISO 4014 M16 x 90-8.8 (**211**), Washer ISO 7094 100 HV A 16 (**212**) and Nut ISO 4032 M16-8 (**213**).

(Fig. B6.02 + B6.03)

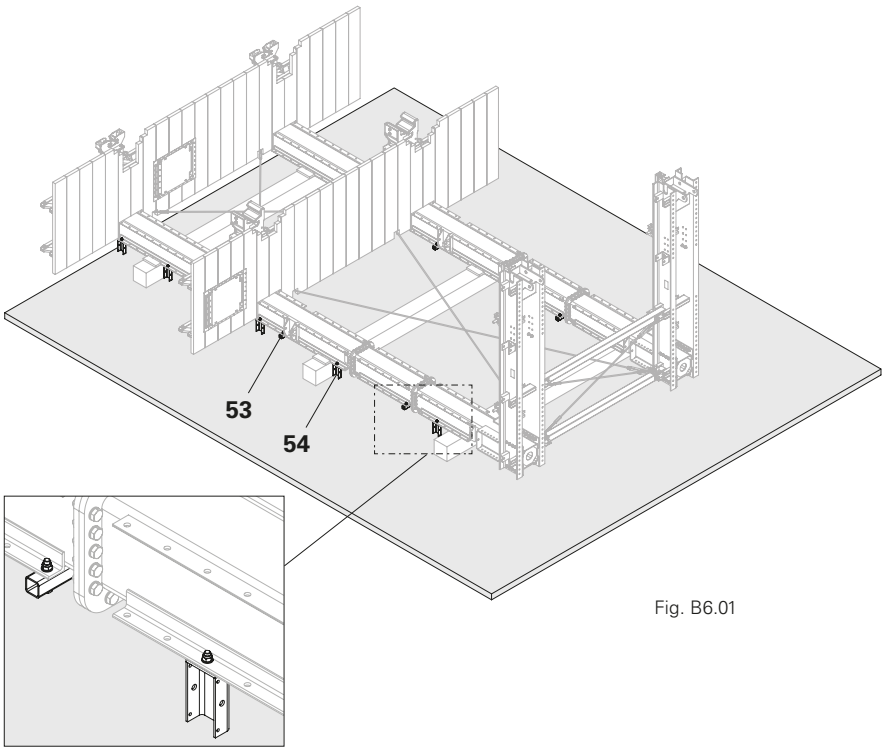


Fig. B6.01

Fig. B6.01a

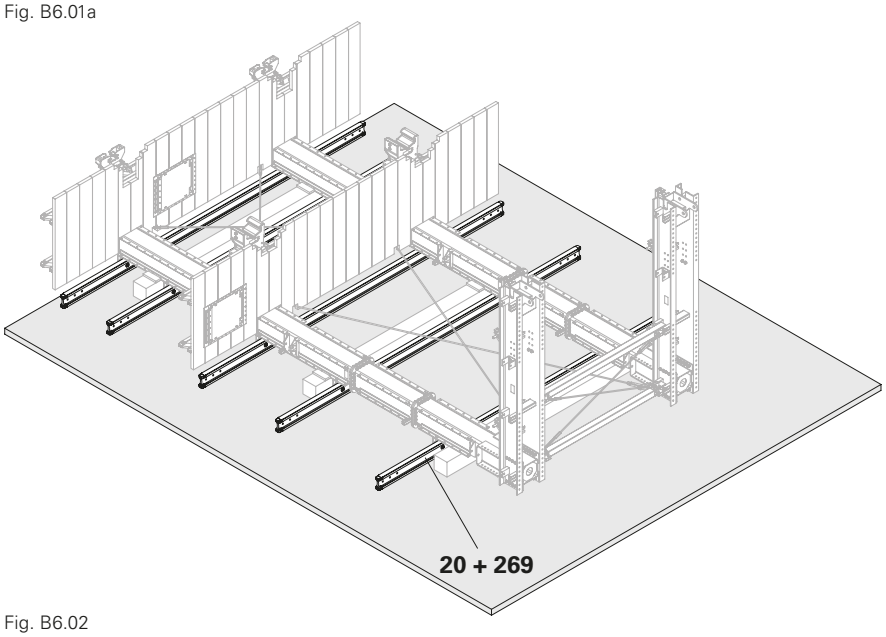


Fig. B6.02

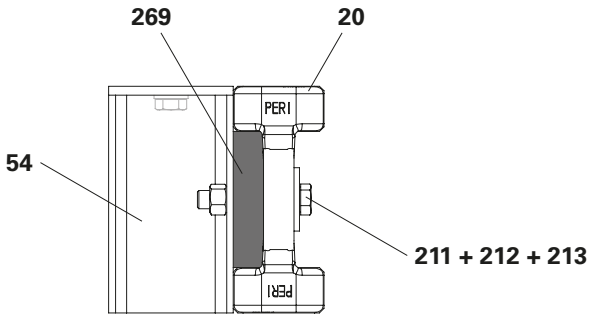


Fig. B6.03

B6 Installing the ladder cage

Components

202 Torx 6 x 80
227 Torx 6 x 100
267 Counter-batten
268 Ladder cage

Assembly

1. Screw the counter-batten (**267**) onto the Girder VT 20 (**20**) with Torx 6 x 100 (**227**). (Fig. B6.04)
2. Screw the ladder cage (**268**) onto the counter-batten (**267**) using Torx 6 x 80 (**202**). (Fig. B6.05)

The lowest guardrail board on each platform serves as a toe board. It must rest on the platform decking!

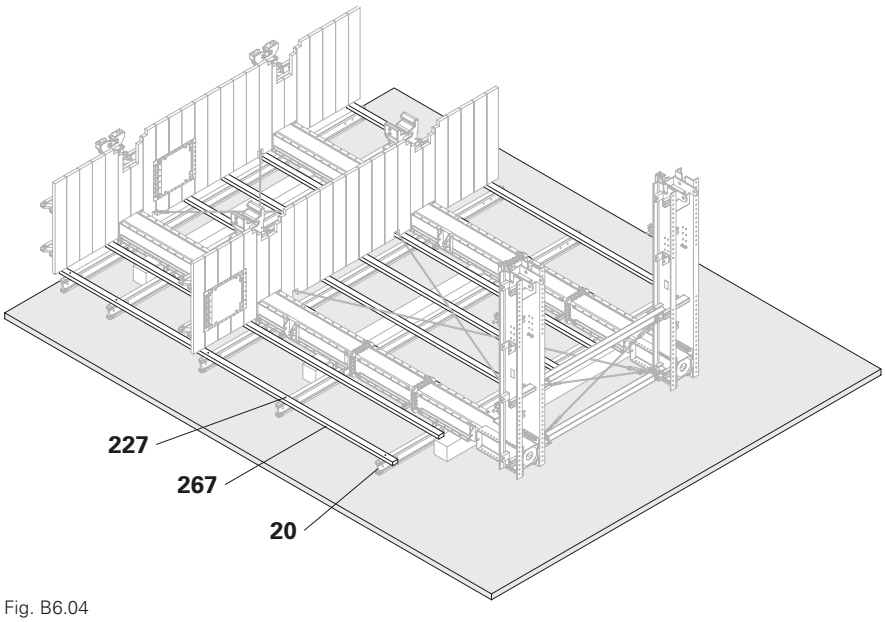


Fig. B6.04

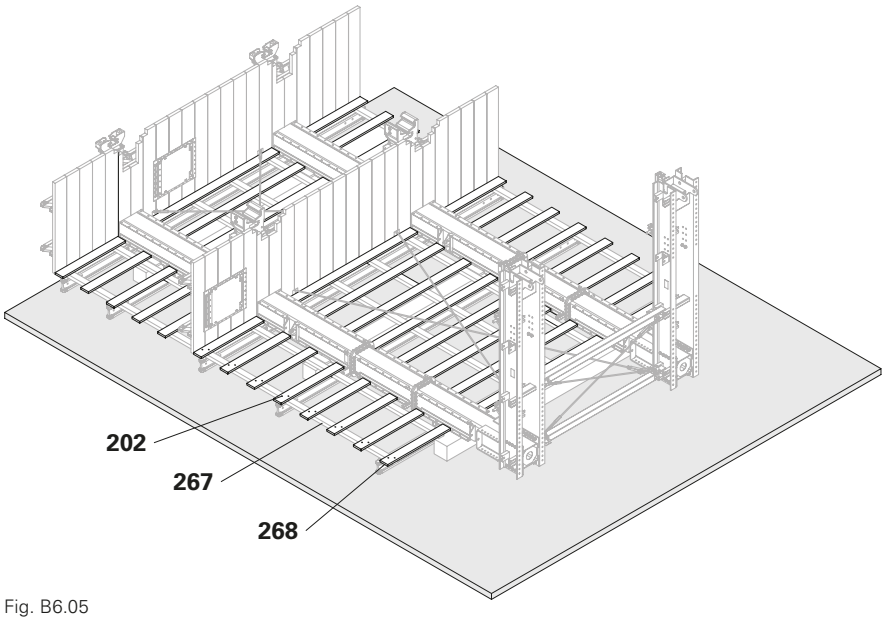


Fig. B6.05

B7 Installing the work platform (level +1)

General information

The work platform (level +1) is located above the work platform (level 0). Reinforcement and concreting work is carried out from here.
The work platform (level +1) is usually circumferential. From there you have access to the concreting platform (level +0.5) or the work platform (level 0) below. The concreting platform is not required for low concreting heights.
The work platform (level +1) consists of two platform sections with a ladder cage. There is an opening between the two platform sections that is closed entirely with hinged hatches.
Both platform sections are pre-assembled and then attached to the gallows of the climbing unit.

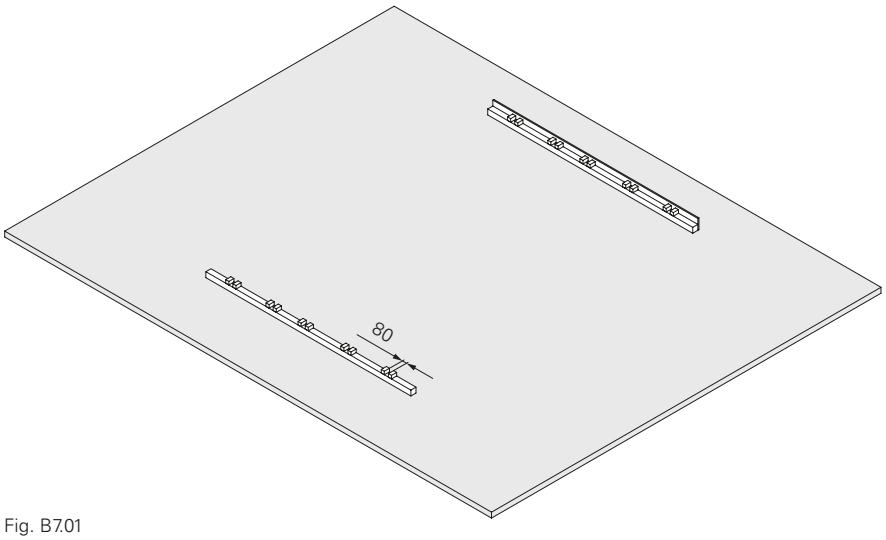


Fig. B7.01

The hinged hatch may only be opened for reinforcement and concreting work.

Recommended platform decking distance
To adjacent platforms 5 cm (**25 mm shorter than the formwork on both the left and right**).

Pre-assembling the platform sections

As assembly aids, prepare two squared timbers with a stop aid. Lay out the squared timbers at the assembly area and align them parallel to each other. (Fig. B7.01)

Installing the base sections

Components

21 Formwork Girder GT 24
44 Clamp GT 24 ACS
202 Torx 6 x 80
262 Planking
280 Hinged Hatch 55 x 60-2

1. Slide 4x Clamps GT 24 ACS (**44**) onto the Formwork Girder GT 24 (**21**).
2. Place the Formwork Girders GT 24 (**21**) on the squared timbers. The Clamps GT 24 ACS (**44**) hang down.

(Fig. B7.02)

3. Saw the planking (**262**) to length.
4. Place the planking (**262**) on the Formwork Girders GT 24 (**21**), align them and screw them tight with 2x Torx 6 x 80 (**202**) for each girder.

(Fig. B7.03)

5. Fit the hatch (**280**), see "Fitting the descent hatch" on page 61.

(Fig. B7.04)

- If necessary, fix the planking at the descent hatch as well as at the transition piece.
- Do not fit planking in the area of the gallows.

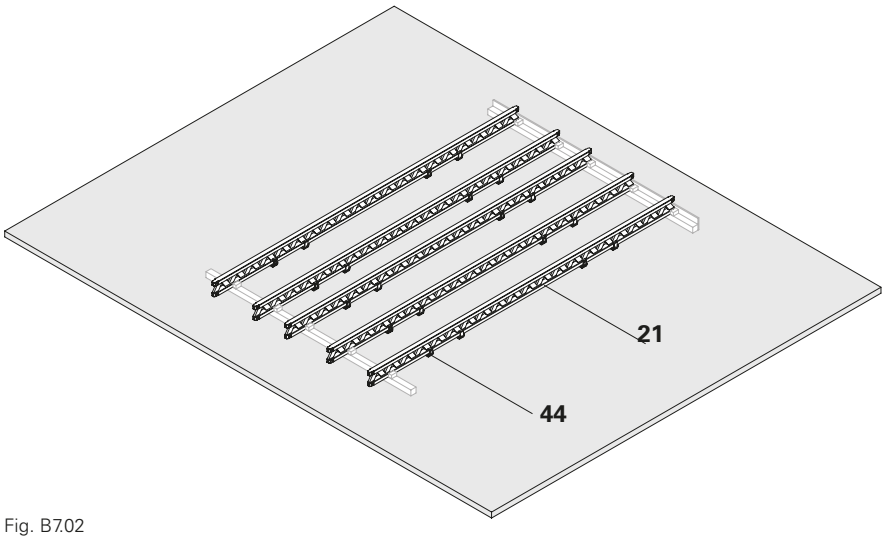


Fig. B7.02

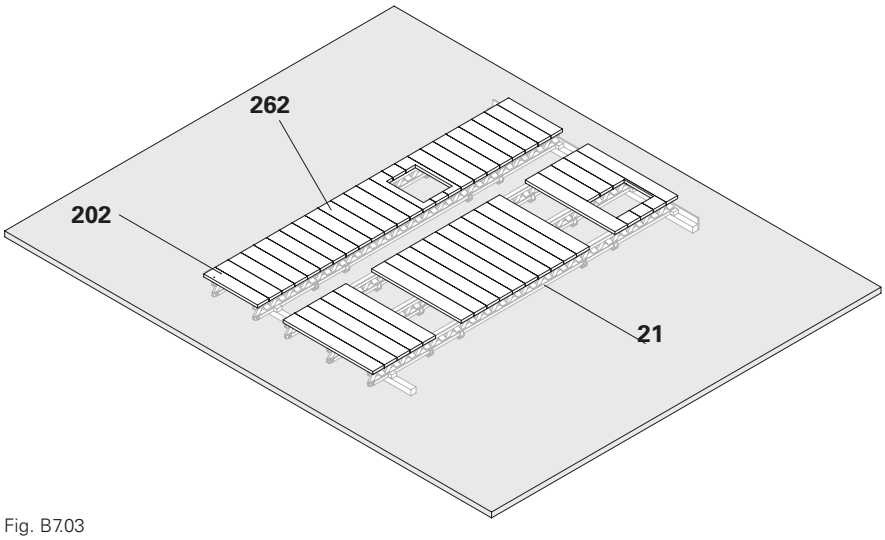


Fig. B7.03

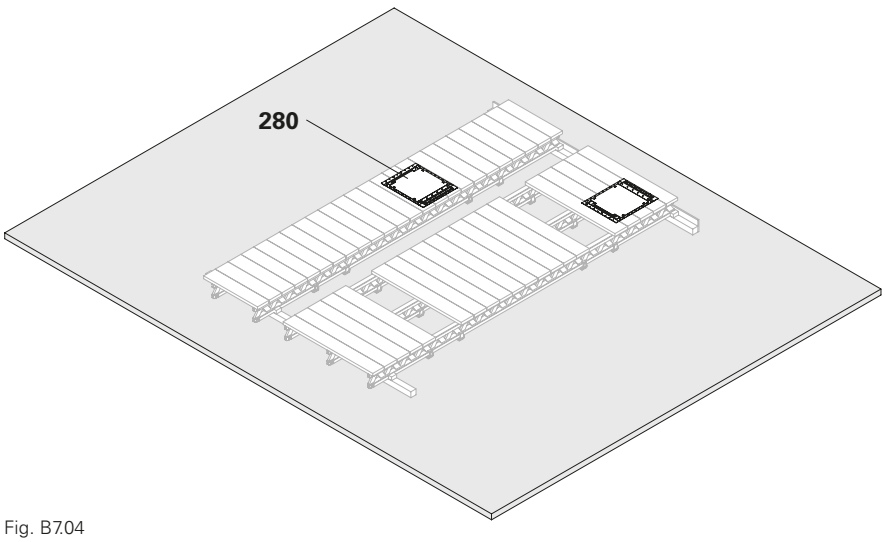


Fig. B7.04

Fitting the hinged hatches

Components

201 Torx 6 x 60
204 Torx 5 x 20
225 Washer ISO 7089 200 HV, A 8
246 Fire hose
277 Profiled timber
278 Hinged hatch

1. Screw the profiled timber (**277**) at the installation position onto the platform decking using Torx 6 x 60 (**201**).
2. Position the hinged hatch (**278**) at a distance of 10 mm from the profiled timber (**277**).
3. Mark the edge of the hinged hatch on the platform decking.
   ➔ When assembling the platform sections, align the hinged hatch with this marking.
4. Place the fire hose (**246**) over the middle of the profiled timber (**277**) and hinged hatch (**278**).
5. Screw the fire hose (**246**) onto the profiled timber (**277**) and hinged hatch (**278**) at a distance of 15 cm with Torx 5 x 20 (**204**) and Washer ISO 7089 200 HV, A 8 (**225**).

(Fig. B7.05 + B7.06 + B7.06a)

!

Make sure that the support for the hinged hatches on both platform sections is sufficiently large and of equal size.

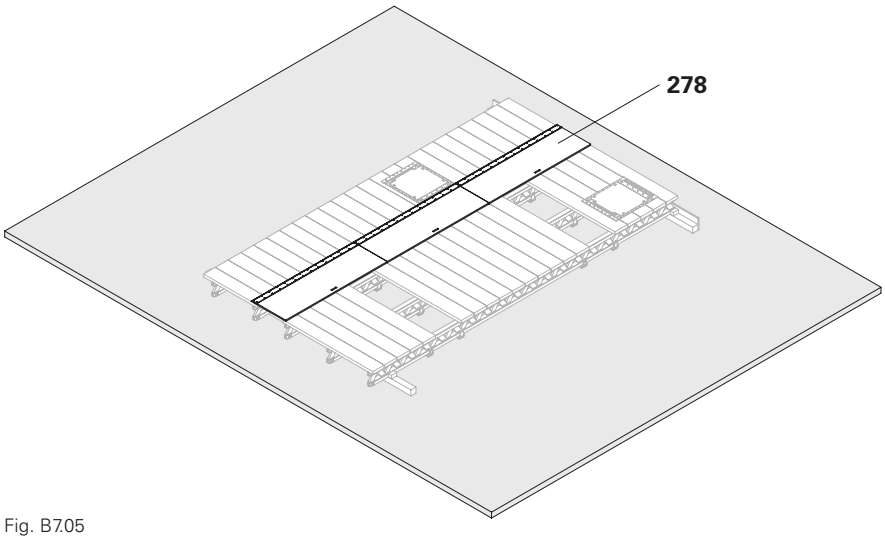


Fig. B7.05

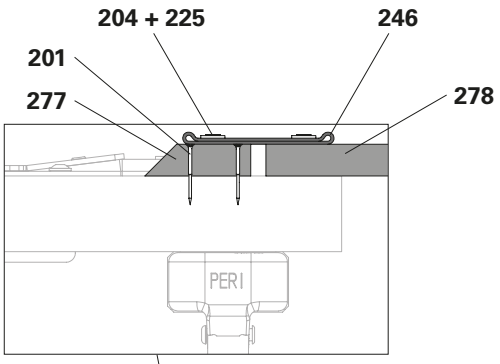


Fig. B7.06a

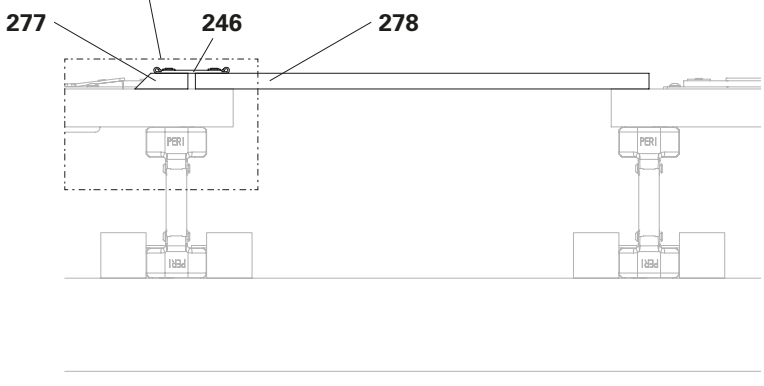


Fig. B7.06

B7 Installing the work platform (level +1)

Installing the ladder cage

Components

15 Guardrail Post PD 8
233 F.H. Bolt DIN 603 M8 x 70 MU
252 Spax 5 x 40
263 Toe board
264 Guardrail board
272 Timber wedge

1. Drill Ø 9 mm holes in the platform decking at the installation position for Guardrail Post PD 8 (**15**).
2. Screw Guardrail Post PD 8 (**15**) onto the platform decking with F.H. Bolt DIN 603 M8 x 70 MU (**233**).
3. Attach toe boards (**263**) and guardrail boards (**264**) to Guardrail Post PD 8 (**15**) and place wooden wedges (**272**) behind them.
4. Screw the boards onto the Guardrail Post PD 8 (**15**) with Spax 5 x 40 (**252**).

(Fig. B7.07)

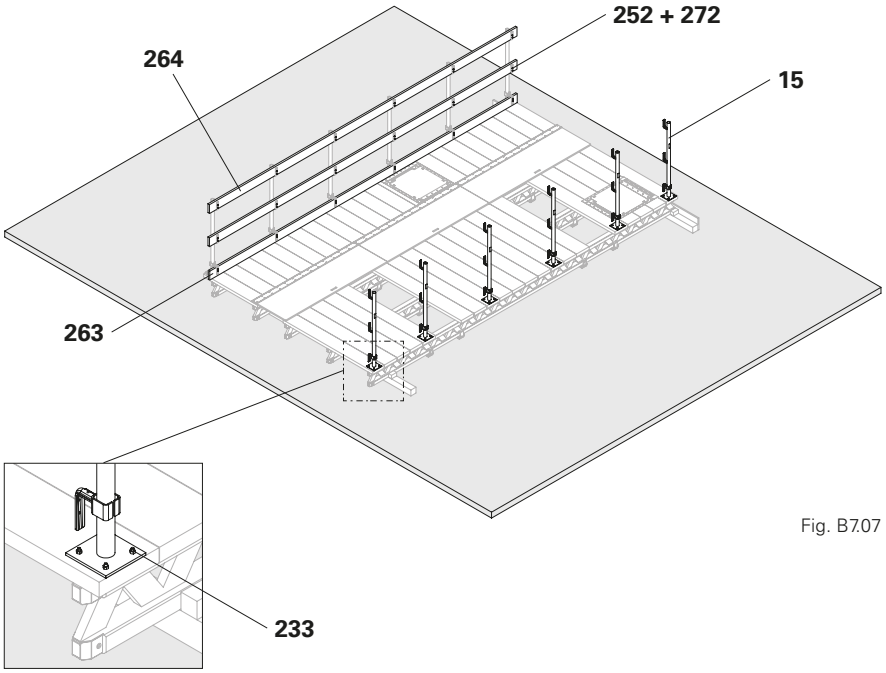


Fig. B7.07

Fig. B7.07a

Fig. B2.21

Assembling the platform sections

Assembly

1. Mark the installation position of the Formwork Girder GT 24 (**21**) for the two platform sections on Gallows 3325 ACS-G (**49**).
2. Attach the platform section on the console bracket side to the crane.
3. Lift the platform section on the console bracket side into the installation position of Gallows 3325 ACS-G (**49**), align it and screw it onto the Gallows 3325 ACS-G (**49**) with the Clamps GT 24 ACS (**44**).

(Fig. B7.08)

4. Attach the rear side of the opposite platform section to the crane.
5. Lift the opposite platform section into the installation position of Gallows 3325 ACS-G (**49**), align it and screw it onto the Gallows 3325 ACS-G (**49**) with the Clamps GT 24 ACS (**44**).

(Fig. B7.09)

Make sure that the hinged hatches rest neatly on the platform decking of the platform section on the console bracket side. Note the marking!

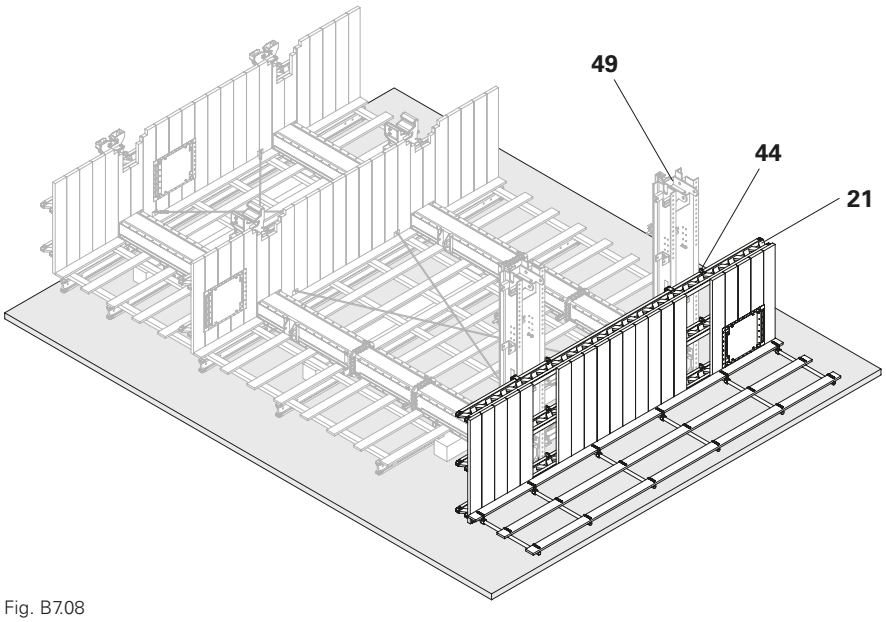


Fig. B7.08

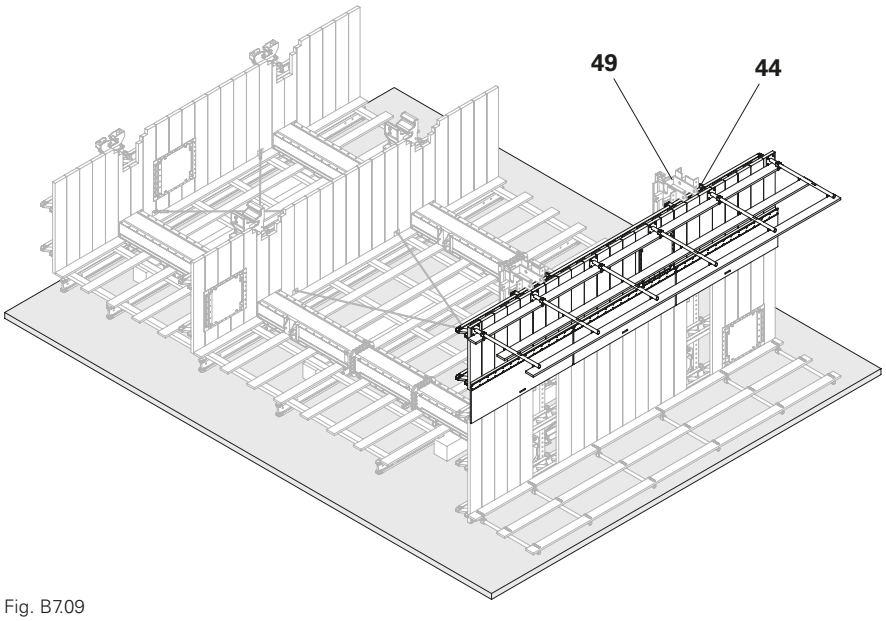


Fig. B7.09

B8 Completing the climbing unit

To complete the climbing unit, carry out the following assembly steps.

Components

140 Climbing Device ACS 100
146 Pressure Point Spindle M42 ACS

Fitting the Climbing Device ACS 100
Attach the Climbing Device ACS 100 (**140**). See the Assembly Instructions for the 'ACS 100 Climbing Device and Hydraulics'.
(Fig. B8.01)

Fitting the ladder
Fit the ladder for the work platform and climbing platform. See "Fitting the ladder" on page 62.
(Fig. B8.01)

Fitting the pressure point spindle
1. Screw 2x Pressure Point Spindles M42 ACS (**146**) into each cantilever beam (level -1) (**41.2**) of the Console Bracket ACS-G (**41**).
2. Adjust Pressure Point Spindle M42 ACS (**146**).
   The projection towards the front edge of the platform decking is 5 cm.

(Fig. B8.01)

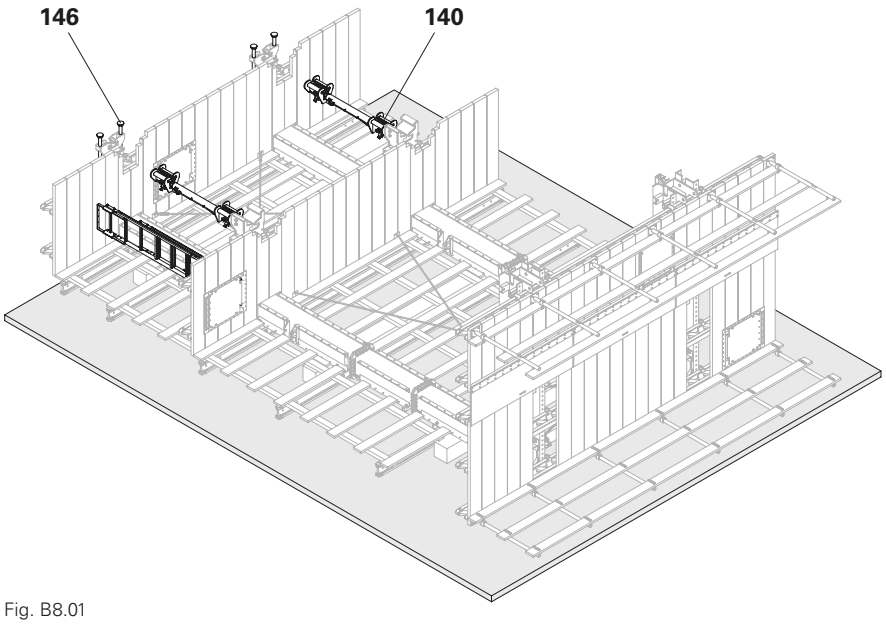


Fig. B8.01

General information

The counter-platform is suspended on the opposite side of the climbing unit. The formwork units on the opposite side are operated and anchored from here. If necessary, reinforcement work is also carried out from here.
The counter-platform is usually circumferential.

Recommended platform decking distance

- To the structure 5 cm.
- To adjacent platforms 5 cm (**25 mm shorter than the formwork on both the left and right**).

- As assembly aids, prepare two squared timbers with a stop aid. The dimension c corresponds to the bracket spacing. Lay out the squared timbers at the assembly area and align them parallel to each other.
- Height of the squared timbers > 25 cm.
- Height of the stops ≤ 4.5 cm.

Assembling the platform sections

Components

21	Formwork Girder GT 24
58	Platform Beam 870-1170 ACS
59	Supporting Spindle ACS
202	Torx 6 x 80
222	F.H. Bolt DIN 603 M8 x 100 MU
262	Planking
269	Shim VT 20

Assembling the base section

1. Lay out Platform Beams 870-1170 ACS (**58**) while observing the console bracket spacing. (Fig. B9.01)

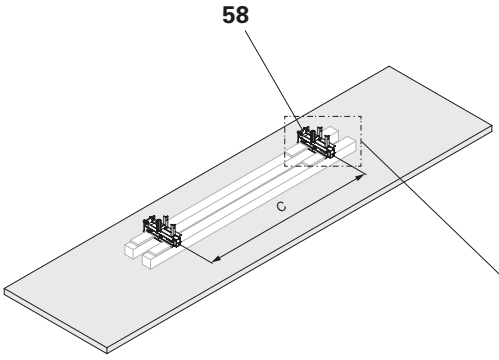


Fig. B9.01

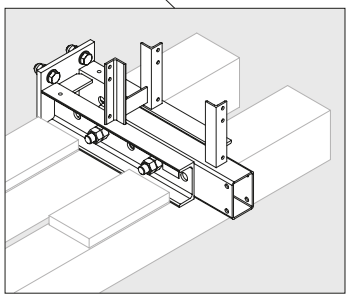


Fig. B9.01a

2. Slide the base end of the Supporting Spindle ACS (**59**) into the Platform Beam 870-1170 ACS (**58**) and screw it to the front side of the Platform Beam 870-1170 ACS (**58**) with the fixing materials supplied. (Fig. B9.02 + B9.02a)
3. Place the Formwork Girder GT 24 (**21**) on the Platform Beam 870-1170 ACS (**58**) as a girder and position it.
4. Pre-drill the Formwork Girder GT 24 (**21**) with Ø 9 mm holes and screw it to the Platform Beam 870-1170 ACS (**58**) with F.H. Bolts DIN 603 M8 x 100 MU (**222**).

(Fig. B9.03)

- Line the Formwork Girder GT 24 with a shim (**269**) on both sides. (Fig. B9.04)
- A shim is not required when Girder VT 20 is used.

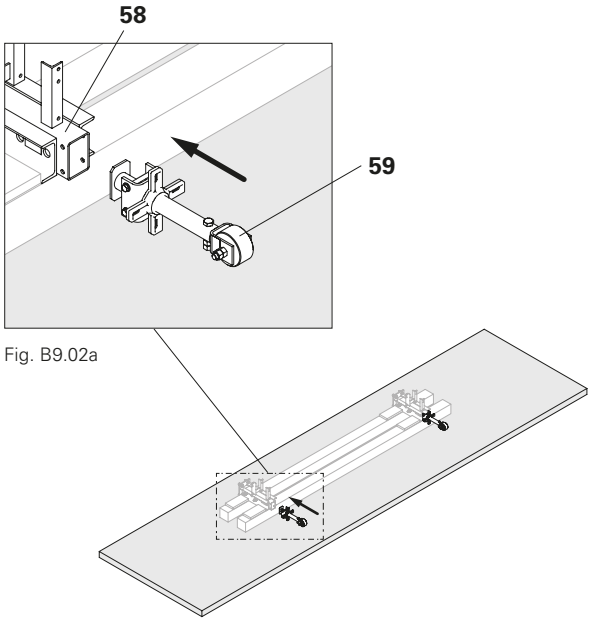


Fig. B9.02a

Fig. B9.02

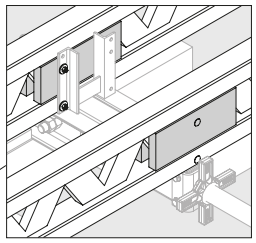


Fig. B9.03a

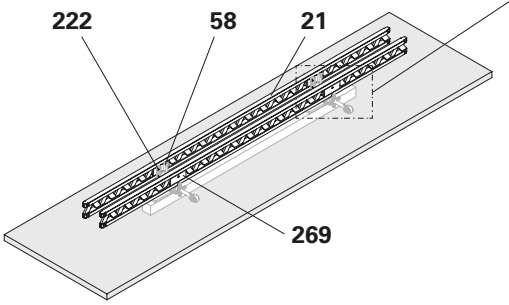


Fig. B9.03

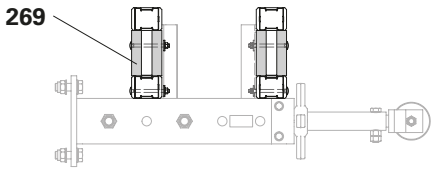


Fig. B9.04

5. Saw the planking (**262**) to length.
6. Place the planking (**262**) on the Formwork Girders GT 24 (**21**), align them and screw them tight with 2x Torx 6 x 80 (**202**) for each girder.
7. Saw recesses in the platform decking for the Platform Post 5900 IPBL 240 ACS.

(Fig. B9.05 + B9.06)

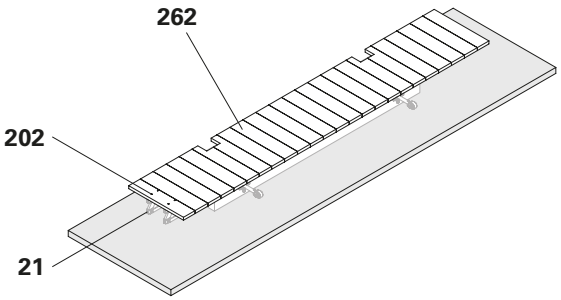


Fig. B9.05

The dimensions x_1 – x_3 are project-specific.

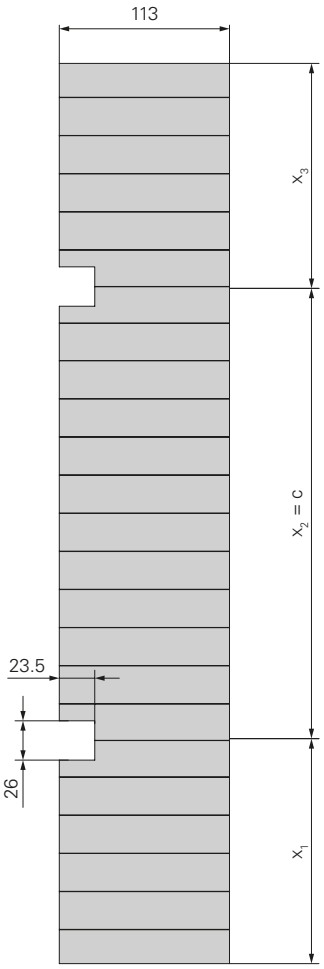


Fig. B9.06

B9 Installing the counter-platform

Components

20 Girder VT 20
54 Ladder Cage Connection VT 20 ACS
57 Platform Post 5900 IPBL 240 ACS
211 Bolt ISO 4014 M16 x 90-8.8
212 Washer ISO 7094 100 HV, A 16
213 Nut ISO 4032 M16-8
269 Shim VT 20

Assembling the rear section

1. Place the Platform Post 5900 IPBL 240 ACS (**57**) on squared timbers while observing the console bracket spacing. (Fig. B9.07)
2. Bolt the Ladder Cage Connection VT 20 ACS (**54**) at the installation position with the fixing materials provided. (Fig. B9.08 + B9.08a)

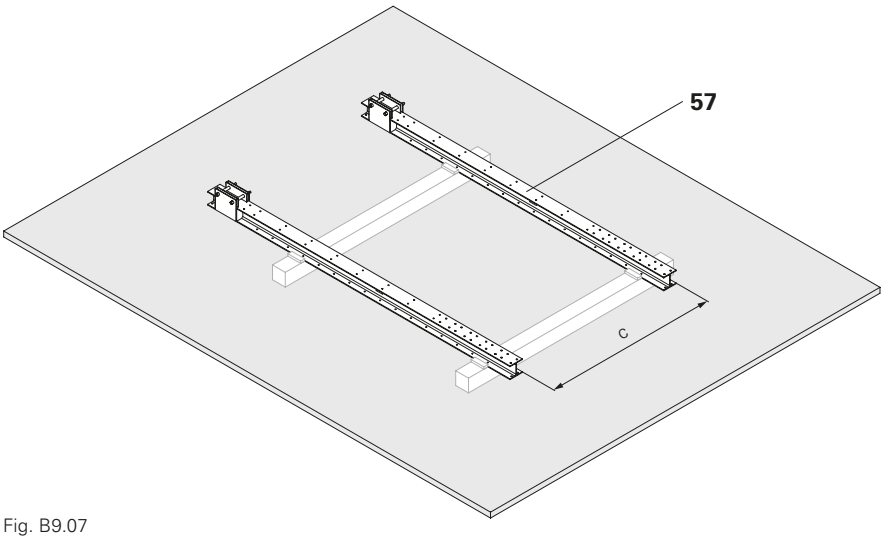


Fig. B9.07

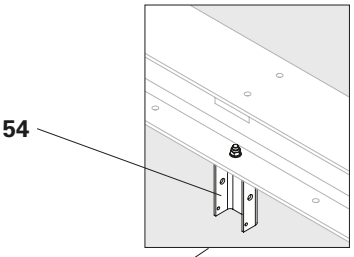


Fig. B9.08a

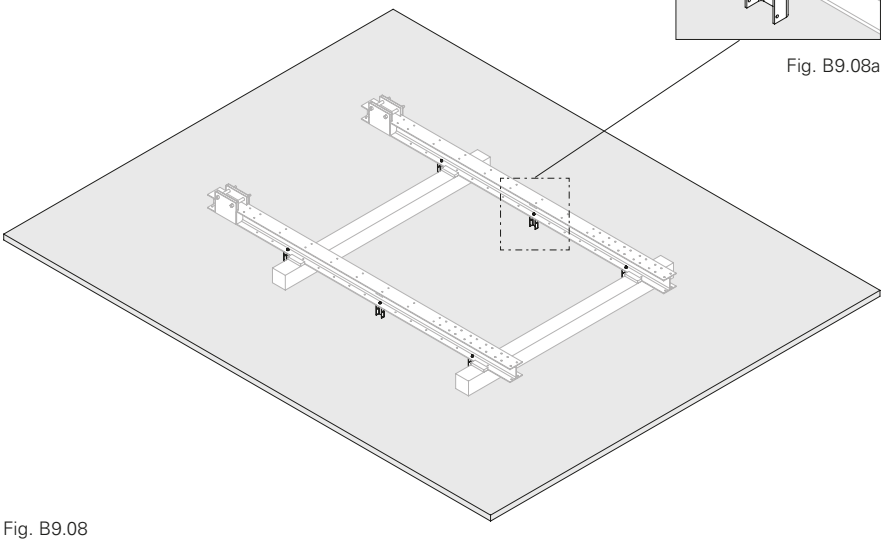


Fig. B9.08

3. Prepare Girder VT 20 (**20**) with Shim VT 20 (**269**). See "Girder VT 20 for the ladder cage" on page 57.
4. Screw the Girder VT 20 (**20**) onto the Ladder Cage Connection VT 20 ACS (**54**) using Bolt ISO 4014 M16 x 90-8.8 (**211**), Washer ISO 7094 100 HV A 16 (**212**) and Nut ISO 4032 M16-8 (**213**). (Fig. B9.09 + B9.09a)

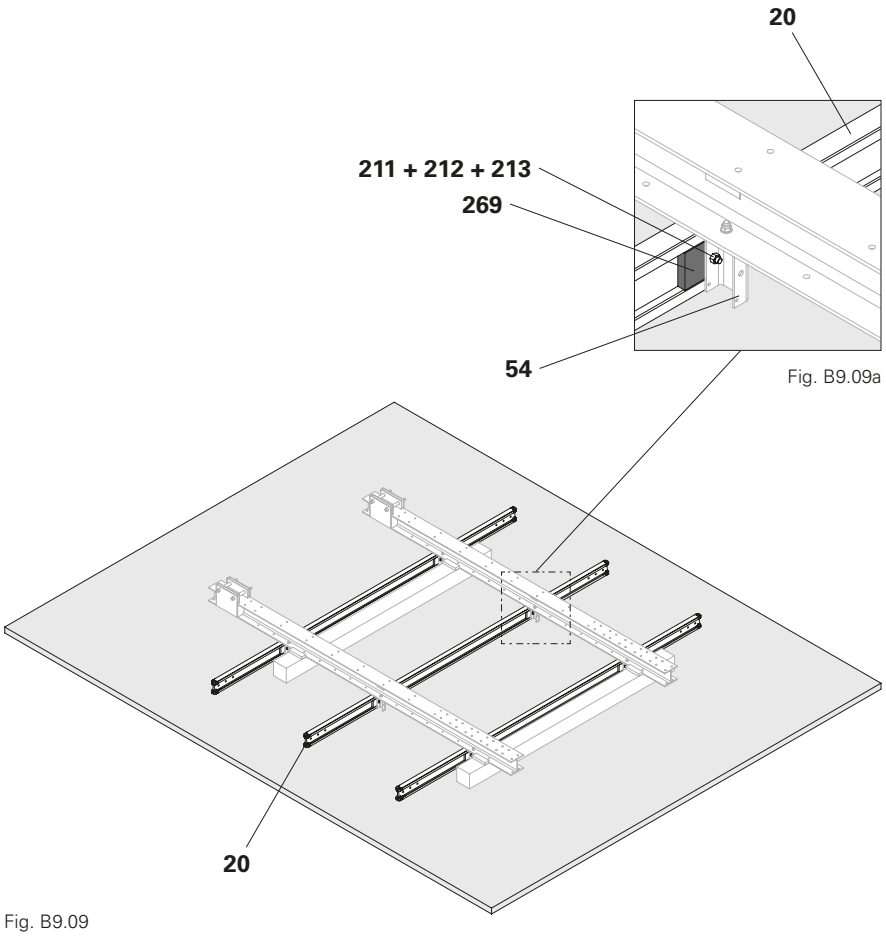


Fig. B9.09a

Fig. B9.09

Connecting the platform sections

Assembly

1. Attach the base section on the front of the Platform Beam 870-1170 ACS (**58**) to the crane and position it above the Platform Posts 5900 IPBL 240 ACS (**57**).
2. Screw both assemblies together with the fixing materials supplied.

(Fig. B9.10 + B9.10a)

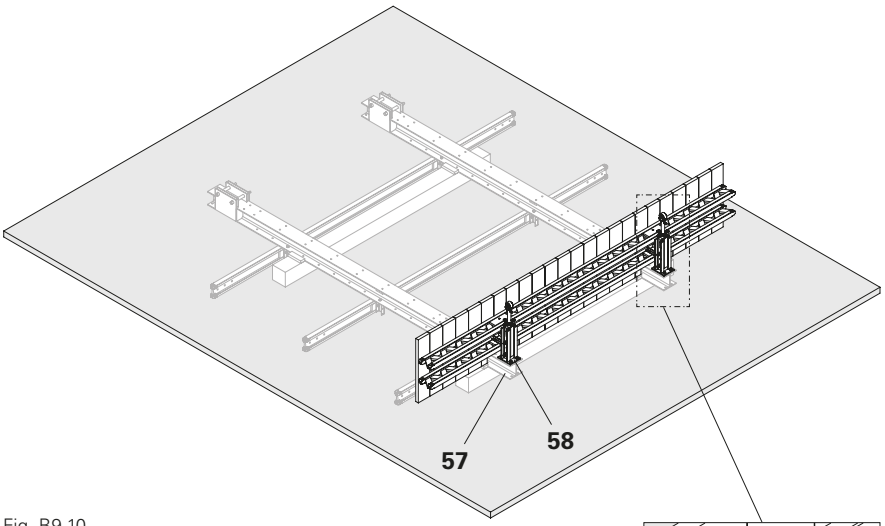


Fig. B9.10

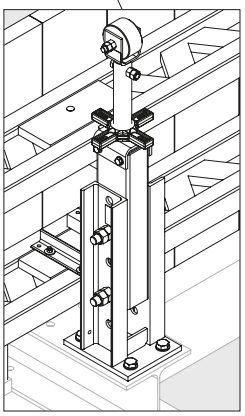


Fig. B9.10a

B9 Installing the counter-platform

Components

202 Torx 6 x 80
227 Torx 6 x 100
267 Counter-batten
268 Ladder cage

Installing the ladder cage

1. Screw the counter-batten (**267**) onto the Girder VT 20 (**20**) with Torx 6 x 100 (**227**). (Fig. B9.11)
2. Screw the ladder cage (**268**) onto the counter-batten (**267**) using Torx 6 x 80 (**202**). (Fig. B9.12)

The lowest guardrail board serves as a toe board. It must rest on the platform decking!

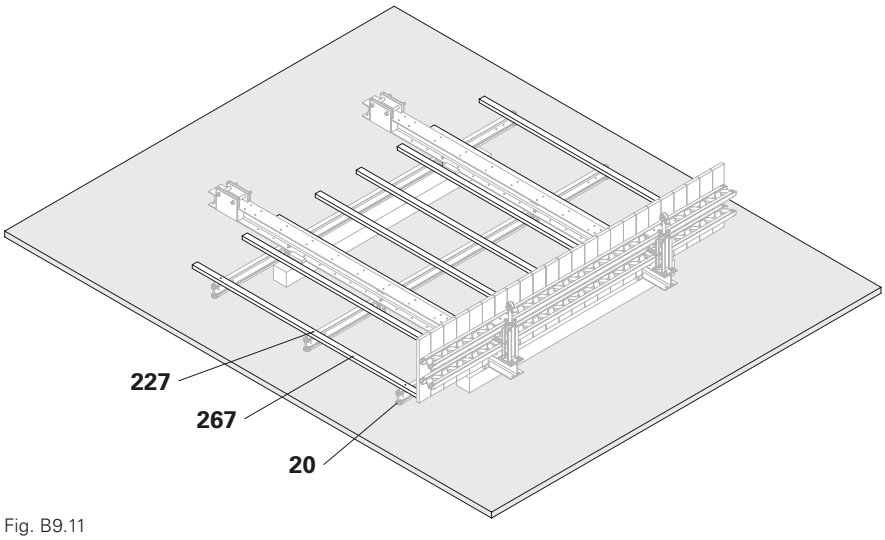


Fig. B9.11

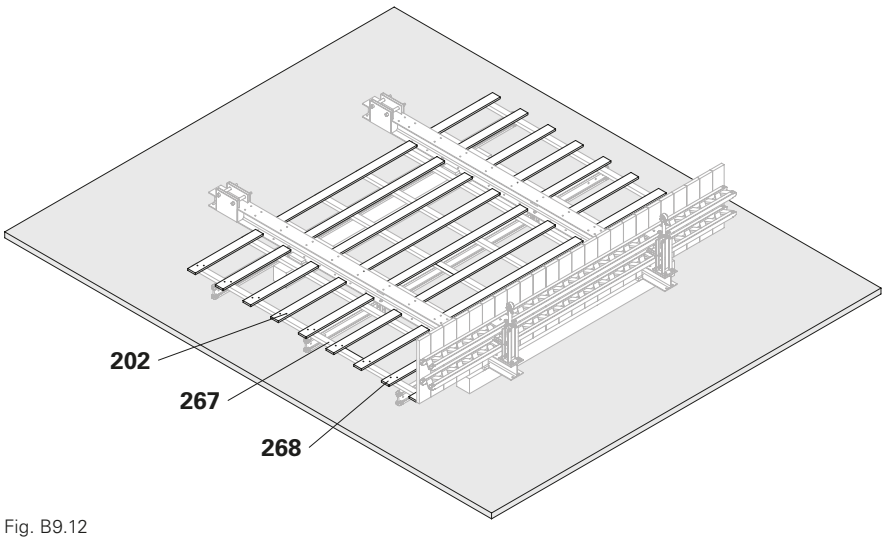


Fig. B9.12

B10 Installing the finishing platform (level -2)

General information

The finishing platform is beneath the climbing platform. The climbing shoes and the finishing climbing cones are removed from that position.
If necessary, the tie holes are closed with concrete cones.
The finishing platform is usually circumferential. You have access to the climbing platform from here.

Recommended platform decking distance

- To the structure 5 cm.
- To adjacent platforms 5 cm (**25 mm shorter than the formwork on both the left and right**).

Assembling the platform sections

- As assembly aids, prepare two squared timbers with a stop aid. The dimension c corresponds to the bracket spacing. Lay out the squared timbers at the assembly area at the distances specified and align them parallel to each other.
- Height of the squared timbers > 25 cm.
- Height of the stops ≤ 4.5 cm.

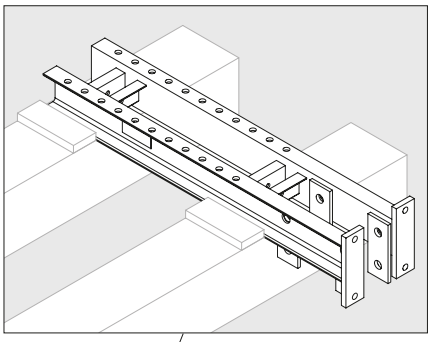


Fig. B10.01a

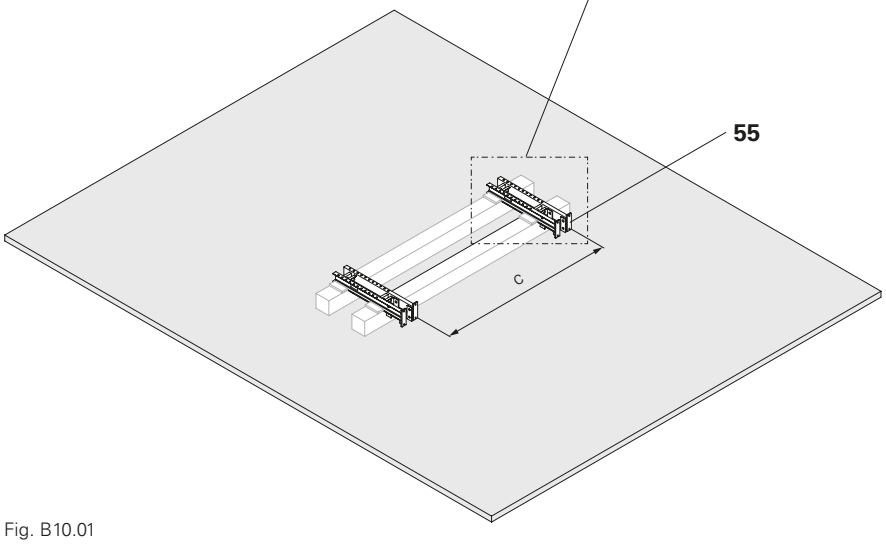


Fig. B10.01

Components

21	Formwork Girder GT 24
44	Clamp GT 24 ACS
55	Finishing Platform Beam 1365 ACS-G
202	Torx 6 x 80
262	Planking

Assembling the base section

1. Set the Finishing Platform Beam 1365 ACS-G (**55**) down on the squared timbers while observing the console bracket spacing. (Fig. B10.01 + B10.01a)

2. Slide 4x Clamps GT 24 ACS (**44**) onto each Formwork Girder GT 24 (**21**).
3. Place the Formwork Girder GT 24 (**21**) on the Finishing Platform Beam 1365 ACS-G (**55**), align it and screw it onto the Finishing Platform Beam 1365 ACS-G (**55**) with the Clamps GT 24 ACS (**44**).

(Fig. B10.02 + B10.02a)

4. Saw the planking (**262**) to length.
5. Place the planking (**262**) on the Formwork Girders GT 24 (**21**), align them and screw them tight with 2x Torx 6 x 80 (**202**) for each girder.

(Fig. B10.03)

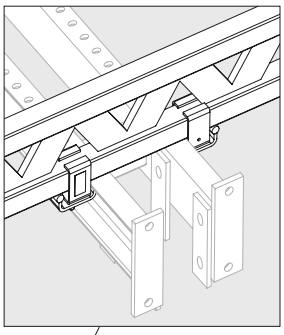


Fig. B10.02a

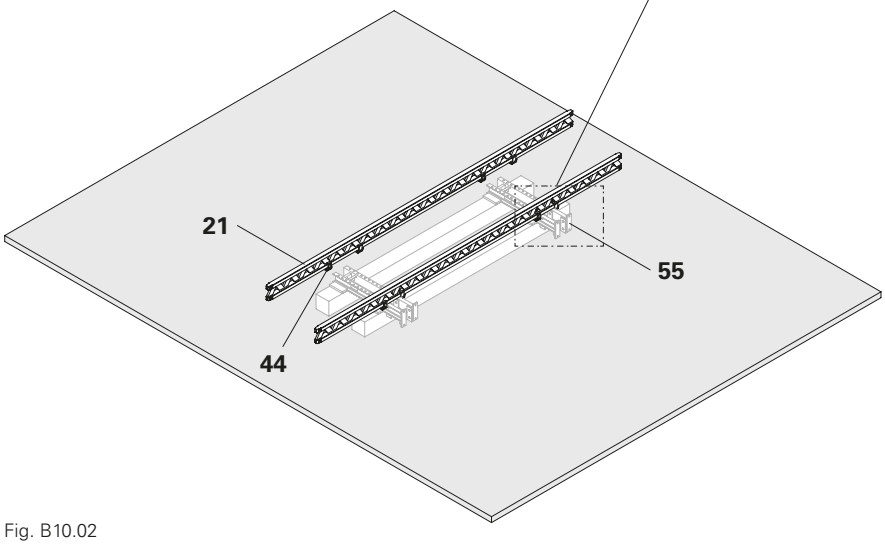


Fig. B10.02

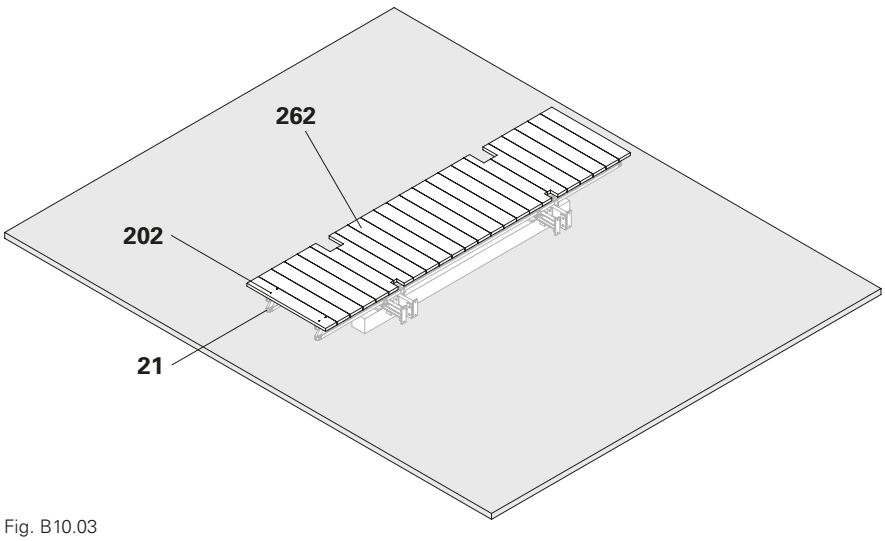


Fig. B10.03

6. Saw recesses in the platform decking.
(Fig. B10.04 + B10.05)

The dimensions x_1 – x_3 are project-specific.

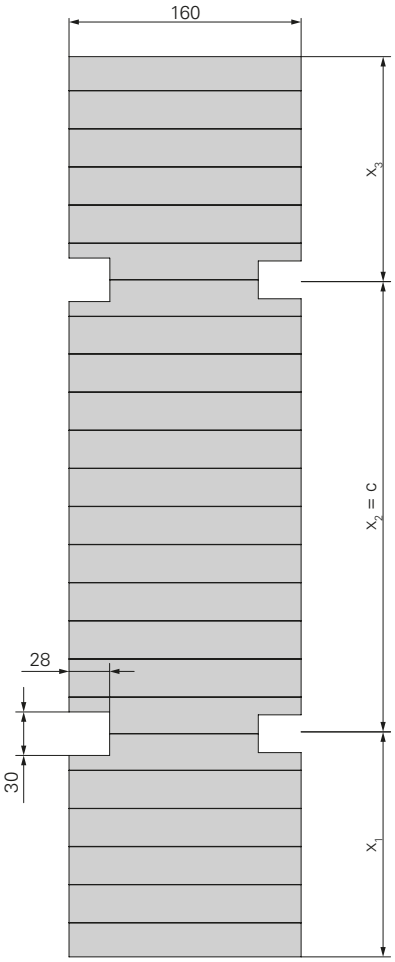


Fig. B10.04

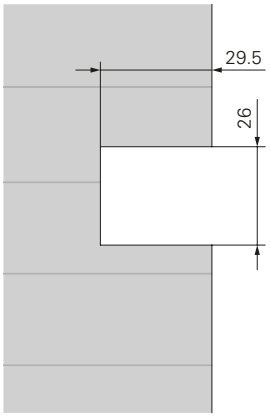


Fig. B10.05

B10 Installing the finishing platform (level -2)

Components

20 Girder VT 20
54 Ladder Cage Connection VT 20 ACS
56 Finishing Platform Vertical 3300 ACS-G
211 Bolt ISO 4014 M16 x 90-8.8
212 Washer ISO 7094 100 HV, A 16
213 Nut ISO 4032 M16-8
269 Shim VT 20

Assembling the rear section

1. Place the Finishing Platform Vertical 3300 ACS-G (**56**) on the squared timbers while observing the console bracket spacing c. (Fig. B10.06)
2. Bolt the Ladder Cage Connection VT 20 ACS (**54**) at the installation position with the fixing materials provided. (Fig. B10.07 + B10.07a)

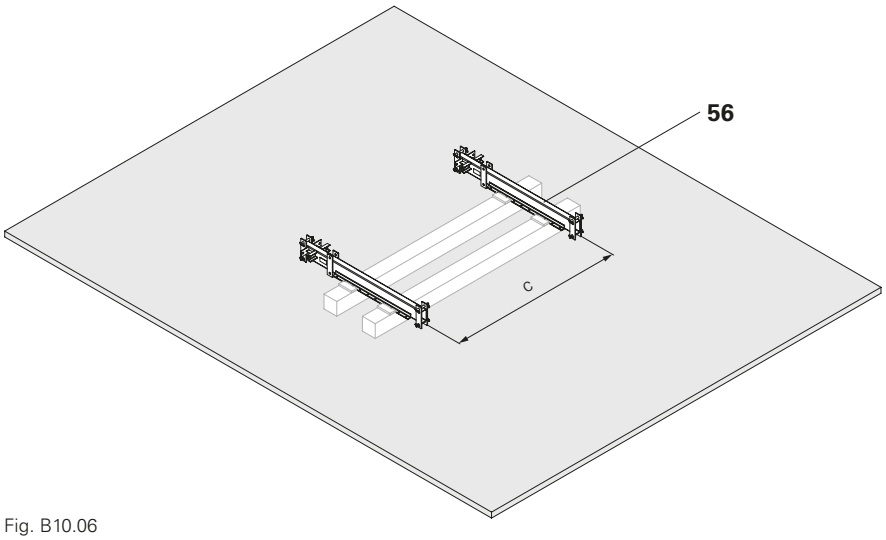


Fig. B10.06

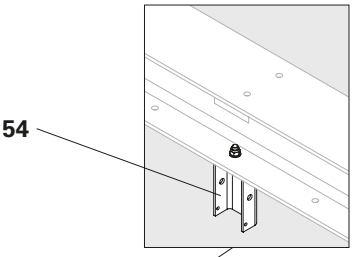


Fig. B10.07a

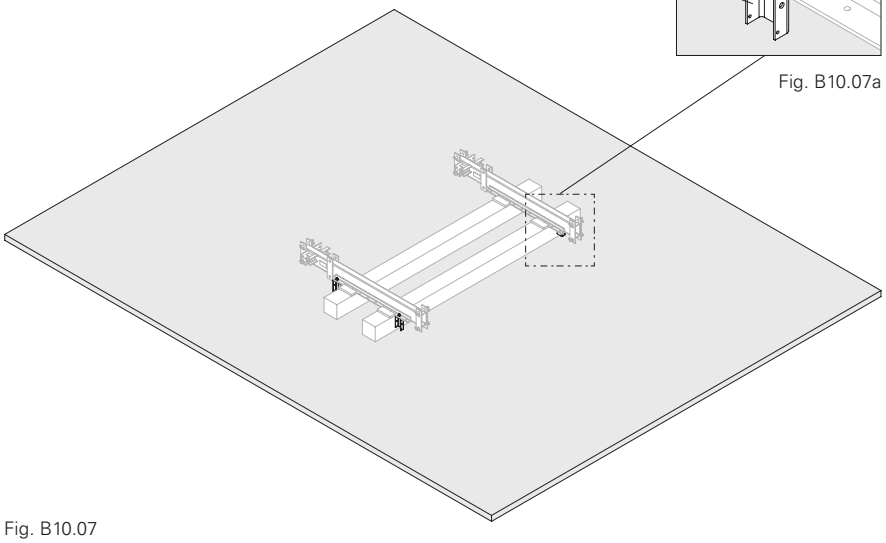


Fig. B10.07

3. Prepare Girder VT 20 (**20**) with Shim VT 20 (**269**). See "Girder VT 20 for the ladder cage" on page 57.
4. Screw the Girder VT 20 (**20**) onto the Ladder Cage Connection VT 20 ACS (**54**) using Bolt ISO 4014 M16 x 90-8.8 (**211**), Washer ISO 7094 100 HV A 16 (**212**) and Nut ISO 4032 M16-8 (**213**).

(Fig. B10.08 + B10.08a)

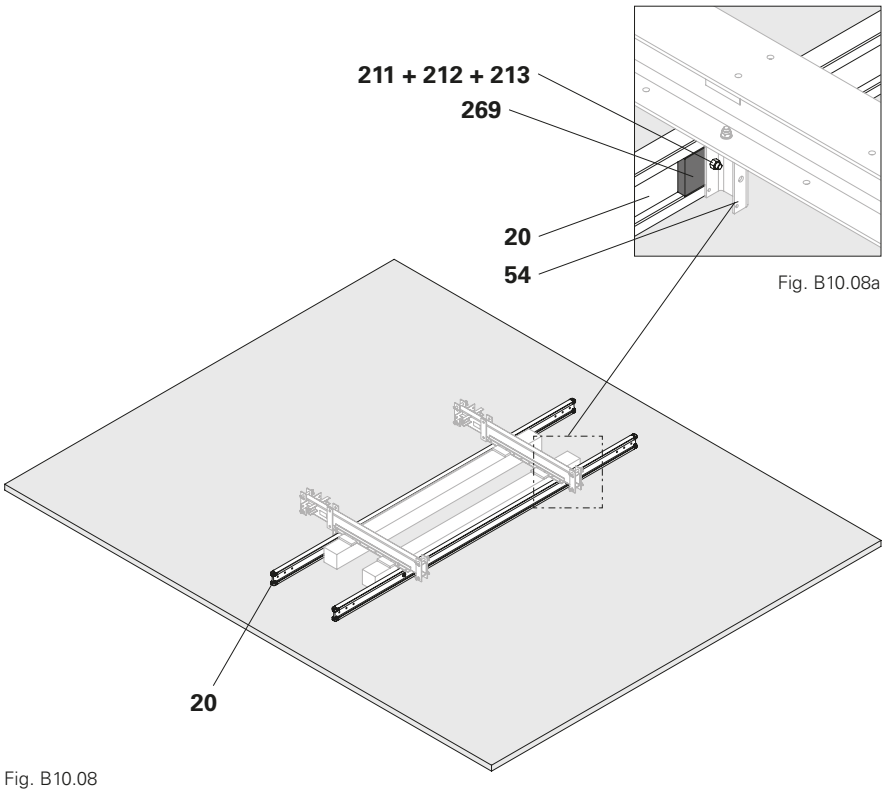


Fig. B10.08a

Fig. B10.08

Connecting the platform sections

Assembly

1. Attach the rear section to the Finishing Platform Vertical 3300 ACS-G (**56**) and position it above the Finishing Platform Beam 1365 ACS-G (**55**).
2. Connect both assemblies together with the fixing materials supplied.

(Fig. B10.09 + B10.10)

Figure B10.10 shows the connection of the two assemblies on the rear side (view rotated by 180°).

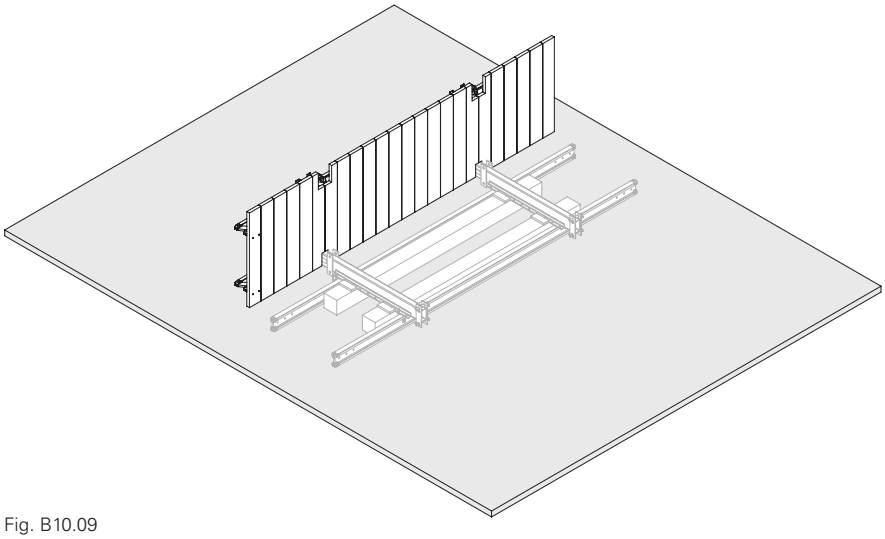


Fig. B10.09

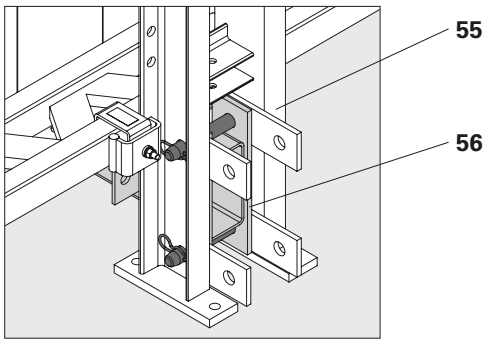


Fig. B10.10

B10 Installing the finishing platform (level -2)

Components

202 Torx 6 x 80
227 Torx 6 x 100
267 Counter-batten
268 Ladder cage

Installing the ladder cage

5. Screw the counter-batten (**267**) onto the Girder VT 20 (**20**) with Torx 6 x 100 (**227**). (Fig. B10.11)
6. Screw the ladder cage (**268**) onto the counter-batten (**267**) using Torx 6 x 80 (**202**). (Fig. B10.12)

The lowest guardrail board serves as a toe board. It must rest on the platform decking!

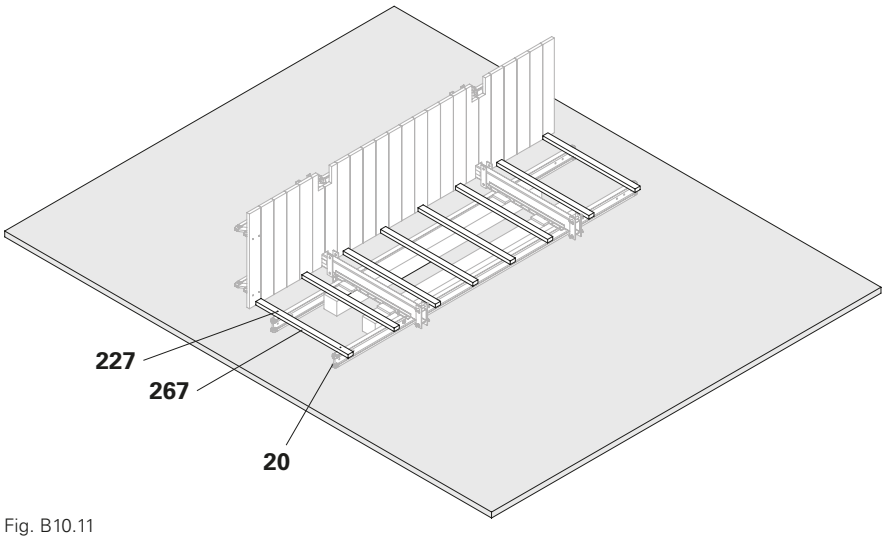


Fig. B10.11

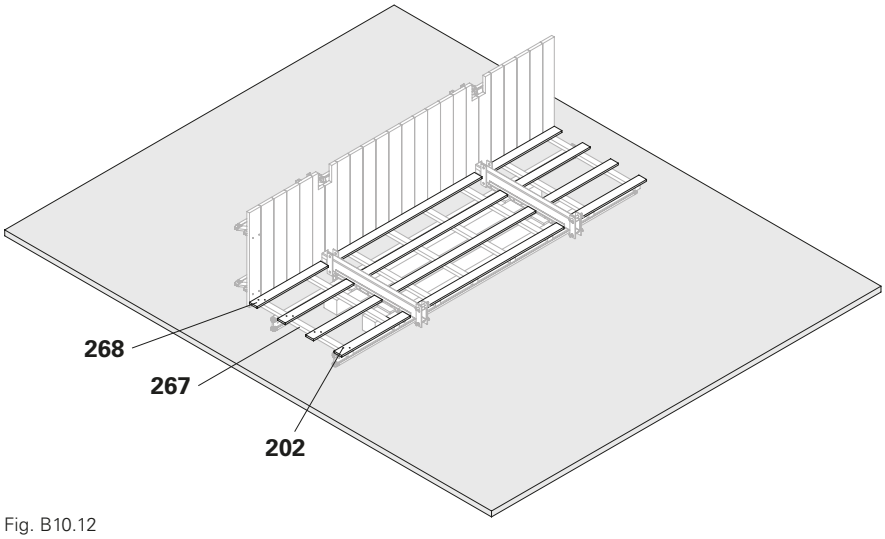


Fig. B10.12

General information

The structure of the climbing units on building edges corresponds to the structure of a normal climbing unit.
The difference is

- the cantilever arm is longer.
- the additional assembly of the lateral protection.

Execution

For climbing units on building edges, one climbing unit is mounted flush with the building edge.
The second climbing unit is mounted offset towards the edge of the structure and has a longer cantilever arm. This projection facilitates the transition to the adjacent climbing unit.
The work, climbing and finishing platforms are built in the same manner. (Fig. B11.01 + B11.02)

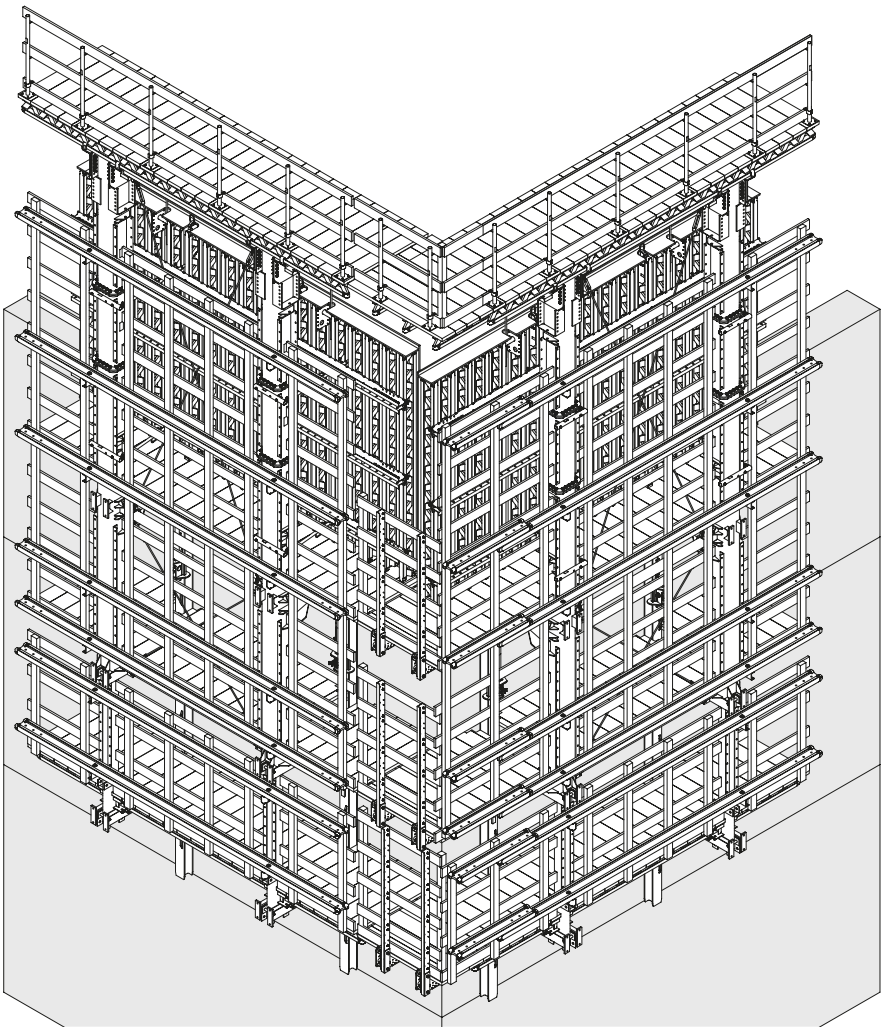


Fig. B11.01

Corner platforms level 0 to level -2
Figure B11.02 shows the corner platforms of two climbing units as viewed from above. The work platform (level +1) is not shown.
The lateral protection for the work platform (level 0), climbing platform (level -1) and finishing platform (level -2) is installed in the same way.

Corner platform level +1
The corner platforms have Gallows 1430 ACS-G and the work platforms (level +1) are adapted to suit the building edge found in each project.

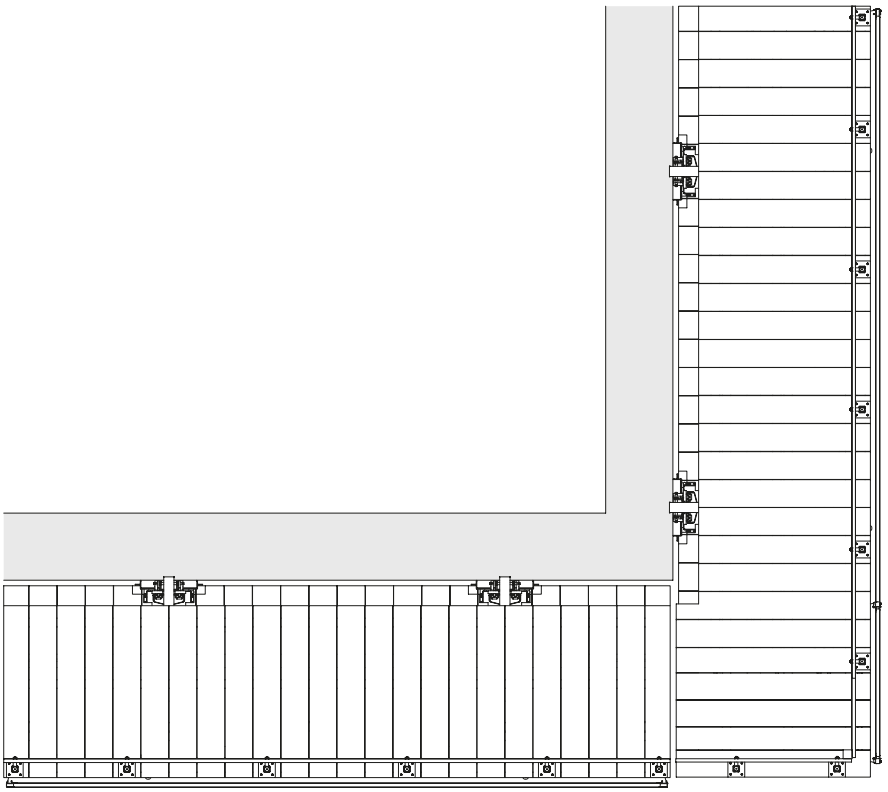


Fig. B11.02

Lateral protection variant 1

Components

14 Guardrail Post Holders Multi
17 Guardrail Post RCS/SRU 184
203 Angle Bracket 90°
204 Torx 5 x 20
232 F.H. Bolt DIN 603 M8 x 60 MU
240 Bolt ISO 4014 M20 x 130-8.8
241 Nut ISO 7042 M20-8
242 Bolt ISO 4014 M8 x 100-8.8
244 Nut ISO 7042 M8-8
263 Toe board
264 Guardrail board

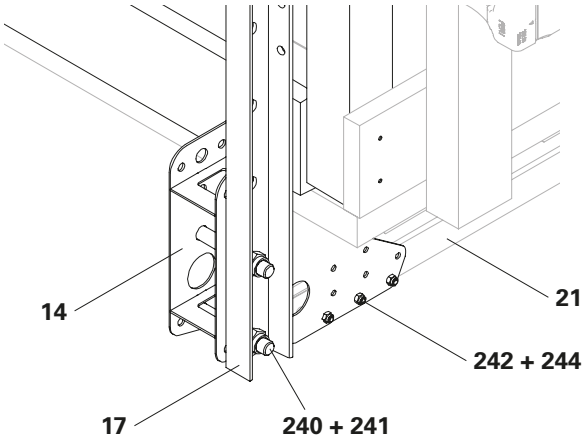


Fig. B11.03

Assembly

1. Slide the guardrail post holder multi (**14**) onto the Formwork Girder GT 24 (**21**) as far as it will go.
2. Pre-drill the Formwork Girders GT 24 (**21**) with Ø 9 mm holes. Screw the guardrail post holder multi (**14**) onto the Formwork Girder GT 24 (**21**) using Bolts ISO 4014 M8 x 100-8.8 (**242**) and Nuts M8 (**244**).
3. Screw the Guardrail Post RCS/ SRU 184 (**17**) onto the guardrail post holder multi (**14**) using Bolts ISO 4014 M20 x 130-8.8 (**240**) and Nuts M20 (**241**).

(Fig. B11.03)

4. Saw the guardrail boards (**264**) to size. Pre-drill the boards with Ø 9 mm holes.

5. Screw the guardrail boards (**264**) onto Guardrail Post RCS 184 (**17**) with F.H. bolts DIN 603 M8 x 60 MU (**232**).
6. Saw the toe board (**263**) to size and screw it onto the platform decking tightly with a 90° square timber connector.

(not shown)

Connecting the ladder cage and lateral protection

Connect the ladder cage and lateral protection in order to improve the stability of the guardrail.

Components

201 Torx 6 x 60
275 Squared timber 8/8

Assembly

1. Saw a piece of squared timber 8/8 (**275**) to length. The squared timber must run all the way from the lower edge of the toe board to the upper edge of the ladder cage.
2. Screw the squared timber 8/8 (**275**) onto the ladder cage and toe board using 2x Torx 6 x 60 (**201**) for each board.
3. Screw the squared timber 8/8 (**275**) onto the lateral protection and toe board using 2x Torx 6 x 60 (**201**) for each board.

(Fig. B11.04)

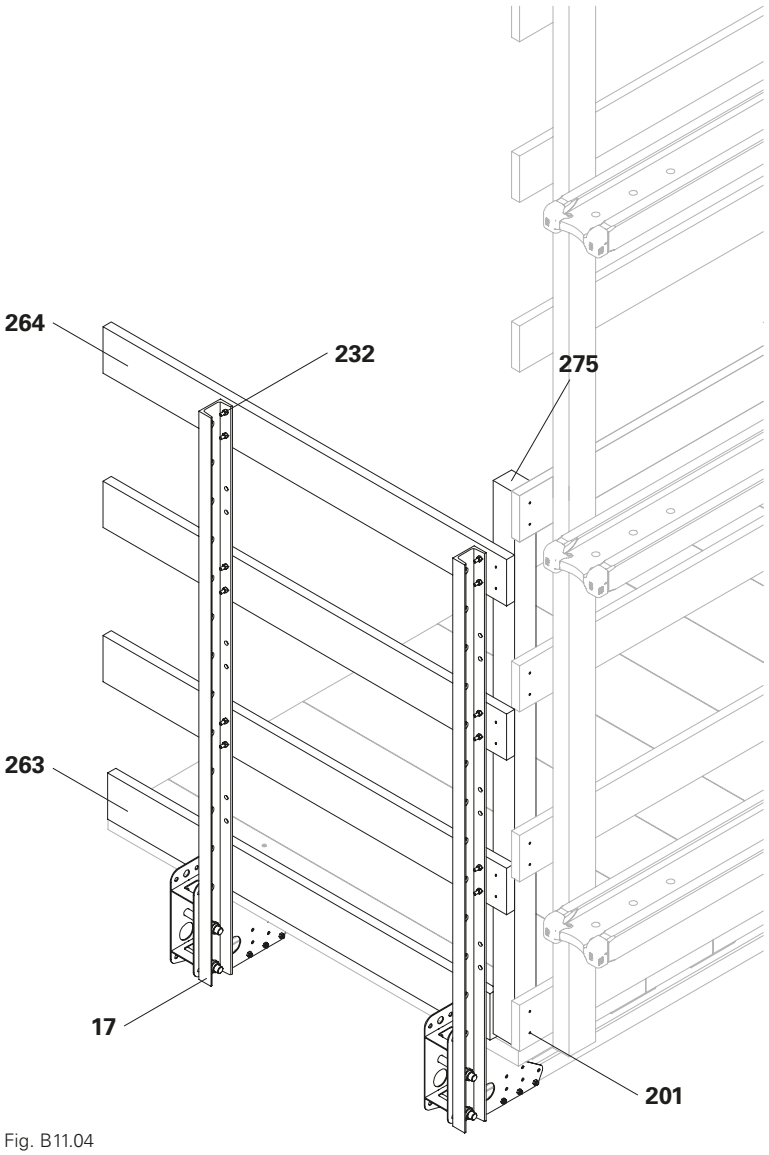


Fig. B11.04

Lateral protection variant 2

Components

14 Guardrail Post Holders Multi
16 Guardrail Post RCS 226
203 Angle Bracket 90°
204 Torx 5 x 20
232 F.H. Bolt DIN 603 M8 x 60 MU
241 Nut ISO 7042 M20-8
242 Bolt ISO 4014 M8 x 100-8.8
243 Bolt ISO 4014 M20 x 180-8.8
244 Nut ISO 7042 M8-8
263 Toe board
264 Guardrail board

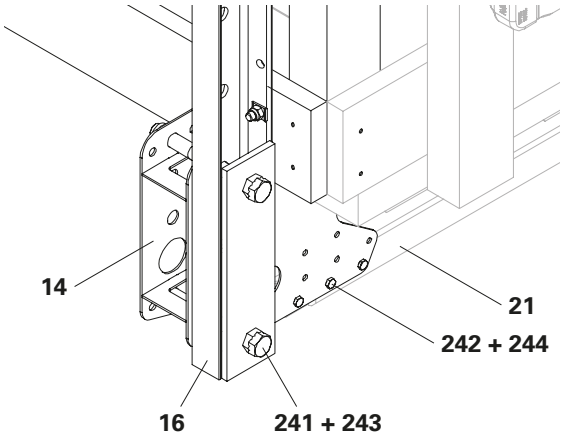


Fig. B11.05

Assembly

1. Slide the guardrail post holder multi (**14**) onto the Formwork Girder GT 24 (**21**) as far as it will go.
2. Pre-drill the Formwork Girders GT 24 (**21**) with Ø 9 mm holes. Screw the guardrail post holder multi (**14**) onto the Formwork Girder GT 24 (**21**) using Bolts ISO 4014 M8 x 100-8.8 (**242**) and Nuts M8 (**244**).
3. Screw the Guardrail Post RCS 226 (**16**) onto the guardrail post holder multi (**14**) using Bolts ISO 4014 M20 x 180-8.8 (**243**) and Nuts M20 (**241**).

(Fig. B11.05)

4. Saw the guardrail boards (**264**) to size. Pre-drill the boards with Ø 9 mm holes.
5. Screw the guardrail boards (**264**) onto Guardrail Post RCS 226 (**16**) with F.H. bolts DIN 603 M8 x 60 MU (**232**).
6. Saw the toe board (**263**) to size and screw it onto the platform decking tightly with a 90° square timber connector.

(not shown)

Connecting the ladder cage and lateral protection

Connect the ladder cage and lateral protection in order to improve the stability of the guardrail.

Components

201 Torx 6 x 60
275 Squared timber 8/8

Assembly

1. Saw a piece of squared timber 8/8 (**275**) to length. The squared timber must run all the way from the lower edge of the toe board to the upper edge of the ladder cage.
2. Screw the squared timber 8/8 (**275**) onto the ladder cage and toe board using 2x Torx 6 x 60 (**201**) for each board.
3. Screw the squared timber 8/8 (**275**) onto the lateral protection and toe board using 2x Torx 6 x 60 (**201**) for each board.

(Fig. B11.06)

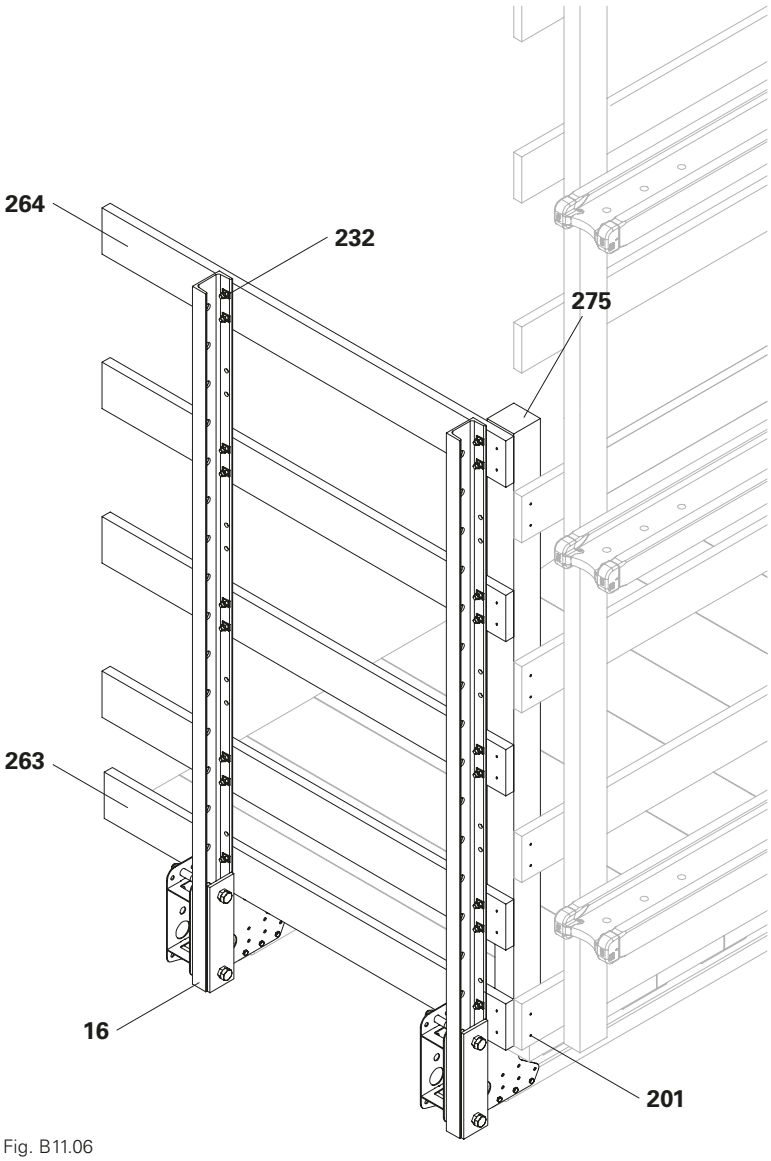


Fig. B11.06

C1 First concreting section

Preparing the formwork

Formwork units are usually delivered to the construction site by PERI in a pre-assembled state. The assembly of the formwork units is not the subject of these instructions.
When using Climbing Shoe II ACS, the Leading Tie Plate ACS 399 also needs to be mounted on the formlining.

Components

170 Climbing Cone-2 M30/DW 20
173 Anchor Positioning Plate M30
174 Hex. Wood Screw DIN 571 6 x 20
175 Positioning Screw M30
176 Leading Tie Plate ACS 399
201 Torx 6 x 60
238 F.H. Bolt DIN 603 M8 x 45 MU

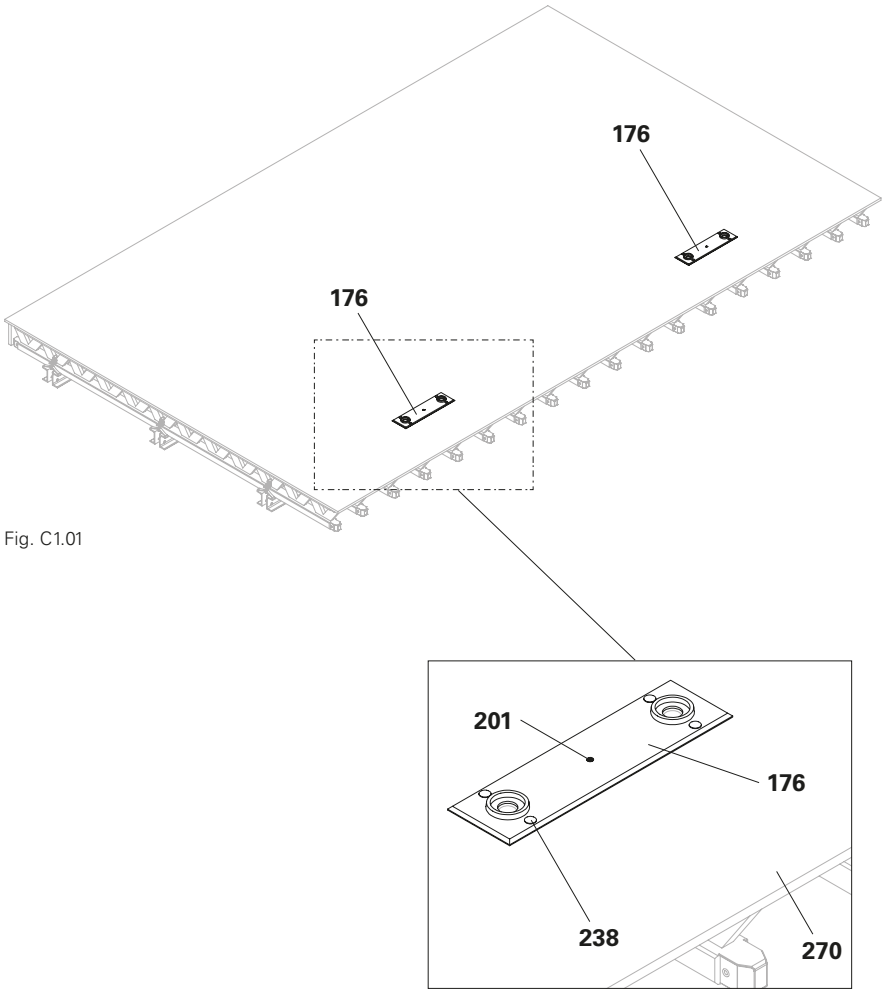


Fig. C1.01

Fig. C1.01a

Assembly

1. Place the formwork unit on squared timbers with the formlining facing upwards.
2. Remove the plastic caps from the pre-drilled tie holes.
3. Place the Leading Tie Plate ACS 399 (**176**) on the formlining (**270**) and align it congruently with the tie holes.
4. Temporarily fix the Leading Tie Plate ACS 399 (**176**) with Torx 6 x 60 (**201**).
5. Mark the holes for the truss-head screws and drill Ø 9 mm holes.
6. Screw Leading Tie Plate ACS 399 (**176**) on tightly with F.H. Bolts DIN 603 M8 x 45 MU (**238**).

(Fig. C1.01 + C1.01a)

C1 First concreting section

7. Rotate the formwork unit and place it on the formlining. Support the formwork unit in such a way that the leading tie plates (**176**) are freely accessible.
8. To fit the Anchor Positioning Plate M30 (**173**) precisely, hold the Climbing Cone-2 M30/DW 20 (**170**) against the Leading Tie Plate ACS 399 (**176**).
9. Screw the Climbing Cone-2 M30/ DW 20 (**170**) into place from the opposite side with the Positioning Screw M30 (**175**) and Anchor Positioning Plate M30 (**173**).
10. Align the Anchor Positioning Plate M30 (**173**) and screw it onto the formlining with wood screw 6 x 20 (**174**).
11. Remove Climbing Cone-2 M30/ DW 20 (**170**) and Positioning Screw M30 (**175**).

(Fig. C1.02 + C1.02a)

- Attach the formwork unit to the 9 t climbing beam with two crane splices 24 to ensure that the lifting and transport processes are carried out safely.
- If a 9 t climbing beam is not used, fit a compression brace between the crane splices 24.

Lateral view

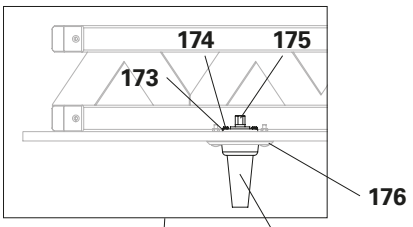


Fig. C1.02a

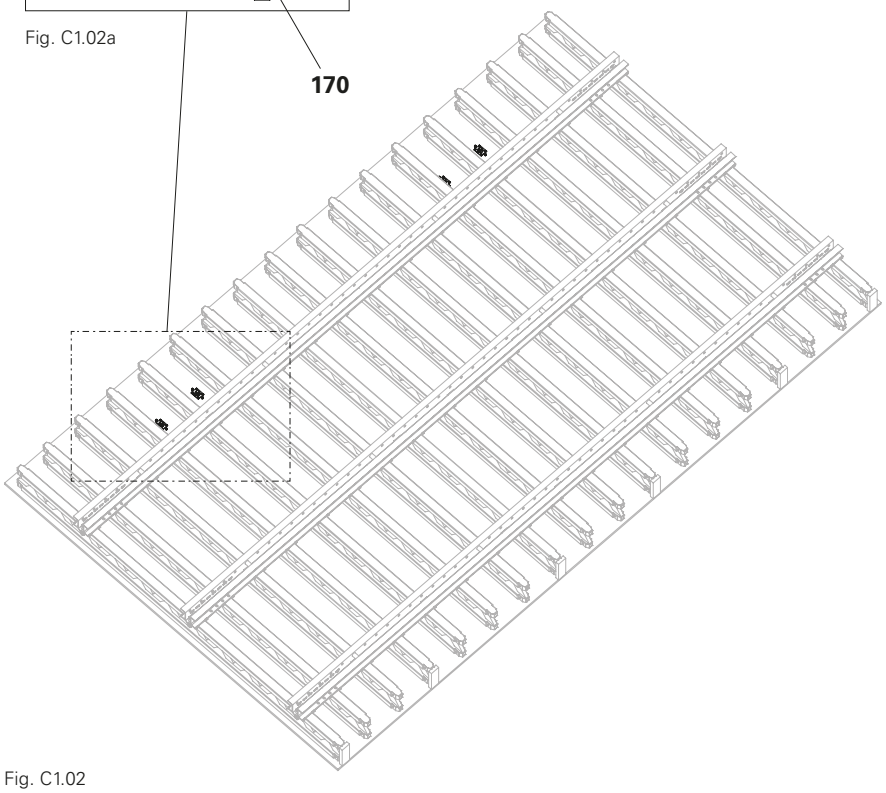


Fig. C1.02

Concrete the starter

1. Position formwork for the first concreting section.
2. Carry out the reinforcement work.
3. Attach the climbing ties (**167**) to the positioning formwork and, if necessary, to the closing formwork.
4. Close the formwork and fit the formwork ties.
5. Concrete the starter.

(Fig. C1.03 + C1.03a)

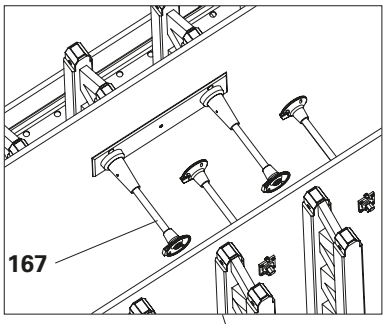


Fig. C1.03a

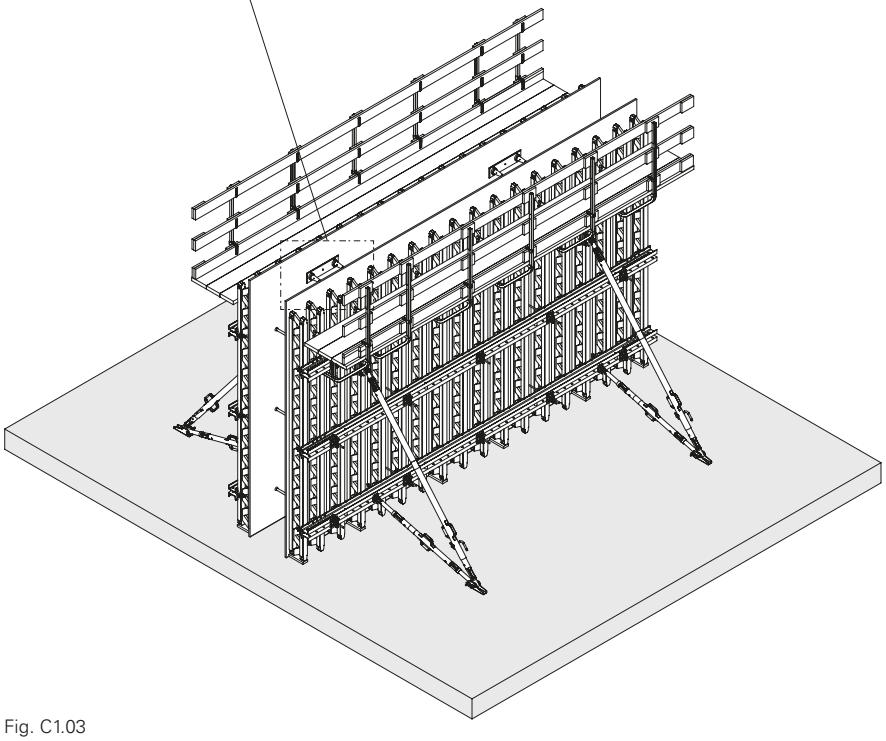


Fig. C1.03

Precondition

First concreting section is hardened and can be struck.

Removing the formwork

1. Remove Positioning Screws M30 (**175**).
2. Remove the formwork ties.
3. Attach the closing formwork to the crane.
4. Remove the Push-Pull Props RS (**30**) from the closing formwork.
5. Fly out the closing formwork and store it temporarily at the installation site.
6. Attach the primary formwork to the crane.
7. Remove the Push-Pull Props RS (**30**) from the primary formwork.
8. Fly out the primary formwork and store it temporarily at the installation site.

(Fig. C2.01 + C2.01a)

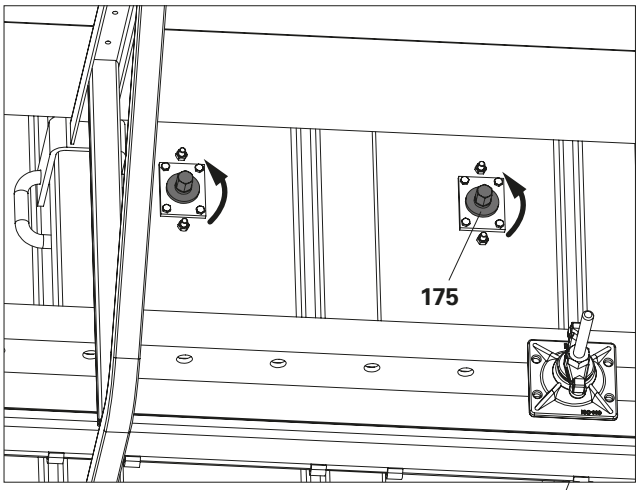


Fig. C2.01a

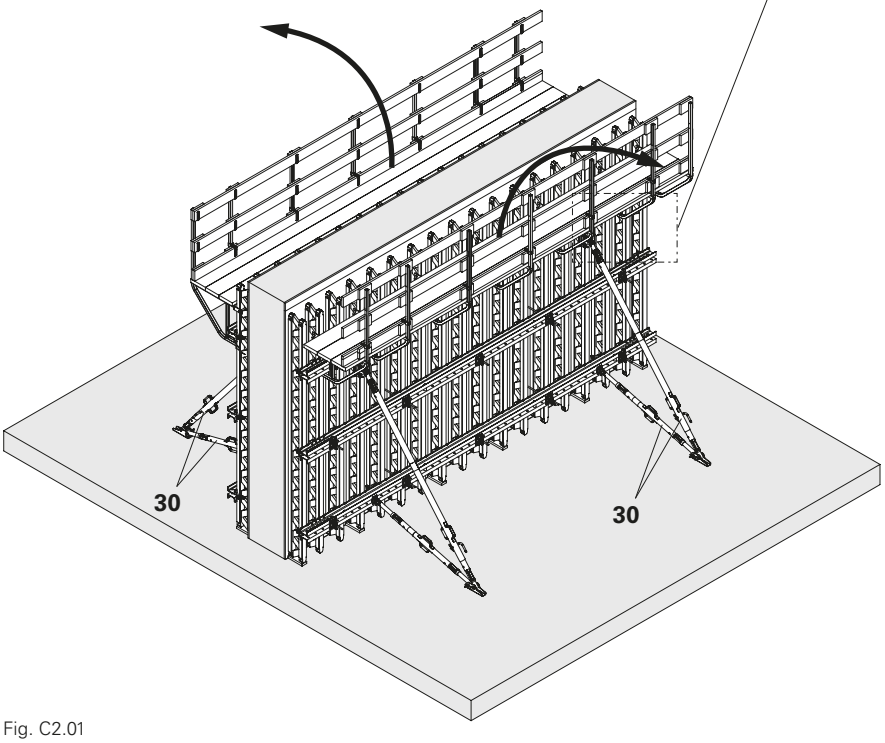


Fig. C2.01

Fitting the tie tube and climbing shoe

- The Tie Tubes ACS on the right and left must only be used in pairs.
- The cylinder screws (**180**) must be tightened without play.

Components

161 Climbing Shoe-II ACS
163 Tie Tube ACS, right
164 Tie Tube ACS, left
180 Cyl. Bolt ISO 4762 M30 x 110-10.9

Assembly

1. Screw the Tie Tube ACS on the right (**163**) and Tie Tube ACS on the left (**164**) onto the climbing ties using two cylinder bolts M30 x 110 (**180**) in each case.
2. Slide the Climbing Shoes II ACS (**161**) onto the Tie Tubes ACS (**163 + 164**).
3. Position Climbing Shoes II ACS (**161**) so they correspond to the console bracket spacing of the climbing unit.
4. Fix Climbing Shoes II ACS (**161**) on the Tie Tubes ACS (**163 + 164**) with the clamping screw (**161.1**).

(Fig. C2.02)

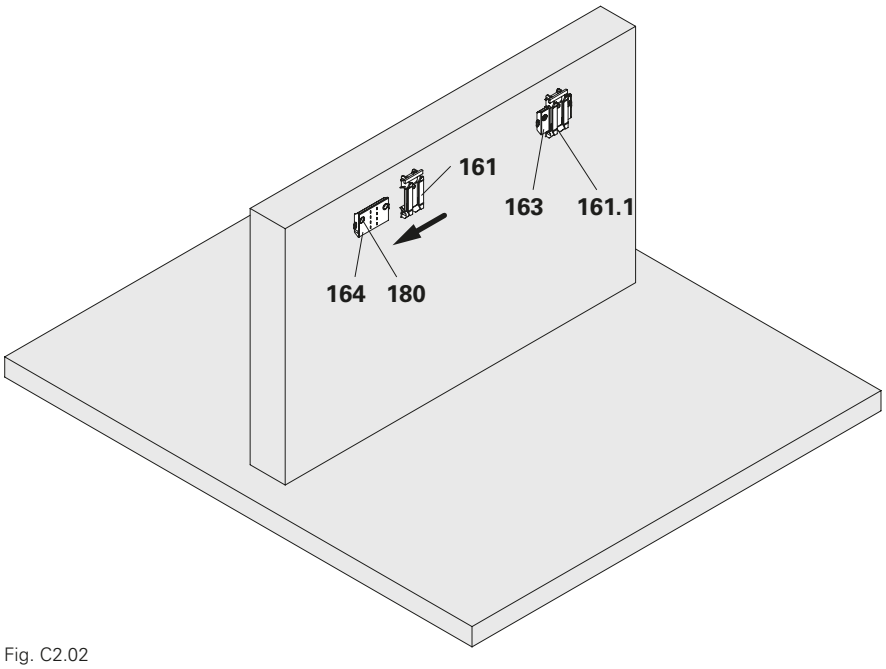


Fig. C2.02

C3 Attaching the climbing unit

Precondition

- The climbing unit with work platform (level +1), work platform (level 0) and climbing platform (level -1) has been installed.
- The counter-platform and finishing platform (level -2) are pre-assembled.
- The ladder descent is prepared for final assembly.

General information

- Use long two-sling lifting gear to attach the assembly.
- Minimum chain length L:
  L ≥ distance between attachment points.
- Ideal chain length L:
  1.5x to 2x console bracket spacing c.
- Alternatively, make use of a 9 t climbing beam.

Preparation

Components

145 Ledger ACS
219 Binding wire

Assembly

1. Install temporary anti-fall protection as lateral protection, e.g. with a Guardrail Post PD 8 and guardrail board.
   On both sides in the case of the first climbing unit that is attached, on the open side on all other climbing units.
2. Insert Ledger ACS (**145**) into Climbing Shoe II (**161**).

(Fig. C3.01)

3. Fold the swing ledger (**161.2**) upwards and fix it temporarily to the reinforcement with binding wire (**219**).

(Fig. C3.02)

Has the Ledger ACS engaged fully in the recess of the climbing shoe?

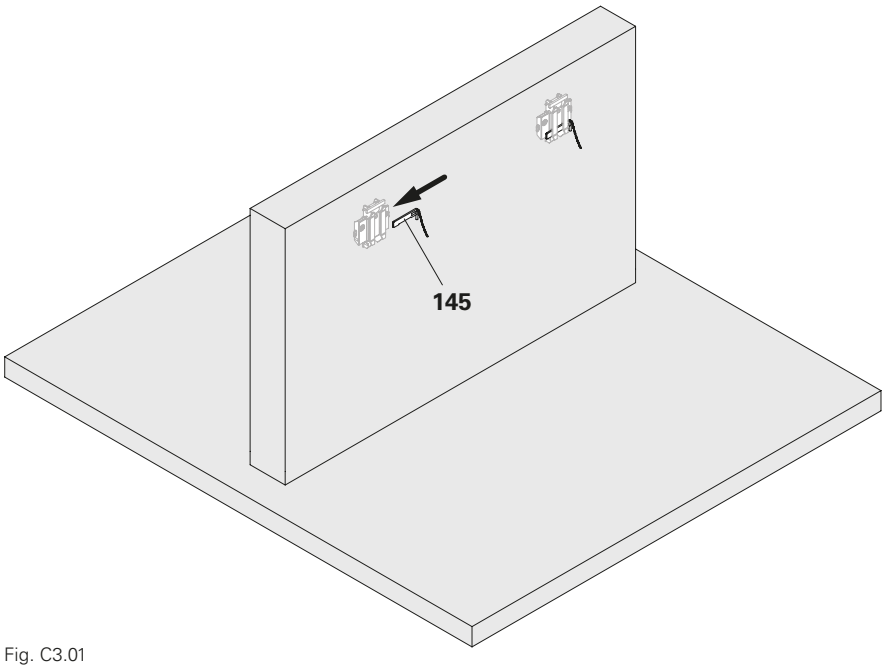


Fig. C3.01

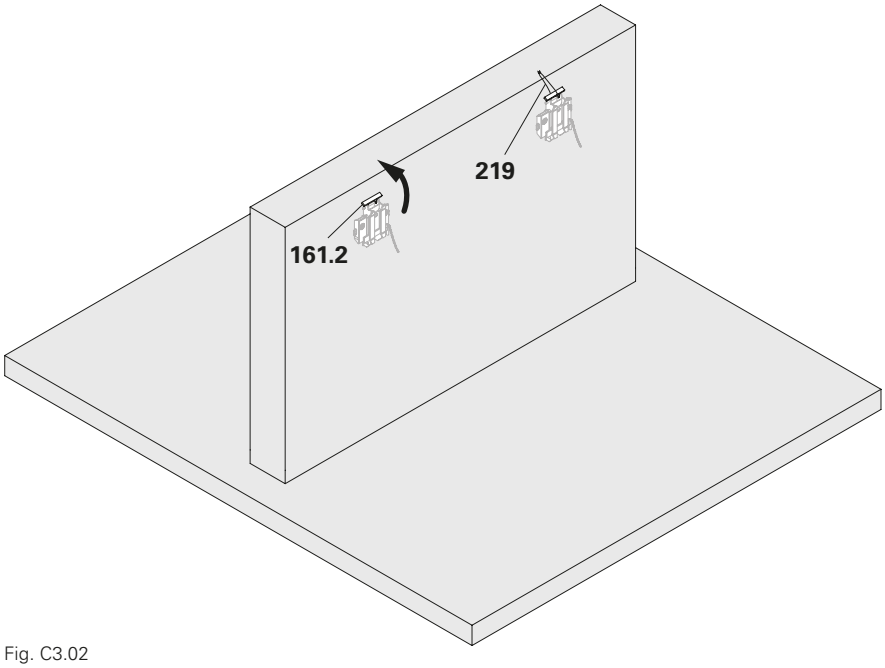


Fig. C3.02

Installing the formwork

Components

215 Betomax 20
216 Suspended Tube 530 ACS
217 Hex. Nut DW 20, AF 36/60
273 Formwork unit

Assembly

1. Place the console bracket side of the formwork unit (**273**) on the ladder cage of the climbing unit.
   ➔ Make sure that the formwork unit is in contact with the platform decking of the work platform (level 0)!
2. Temporarily fix the Steel Waler SRU of the formwork unit (**273.1**) to the vertical post intermediate (**45**).

(Fig. C3.03 + C3.04)

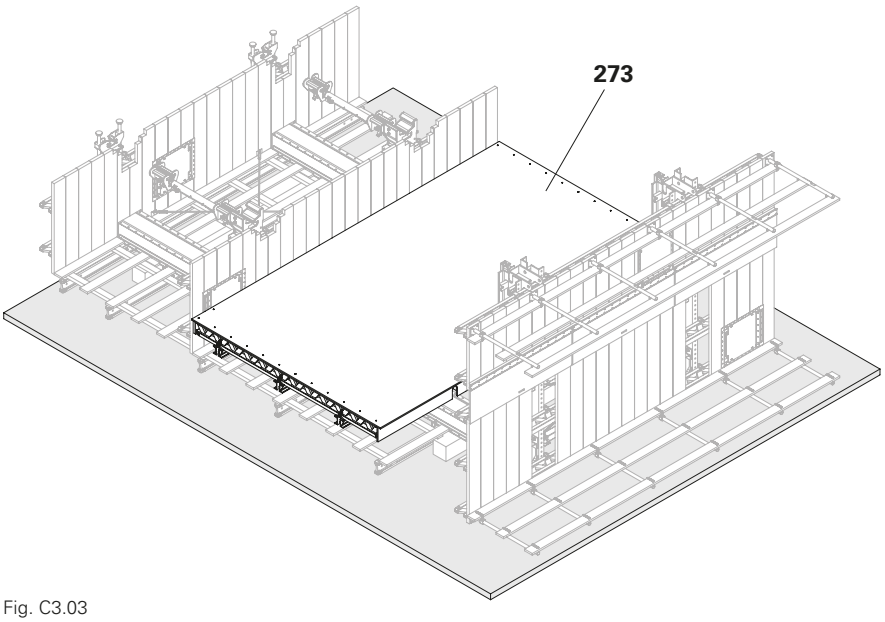


Fig. C3.03

Prop up the formwork unit at the lower end with timber wedges. This means that the formwork unit is ready to be moved after it has been attached without the need for any further measures.

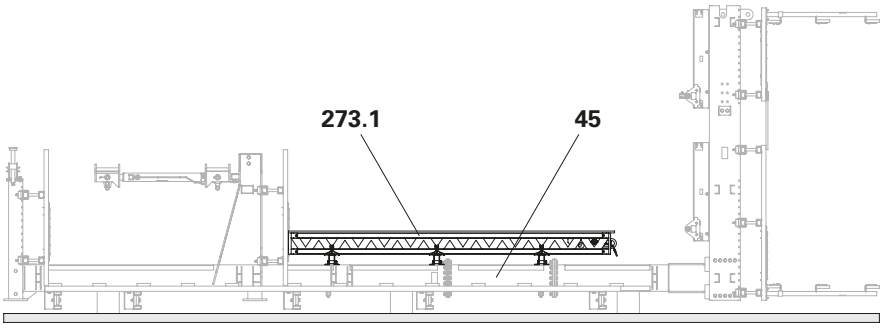


Fig. C3.04

3. Screw Hexagon Nut DW 20, AF 36/60 (**217a**) onto Betomax 20 (**215**).
4. Slide Betomax 20 (**215**) through the hole in Suspension Tube 530 ACS (**216**).
5. Screw Hexagon Nut DW 20, AF 36/60 (**217b**) onto Betomax 20 (**215**).

(Fig. C3.05)

6. Screw Betomax 20 (**215**) into Adapter DW 20 ACS (**60**).
7. Screw Hexagon Nuts DW 20, AF 36/60 (**217a + 217b**) onto Suspended Tube 530 ACS (**216**).

(Fig. C3.05 + C3.06)

8. Temporarily fix the Trolley HTP (**52**) to the Vertical Post Top 2100 ACS (**46**).

(Fig. C3.07)

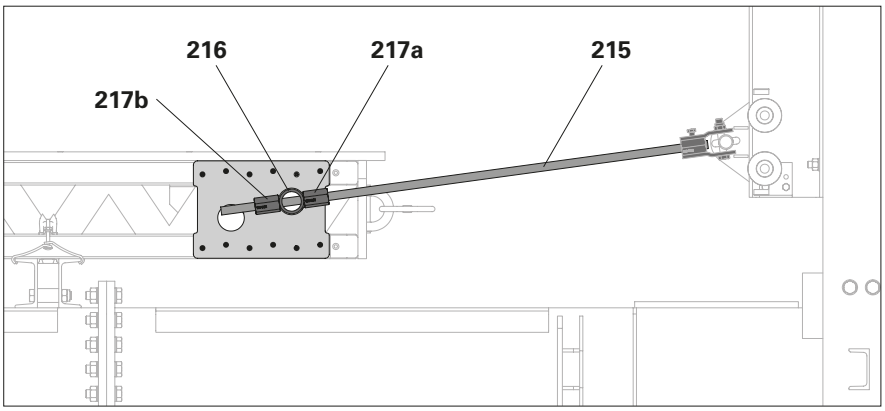


Fig. C3.05

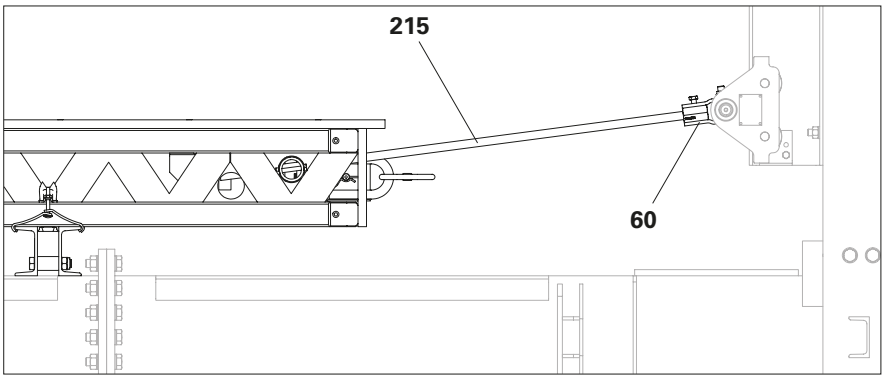


Fig. C3.06

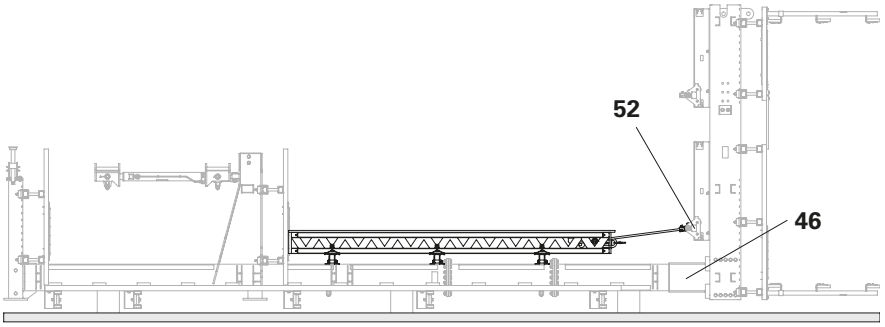


Fig. C3.07

Fitting Suspended Tube 530 ACS
If the formwork unit is not prepared for an installation process involving Suspended Tube 530 ACS, carry out the following additional work.

Fig. C3.09a – C3.09c shows the design variants for the assembly of Formwork Suspension VARIO GT24, Ø 60 (**218**).

Components

200 Torx 6 x 40
216 Suspended Tube 530 ACS
218 Formwork Suspension VARIO GT24, Ø 60

Assembly
1. Remove screws (**216.1**) from Suspended Tube 530 ACS (**216**).
2. Slide the Suspended Tube 530 ACS (**216**) through the Formwork Girders GT 24 (**21**) at the installation position.
3. Slide 2x Formwork Suspension VARIO GT24, Ø 60 (**218**) onto Suspended Tube 530 ACS (**216**).
4. Position the formwork suspension (**218**) and screw them down with 12x Torx 6 x 40 (**200**).
5. Secure Suspended Tube 530 ACS (**216**) with screw (**216.1**).

(Fig. C3.08)

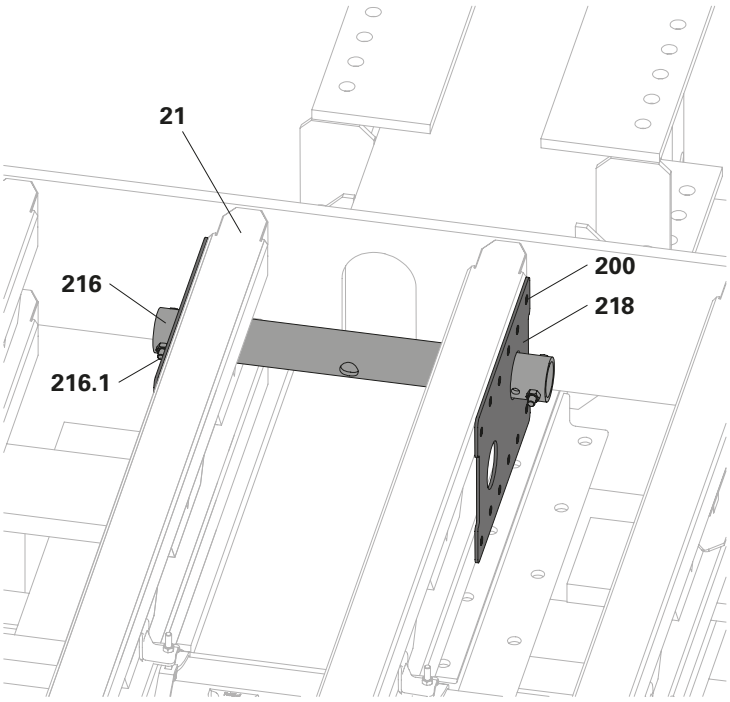


Fig. C3.08

Use Torx 6 x 40 or Torx 6 x 60.

Permissible installation positions

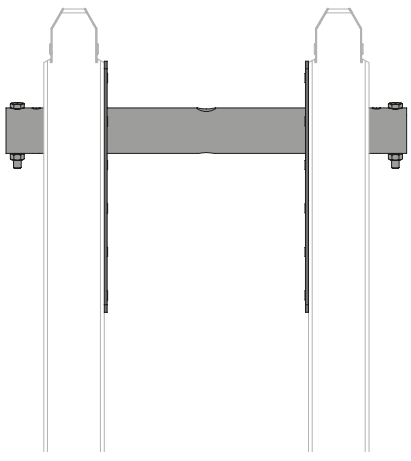


Fig. B9.06a

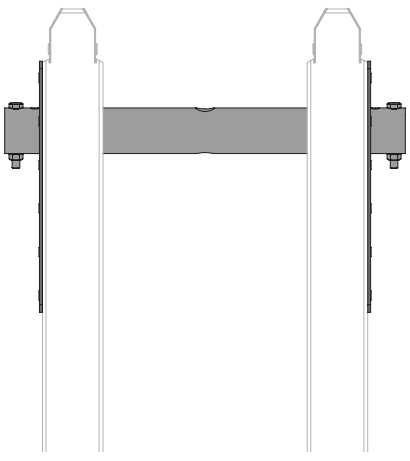


Fig. B9.06b

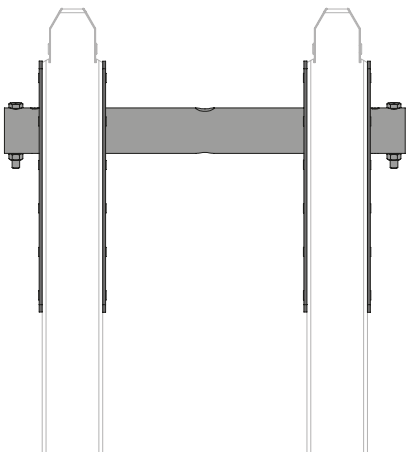


Fig. B9.06c

Mounting procedure

Do not suspend climbing units until the required concrete strength has been achieved.

Placing the hydraulic unit in position

1. Loop a round sling around the gallows between the panel beam and the vertical post top and attach it to the crane.
2. Set the climbing unit upright and place it on the ground.
3. Place the hydraulic unit (**141**) on the climbing platform and fix it to the platform decking.

(Fig. C3.10)

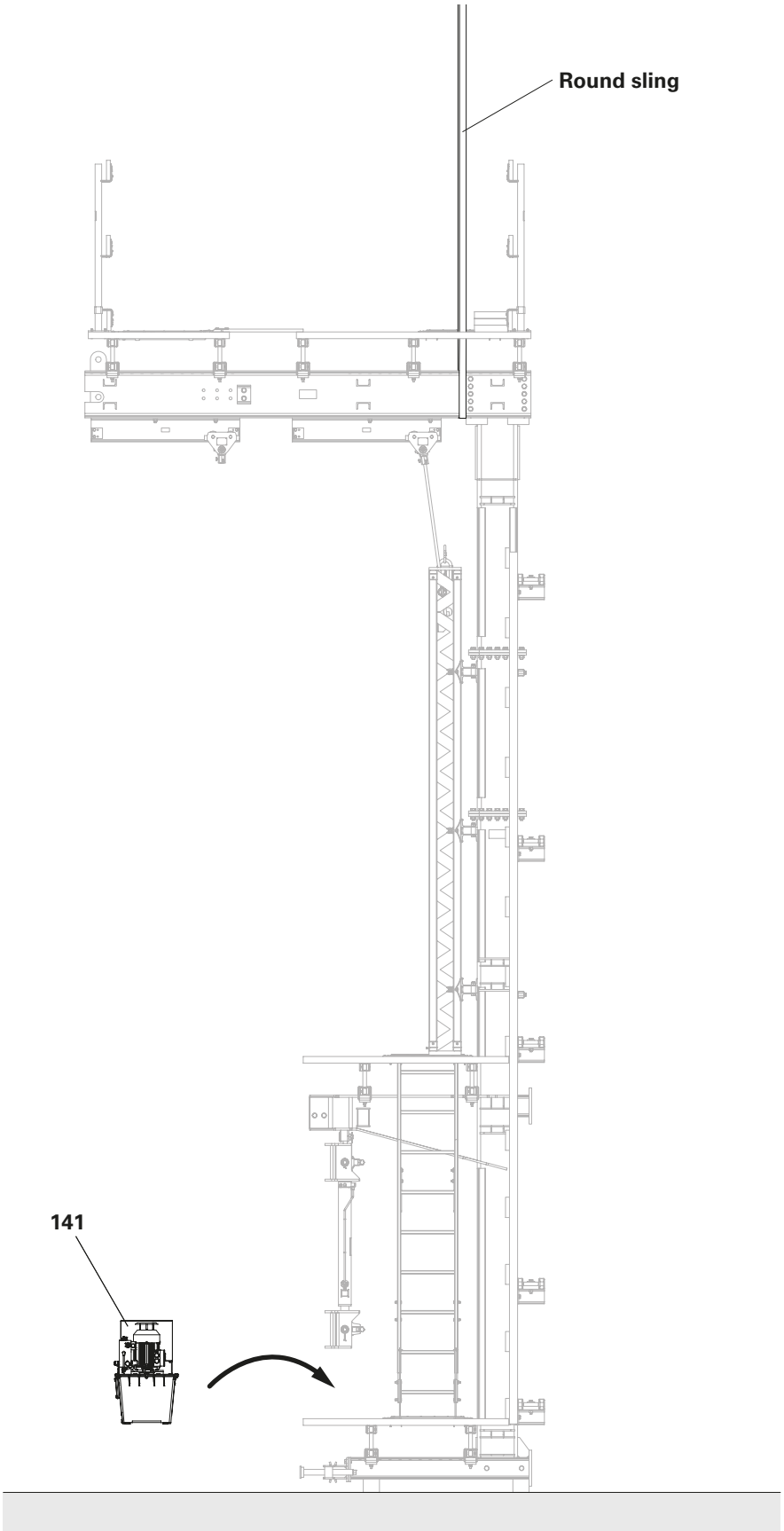


Fig. C3.10

Attaching the climbing unit

1. Position the climbing unit above the Climbing Shoes II ACS (**161**).
2. Slowly lower the climbing unit and feed the heads of the cantilever beam (level 0) (**41.1**) into the Climbing Shoes II ACS (**161**).
3. Lower the climbing unit until the heads of the cantilever beam (level 0) (**41.1**) are resting fully on the Ledger ACS (**145**).

(Fig. C3.11 + C3.11a)

4. Check that the climbing unit is aligned vertically.
5. If necessary, adjust the climbing unit vertically with the Pressure Point Spindles M42 ACS (**146**).

(Fig. C3.11b)

6. Fix the chain of Ledger ACS (**145**) to Formwork Girder GT 24 (**21**).
7. Fold the swing ledger (**161.2**) downwards.
8. Add in the missing platform decking for the work platform (level +1).

(Fig. C3.11a)

- Is the head of the cantilever beam (level 0) resting fully on the Ledger ACS?
- Is the swing ledger folded down?
- Are all Pressure Point Spindles M42 ACS (**146**) on the wall?

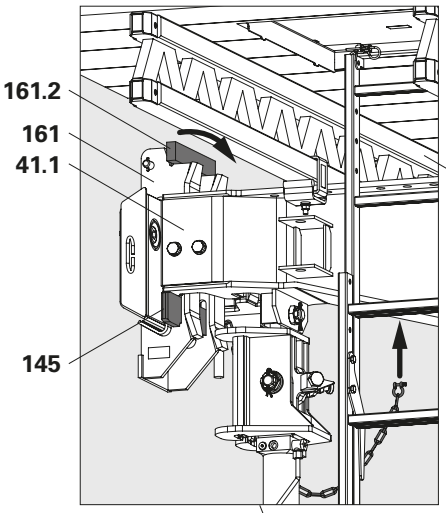


Fig. C3.11a

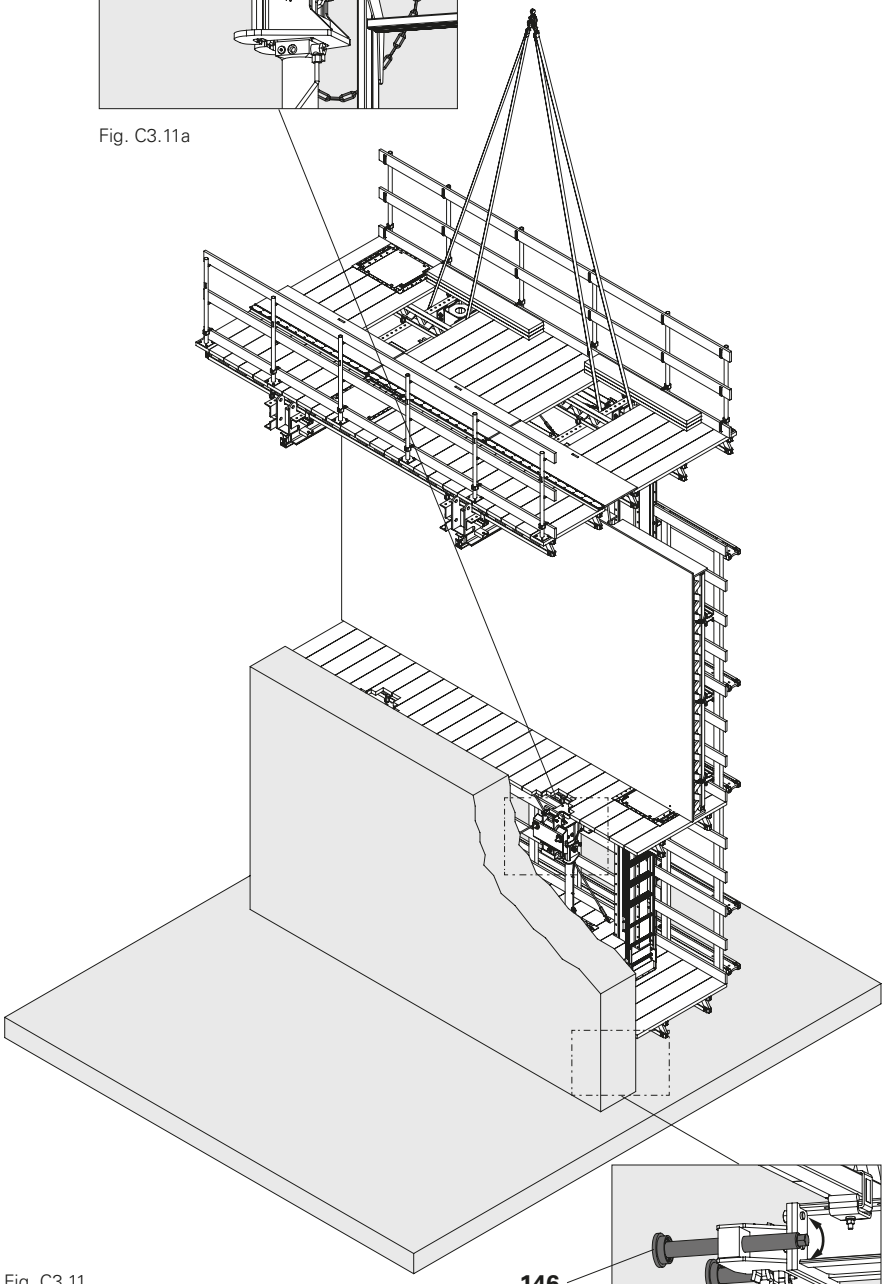


Fig. C3.11

Fig. C3.11b

Aligning the formwork

1. Detach the formwork unit on the console bracket side (**273**) from the vertical post intermediate.
2. Undo Hex. Nut DW 20 (**217a**).
3. Align the formwork unit with Hex. Nut DW 20 (**217b**).
4. Place Hex Nuts DW 20 (**217a + 217b**) onto Suspended Tube 530 ACS (**216**) and screw them tight.

(Fig. C3.12)

Make sure that the formwork unit hangs freely and is not propped up by the platform decking.
PERI recommends the following values:

- Formwork overlap of 5 cm at the final concreting section.
- Distance between lower edge of formwork and platform decking of 10 cm.

(Fig. C3.13)

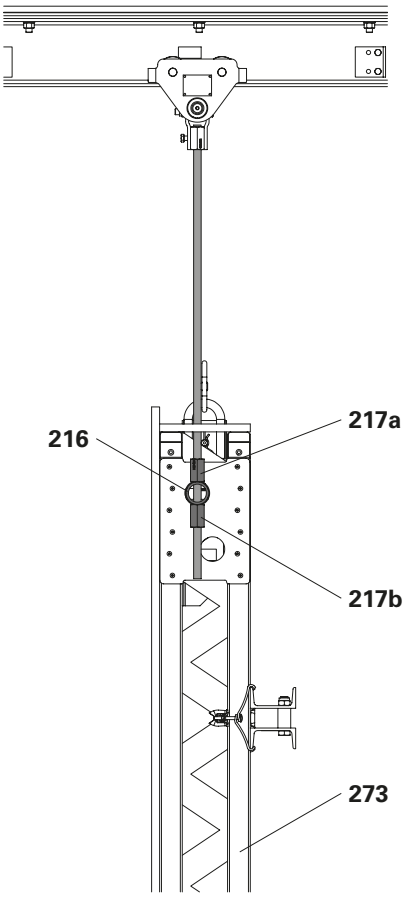


Fig. C3.12

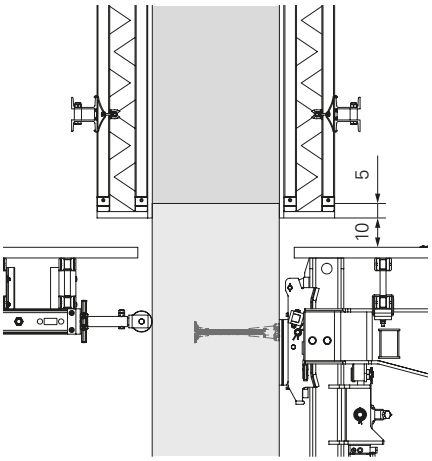


Fig. C3.13

Installing the formwork

Components

215 Betomax 20
216 Suspended Tube 530 ACS
217 Hex. Nut DW 20, AF 36/60
273 Formwork unit

Assembly

1. Place the opposite side of the formwork unit (**273**) on the ladder cage of the counter-platform.
   ➔ Make sure that the formwork unit is in contact with the platform decking!
2. Temporarily fix the Steel Waler SRU of the opposite side of the formwork unit (**273**) to the Platform Post 5900 IPBL 240 ACS (**57**).

(Fig. C4.01)

3. Screw Hexagon Nut DW 20, AF 36/60 (**217a**) onto Betomax 20 (**215**).
4. Slide Betomax 20 (**215**) through the hole in Suspension Tube 530 ACS (**216**).
5. Screw Hexagon Nut DW 20, AF 36/60 (**217b**) onto Betomax 20 (**215**).
6. Screw Hexagon Nuts DW 20, AF 36/60 (**217a + 217b**) onto Suspended Tube 530 ACS (**216**).

(Fig. C4.02)

Prop up the formwork unit at the lower end with timber wedges. This means that the formwork unit is ready to be moved after it has been attached without the need for any further measures.

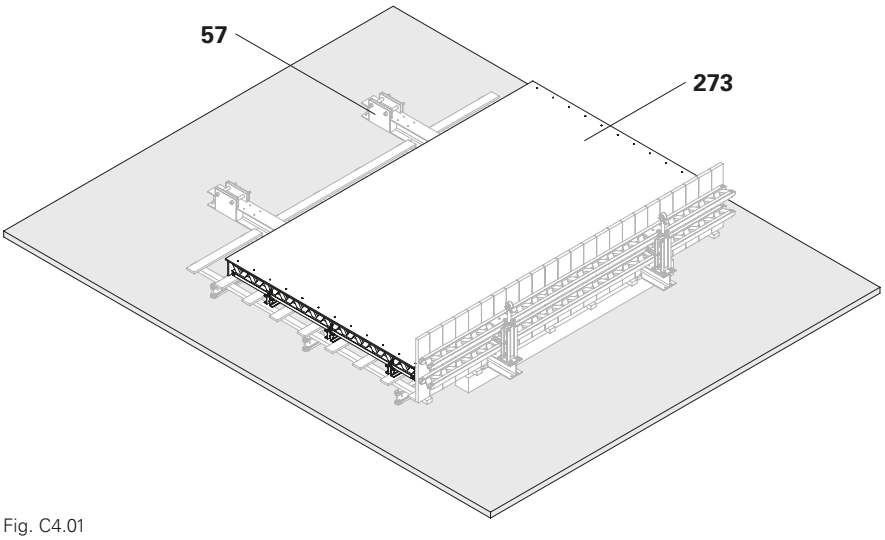


Fig. C4.01

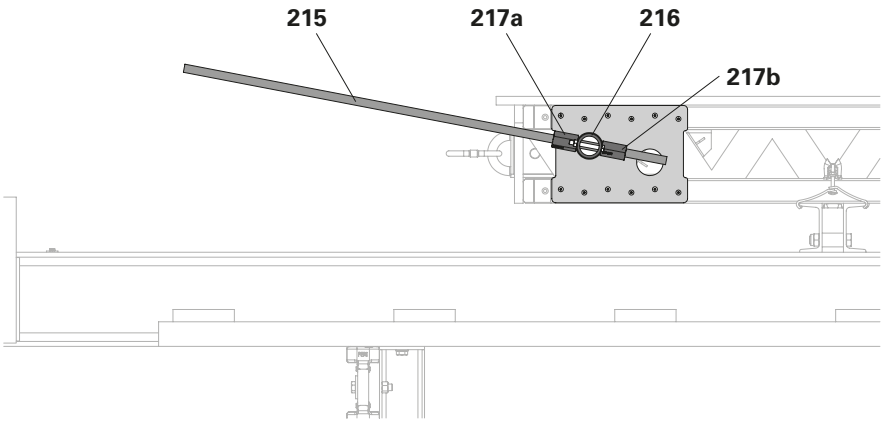


Fig. C4.02

Mounting procedure

- Use a lifting platform to attach the counter-platform safely.
- To mount the counter-platform, attach it to the 9 t climbing beam.
- If a 9 t climbing beam is not used, fit a compression brace between the platform posts.

Assembly

1. Attach the crane hooks to the holes of Platform Post 5900 IPBL 240 ACS (**57**).
2. Fly in the counter-platform and bolt it to the Gallows 3325 ACS-G (**49**) with the fixing materials provided.

(Fig. C4.03 + C4.03a)

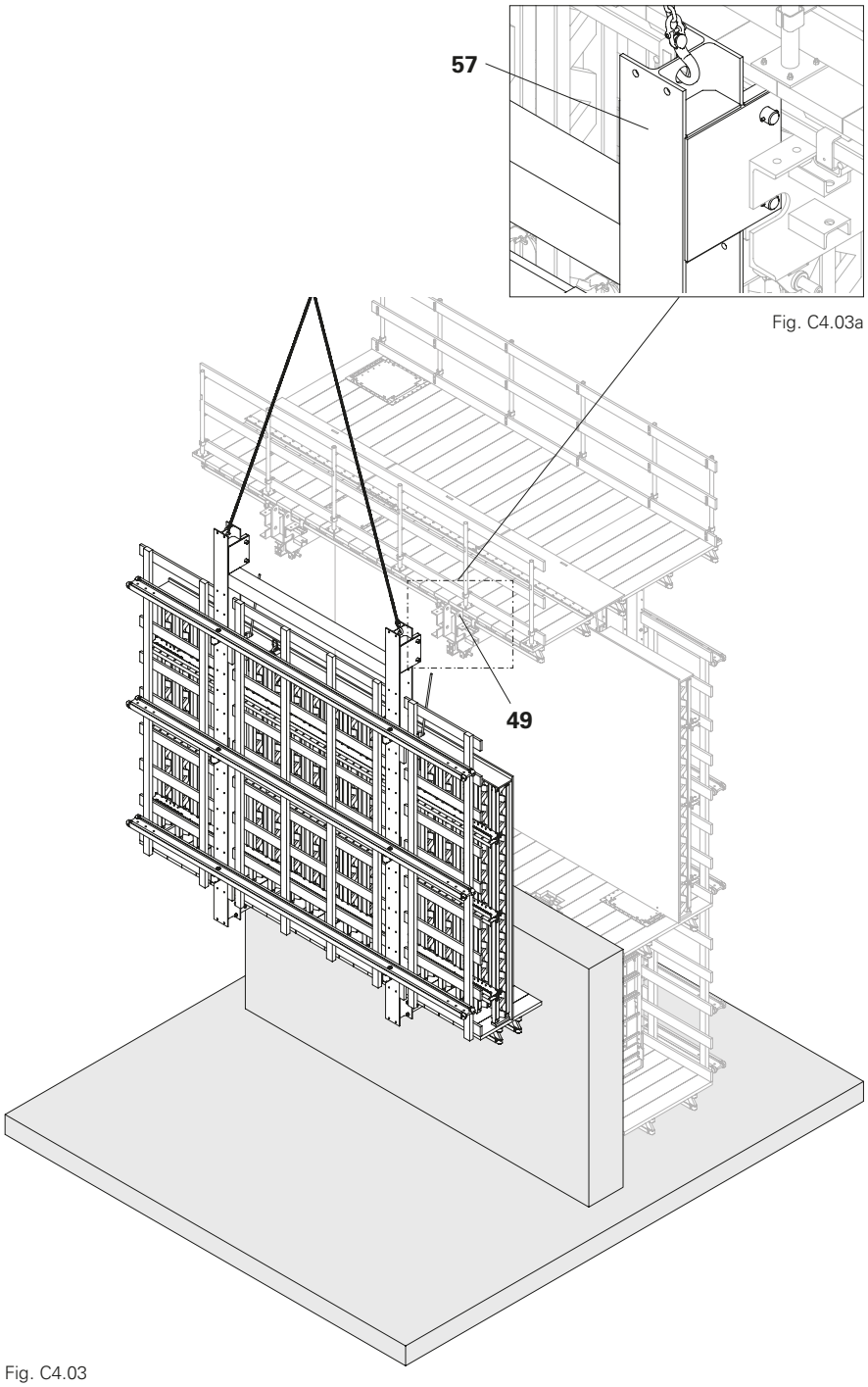


Fig. C4.03a

Fig. C4.03

C4 Attaching the counter-platform

Aligning the formwork

1. Screw Betomax 20 (**215**) into Adapter DW 20 ACS (**60**).
2. Detach the opposite side of the formwork unit (**273**) from the Platform Post 5900 IPBL 240 ACS.
3. Undo Hex. Nut DW 20 (**217a**).
4. Align the formwork unit with Hex. Nut DW 20 (**217b**).
5. Place Hex Nuts DW 20 (**217a + 217b**) onto Suspended Tube 530 ACS (**216**) and screw them tight.

(Fig. C4.04)

Make sure that the formwork unit hangs freely and is not propped up by the platform decking.
PERI recommends the following values:

- Formwork overlap of 5 cm at the final concreting section.
- Distance between lower edge of formwork and platform decking of 10 cm.

(Fig. C4.05)

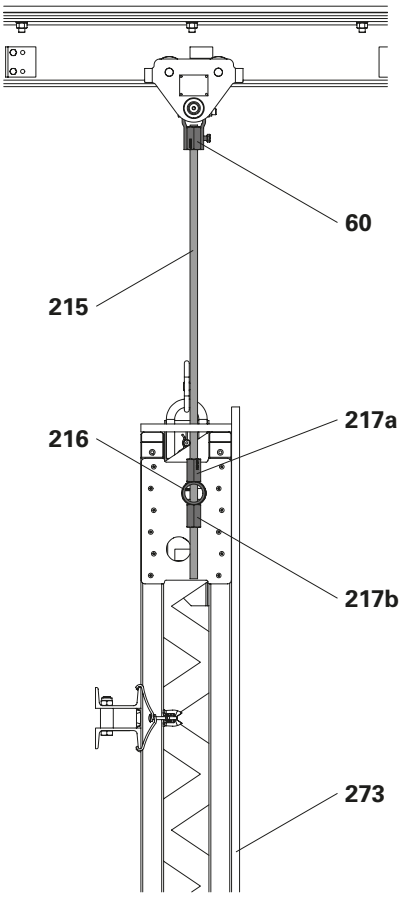


Fig. C4.04

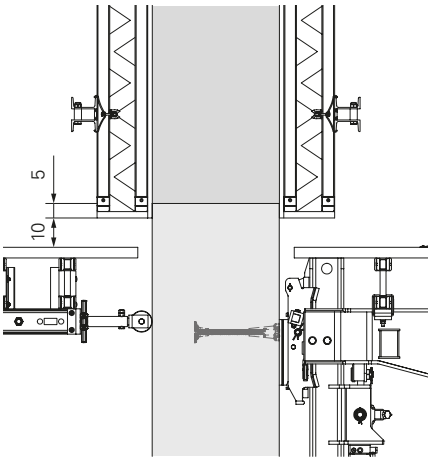


Fig. C4.05

General information

Danger

- Risk of crushing to the body or body parts when closing the formwork!
  ⇒ Do not linger behind the formwork units.
  ⇒ Do not reach between adjacent formwork units.
- Unsecured formwork units may shift on their own!
  This can lead to serious injuries or even death.
  ⇒ Secure formwork units, for example, by tying them to the Console Bracket ACS-G or Platform Post 5900 IPBL 240 ACS.

Moving the formwork unit
Guide the formwork unit backwards and forwards from both sides.

Formwork in climbing position

1. Unbolt the Kicker Brace AV 140 (**61**) at the Connection AV ACS (**53**), fold it towards the formwork unit (**273**) and fix it in place.
2. Retract the formwork unit (**273**).
3. Secure the formwork unit (**273**).
   ➔ Do not tie the formwork unit to the ladder cage!

(Fig. C5.01)

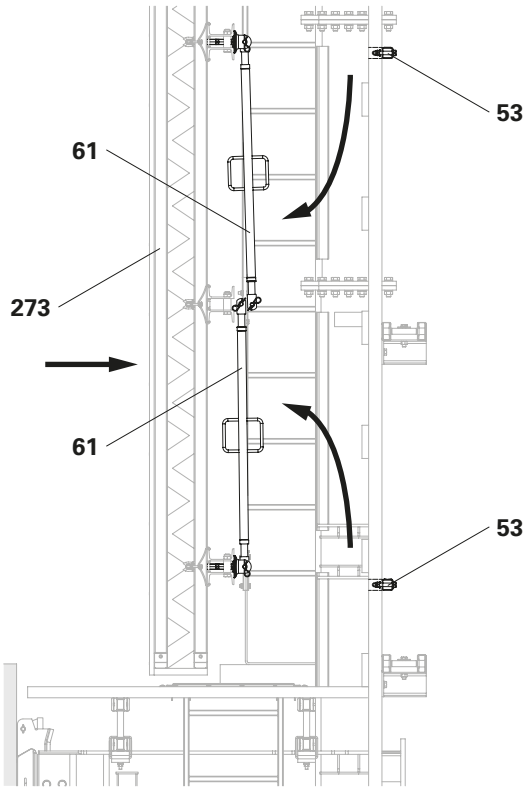


Fig. C5.01

Formwork in concreting position

1. Move the formwork unit (**273**) forwards.
2. Bolt the Kicker Brace AV 140 (**61**) to the Connection AV ACS (**53**).
3 Align the formwork unit with Kicker Brace AV 140 (**61**) vertically.

(Fig. C5.02)

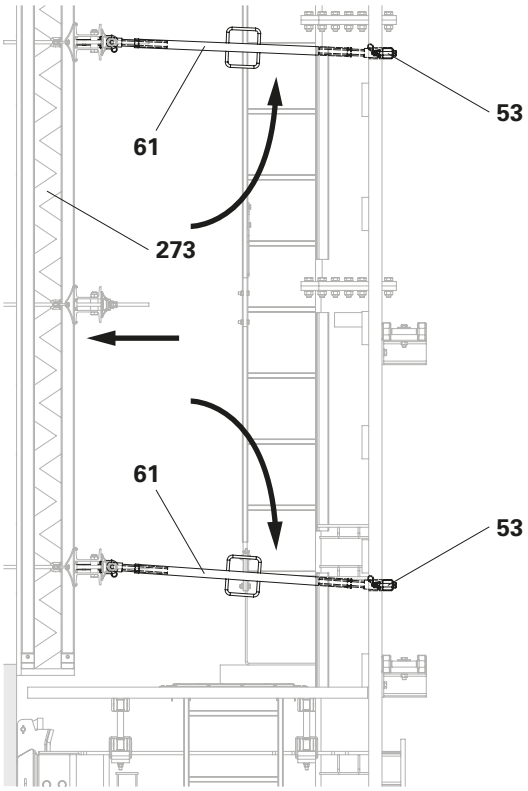


Fig. C5.02

C6 Second concreting section

Work to be performed
- Install and commission the hydraulic system.
- Carry out reinforcement work for the second concreting section.

The following work is only applicable in combination with the Assembly Instructions for "ACS 100 Climbing Device and Hydraulics".

Installing the hydraulic system

This includes the following work:
- Lay and connect the power cable for the hydraulic unit.
- Lay and connect hydraulic hoses along the ladder cage and platform beam.
- Connect the remote control.
- Fill the hydraulic unit with hydraulic oil.
- Bleed the hydraulic system and put it into operation.

(Fig. C6.01 + C6.02)

For a detailed description of these tasks, see the Assembly Instructions for "ACS 100 Climbing Device and Hydraulics".

While the hydraulic system is being installed and commissioned, carry out the reinforcement work for the next concreting section.

Carrying out reinforcement work and pouring concrete
1. Attach climbing ties to the primary and closing formwork.
2. Move the primary formwork forwards.
3. Move the closing formwork forwards, secure it and fit the formwork ties.
4. Concrete the second section.

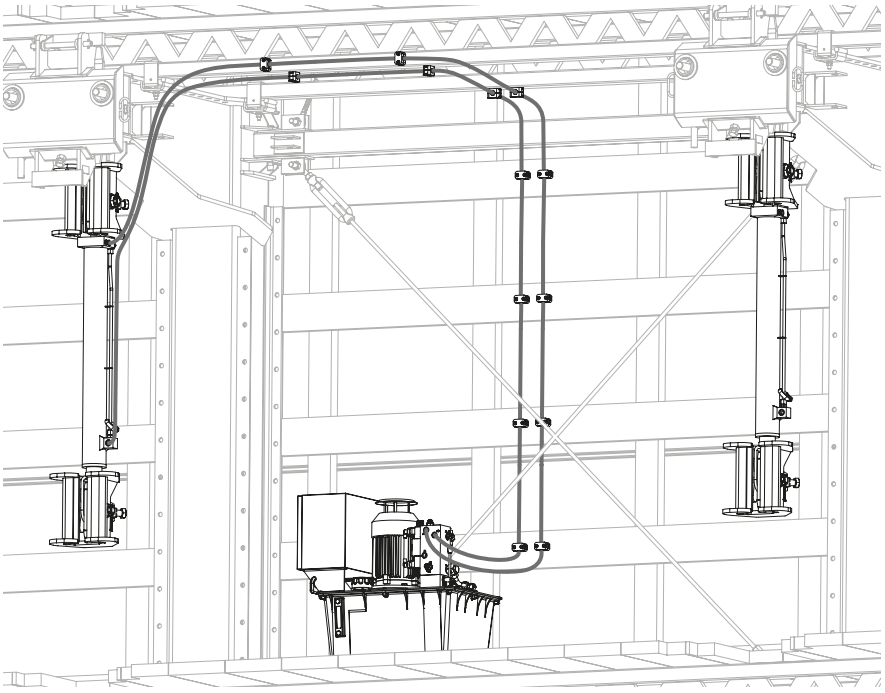


Fig. C6.01

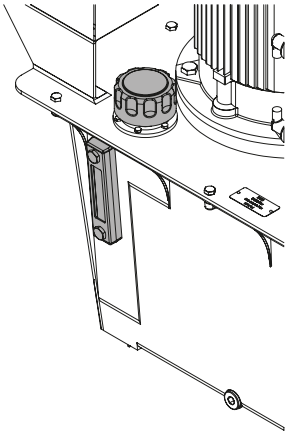


Fig. C6.02

Installing Climbing Rail ACS

Striking the second concreting section

1. Remove the formwork ties.
2. Remove Positioning Screw M30.
3. Move the formwork unit back.

Installing the anchoring

1. Fit Tie Tube ACS and Climbing Shoe II ACS onto the climbing tie of the second concreting section.

Installation preparations for Panel Beam 1110 ACS

1. Remove the platform decking of the work platform (level +1) above the Gallows 3325 ACS-G.
2. Loosen the screws (**208**) from Panel Beam 1110 ACS (**50**) and slide Panel Beam 1110 ACS (**50**) to the side.

→ The Climbing Rail ACS (**143**) has space between Panel Beam 1110 ACS (**50**) and Gallows 3325 ACS-G (**49**).

(Fig. C6.03)

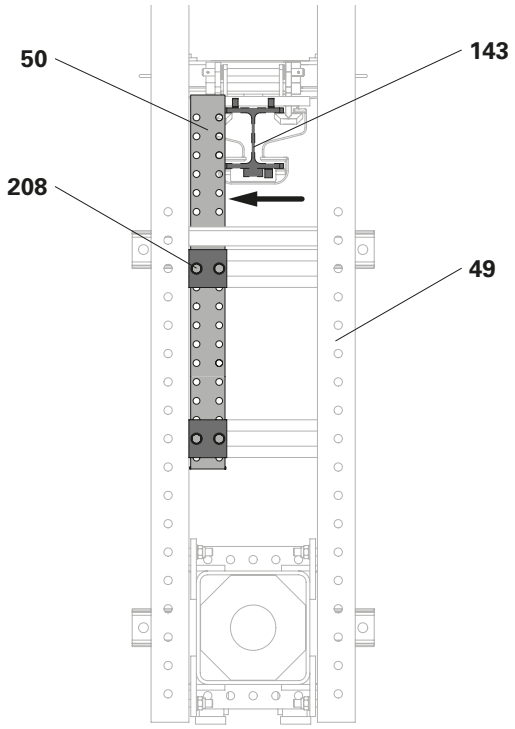


Fig. C6.03

Installation preparations for Panel Beam 1110 IPB 160 ACS

1. Remove the platform decking of the work platform (level +1) above the Gallows 3325 ACS-G.
2. Remove the screw (**406a**).
3. Undo the screws (**406b**) and rotate Counterplate 100 x 100 x 15 ACS (**68**).
4. Swing the Panel Beam 1110 IPB 160 ACS (**67**) to the side.

→ The Climbing Rail ACS (**143**) has space between Panel Beam 1110 IPB 160 ACS (**67**) and Gallows 3325 ACS-G (**49**).

(Fig. C6.04)

Prop up the formwork unit with timber wedges. This will make the following work easier.

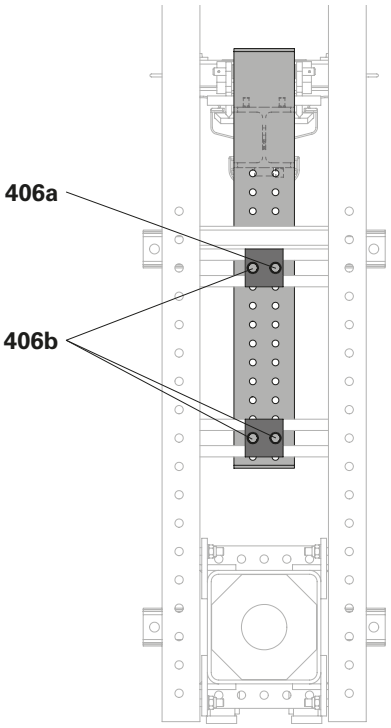


Fig. C6.04a

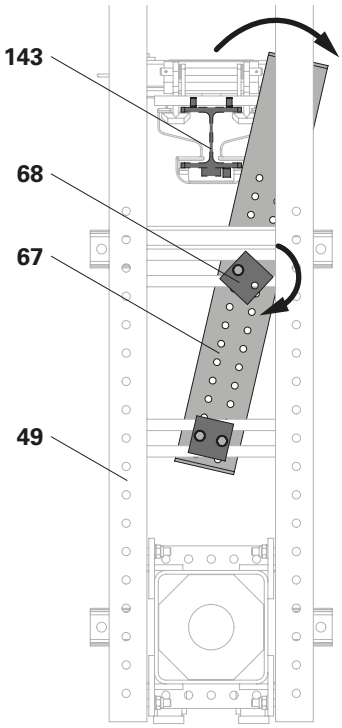


Fig. C6.04b

Danger

Heavy components that can fall down!
Risk of serious injury or death from falling off the climbing rail.

⇒ Fold the swing ledger (**161.2**) all the way down.
⇒ The support noses (**143.1**) of the Climbing Rail ACS (**143**) must rest fully on the swing ledger (**161.2**).

(Fig. C6.05 + C6.05a)

Caution

Heavy moving parts!
During assembly, there is a risk of hands and other body parts being crushed.

⇒ Guide the Climbing Rail ACS with a rope.
⇒ Do not move the Climbing Rail ACS onto the top or bottom climbing head.
⇒ Make sure clothing does not get caught up in the catch blocks.
⇒ Ensure a safe and secure position.

Installation

1. Lower the Climbing Rail ACS and slide it between the Panel Beam 1110 ACS and Gallows 3325 ACS-G.
   Note the installation position of the Climbing Rail ACS.

(Fig. C6.06)

- For further information, see the Assembly Instructions for the 'ACS 100 Climbing Device and Hydraulics'.
- In the interests of providing a clearer overview, a simplified representation is shown in Fig. C6.06.

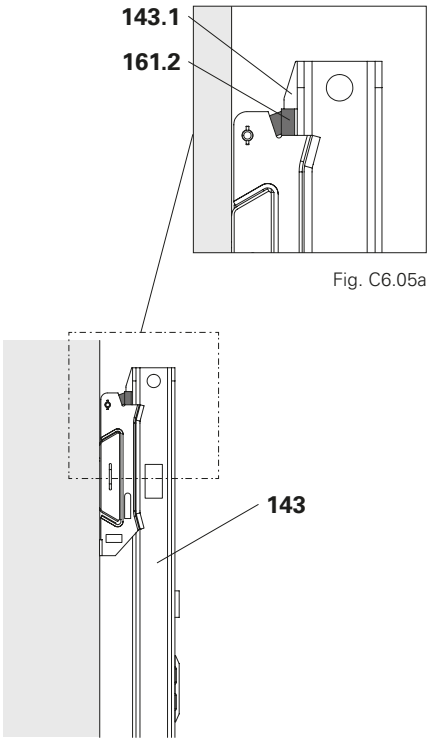


Fig. C6.05a

Fig. C6.05

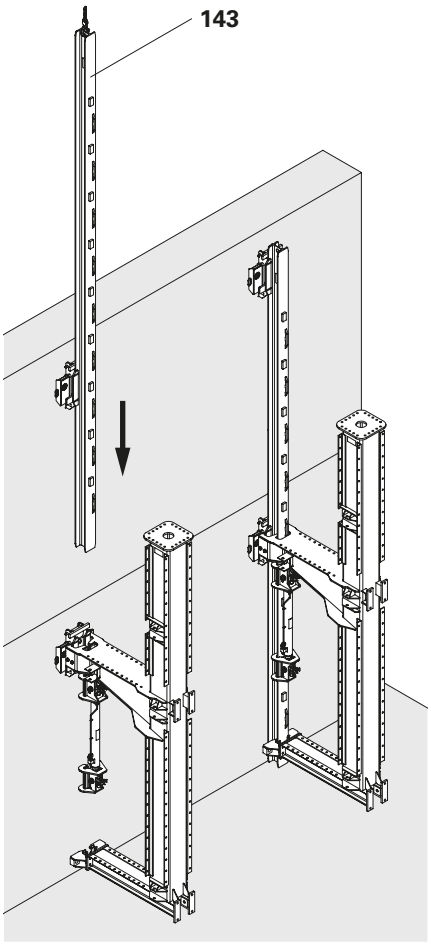


Fig. C6.06

Concluding work on Panel Beam 1110 ACS

1. Slide the Panel Beam 1110 ACS (**50**) into the installation position and tighten the screws (**208**).
2. Complete the platform decking on the work platform (level +1).

Fig. C6.07 shows the Climbing Rail ACS (**143**) and the Panel Beam 1110 ACS (**50**) after installation.

Concluding work on Panel Beam 1110 IPB 160 ACS

1. Rotate Panel Beam 1110 IPB 160 ACS (**67**) and Counterplate 100 x 100 x 15 ACS (**68**) into the installation position.
2. Fit and tighten the screws (**406**).
3. Complete the platform decking on the work platform (level +1).

Fig. C6.08 shows the Climbing Rail ACS (**143**) and the Panel Beam 1110 IPB 160 ACS (**67**) after installation.

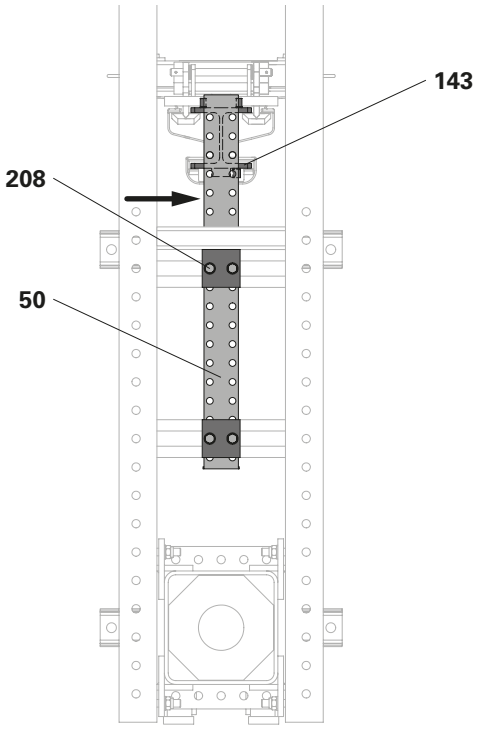


Fig. C6.07

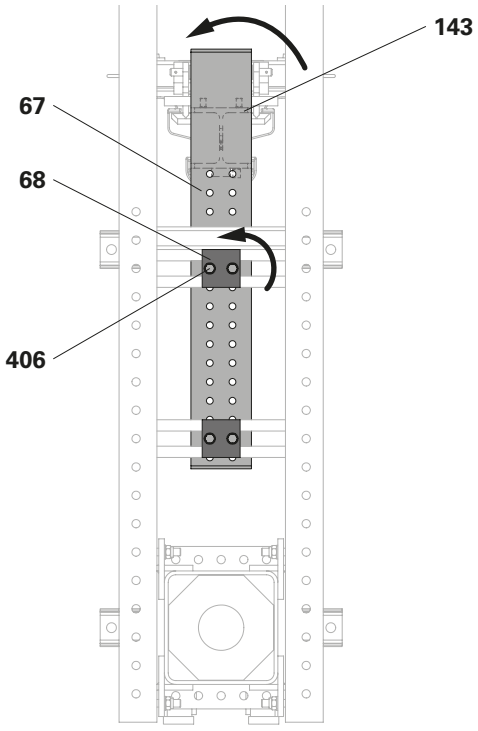


Fig. C6.08

Attaching the finishing platform

Preparing for the climbing procedure

- Do not linger in the danger zone created by the moving parts.
- Cordon off leading edges formed between the platforms. If necessary, put on PPE.
- When operating the climbing unit, only personnel required for climbing are allowed on the platform.
- Personnel, building materials or tools must not be transported with the climbing unit when it is moved.
- Approval for climbing is given by the operating personnel.

1. Fold up the spacer (**144**) at the end of the Climbing Rail ACS (**143**).
   → The Expander ACS (**149**) pulls the spacer (**144**) towards the climbing rail (**143**) and thus prevents it from slipping when it is in a relieved state.

(Fig. C6.09)

2. Secure danger zones at the ends of the platforms.

- Risk of collision: The Pressure Point Spindles M42 ACS (**146**) must be retracted entirely when operating the climbing unit so it is possible to move past the climbing shoes without a collision occurring.
  The climbing unit is propped up on the Climbing Rail ACS during the climbing process.
- The spacer (**144**) must support the Climbing Rail ACS (**143**) when the climbing unit is operated, otherwise there is a risk of overloading the Climbing Rail ACS (**143**).

3. Turn the Pressure Point Spindles M42 ACS (**146**) back in a counter-clockwise direction as far as they will go.
   → The climbing unit is propped up exclusively by the Climbing Rail ACS (**143**).

(Fig. C6.10)

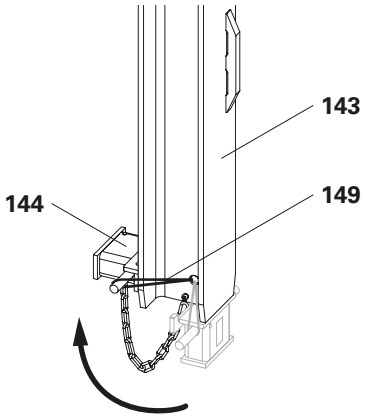


Fig. C6.09

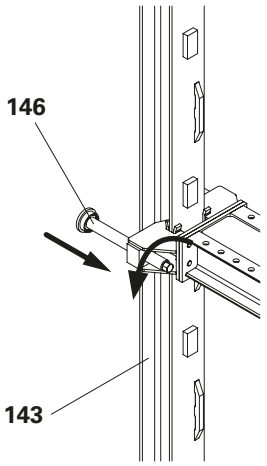


Fig. C6.10

Carrying out the climbing procedure

The manner in which the hydraulic system and the climbing devices are operated is not described here in order to provide a clear description of the climbing procedure. See the Assembly Instructions for the "ACS 100 Climbing Device and Hydraulics" in this regard.

- Avoid tilting the climbing unit during the climbing operation.
- Check the position of the catch and cam after each cylinder stroke.
  → The red marking flag for the catch points downwards.
  → The cam is in the central position.

1. Set the switch units in all the climbing heads to "Climbing the platform". (Fig. C6.11)
2. Extend the hydraulic cylinder by approx. 10 cm. Pull the Ledger ACS out of the climbing shoes.
3. Climb the climbing unit until the finishing platform can be placed beneath the climbing unit.
4. Place the finishing platform beneath the climbing unit.
5. Couple the finishing platform to the climbing unit with the fixing materials provided.

(Fig. C6.12)

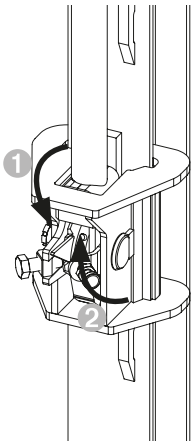


Fig. C6.11

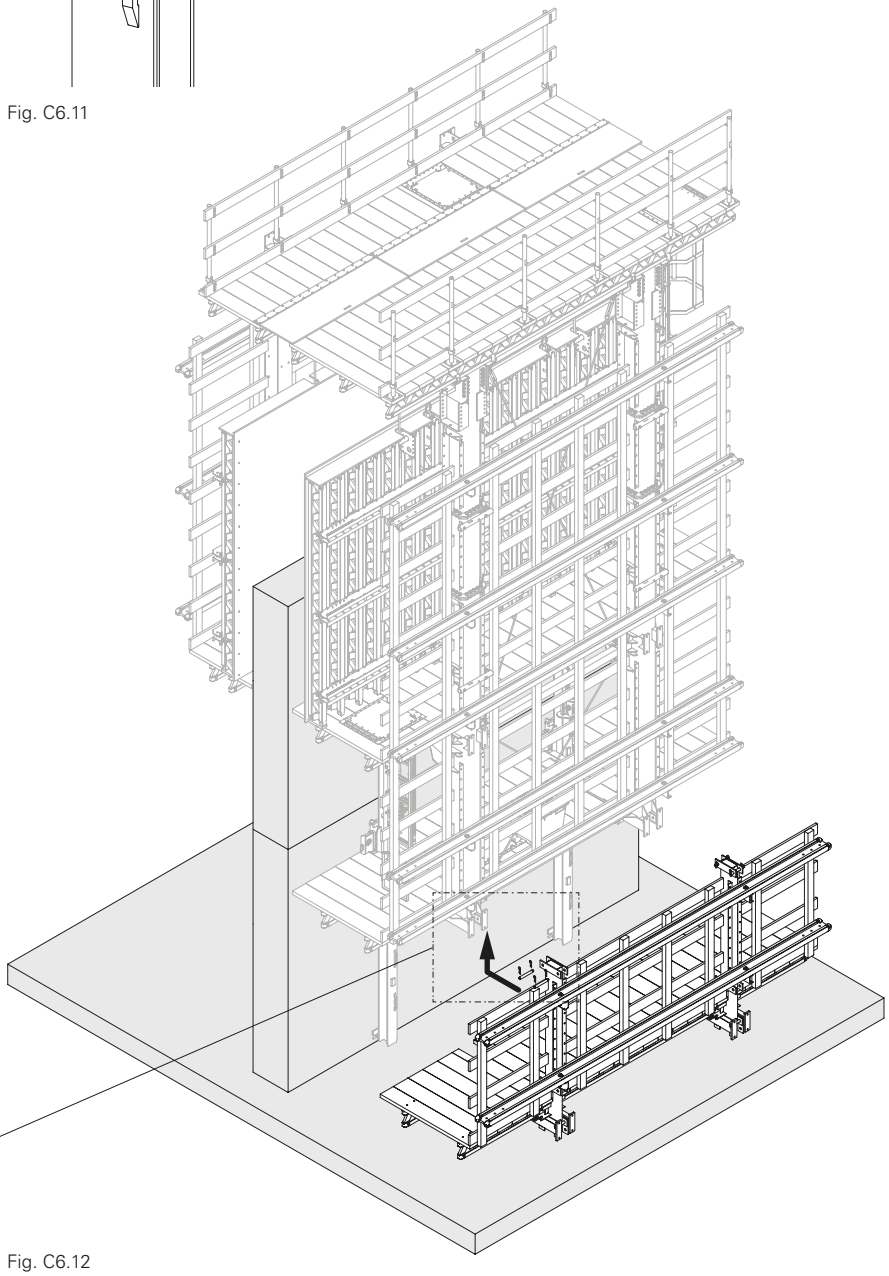


Fig. C6.12

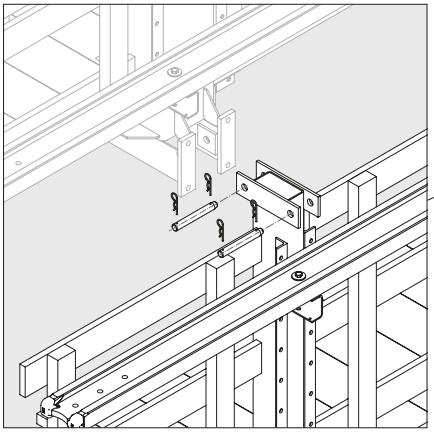


Fig. C6.12a

6. Climb to the end position.
7. Insert the Ledger ACS into the Climbing Shoe II and place the climbing unit on the Ledger ACS.
8. Rotate the Pressure Point Spindles M42 ACS (**146**) in a clockwise direction and align the climbing unit vertically.
   → The climbing unit is propped up by the structure.
   → The Climbing Rail ACS (**143**) swings freely and is not subjected to any load.

(Fig. C6.13)

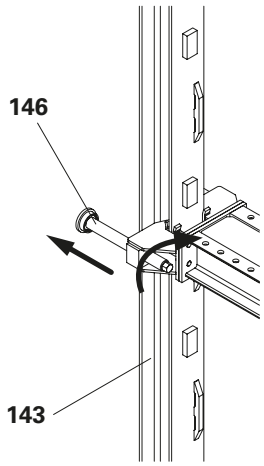


Fig. C6.13

Fitting the ladder

Fit the ladder between the climbing platform and the finishing platform.
See "Fitting the ladder" on page 62.
(Fig. C6.14)

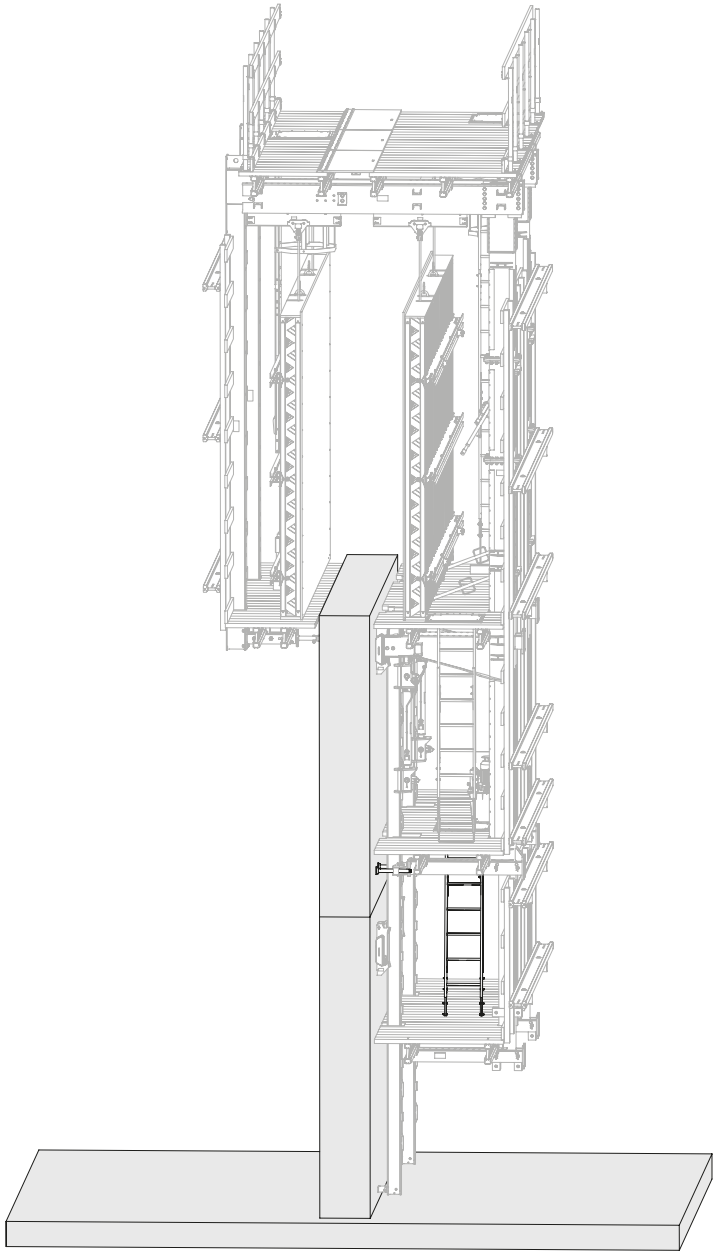


Fig. C6.14

Concreting cycle

1. Clean the formwork unit and spray with release agent, e.g. PERI Bio-Clean.
2. Fit the climbing tie.
3. Move the primary formwork forwards.
4. Carry out reinforcement work.

Danger

Risk of crushing to the body or body parts when closing the formwork!

⇒ Do not linger behind the formwork units.

⇒ Do not reach between adjacent formwork units.

5. Move the closing formwork forwards.
6. Align, connect and anchor the formwork units.
7. Concrete the section.

(Fig. D1.01)

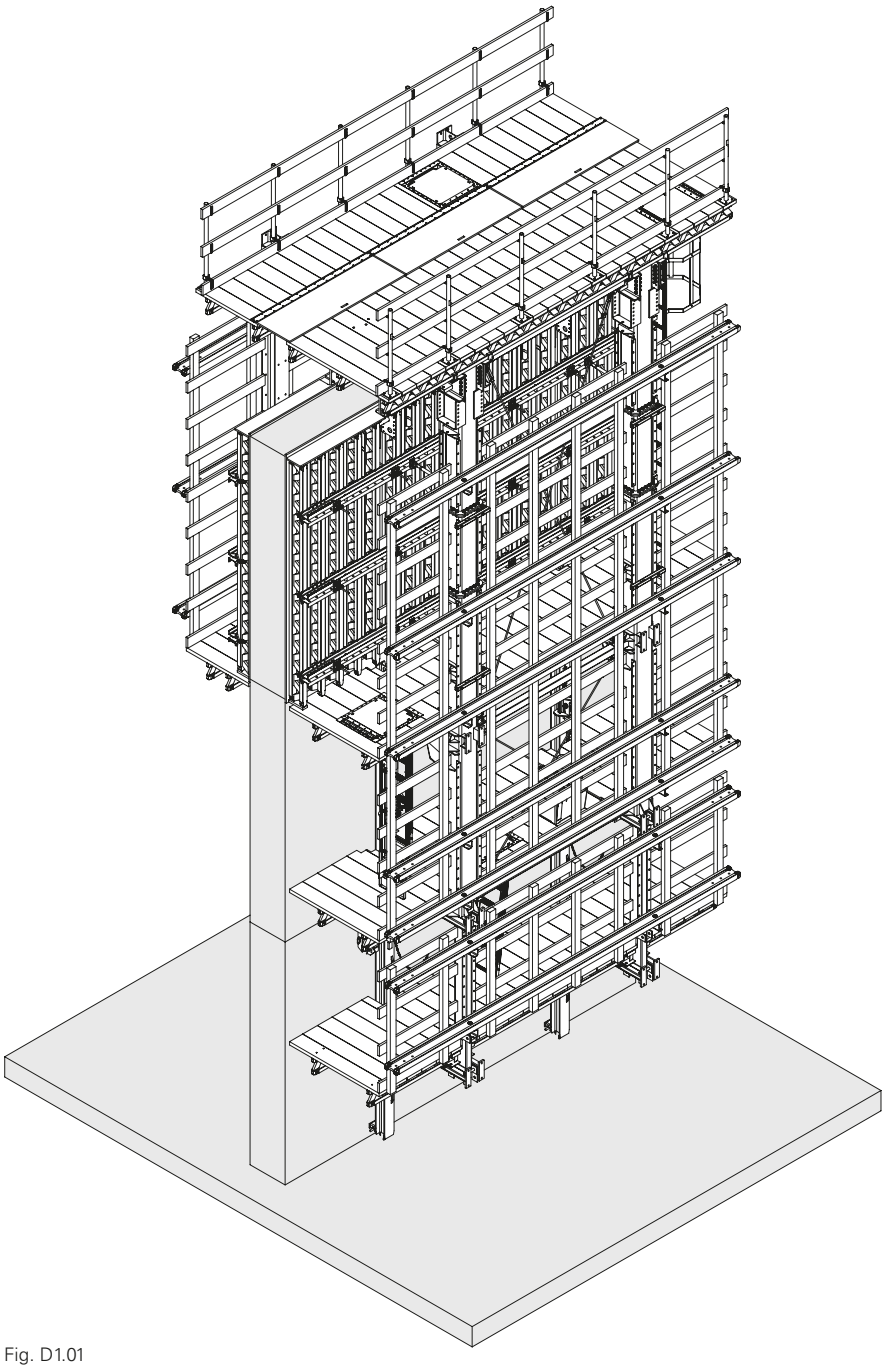


Fig. D1.01

Climbing cycle

- Only climb to the next concreting section when the required concrete strength has been reached.
- To operate the climbing rail and climbing unit, move the formwork to the rear end position and secure it on site.

Preparing for the climbing procedure

1. Remove formwork ties and connecting parts of the formwork units.
2. Remove Positioning Screw M30. The Leading Tie Plate ACS 399 stays on the formwork.

Keep reusable parts for the next assembly process and stow them safely:

- Positioning screw M30
- Formwork tie
- Wingnut pivot plates

3. Retract the primary formwork and the closing formwork.
4. Fit Tie Tube ACS and Climbing Shoe II ACS onto the climbing tie.

Climbing the climbing rail

- An observer on the work platform (level +1) issues instructions and is responsible for ensuring that all instructions are carried out correctly.
- Check the position of the catch and cam after each cylinder stroke.
  → The red marking flag for the catch points upwards.
  → The cam is in the central position.

1. Set all switch units in the climbing heads to "Climbing: Rail". (Fig. D2.01)

- Position the climbing shoes so that the climbing rails can pass through unhindered.
- After climbing the climbing rail, make sure that the
  – the swing ledger is folded down all the way.
  – the support noses of the Climbing Rail ACS are resting fully on the swing ledger.

2. Climb the Climbing Rail ACS (**143**) to the end position.
3. Fold the spacer (**144**) upwards. (Fig. D2.02)

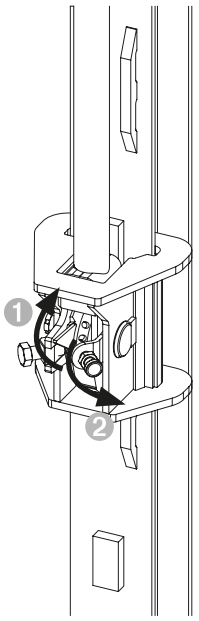


Fig. D2.01

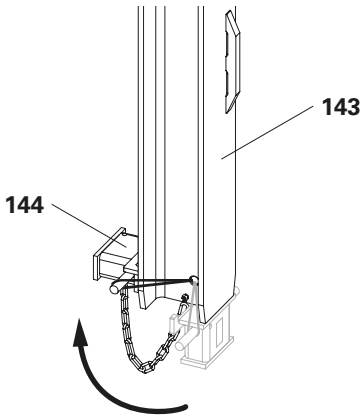


Fig. D2.02

D2 Moving the climbing unit

Preparatory work

1. Remove climbing shoes and tie tubes that are no longer required.
2. Remove the climbing cones.
3. Close the tie holes.
4. Remove the deck covers between the climbing units.
5. Temporarily secure exposed leading edges.

Climbing the climbing unit

Is the spacer folded up and supporting the climbing rail?

1. Retract the Pressure Point Spindle M42 ACS (**146**). (Fig. D2.03)
2. Set the switch units in all the climbing heads to "Climbing the platform". (Fig. D2.04)

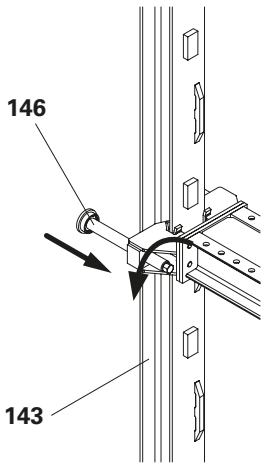


Fig. D2.03

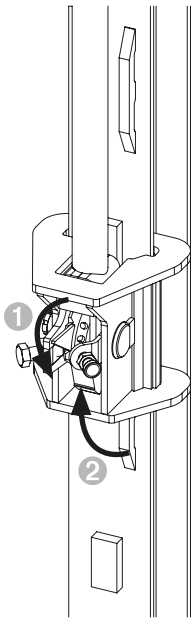


Fig. D2.04

Check the position of the catch and cam after each cylinder stroke.
→ The red marking flag for the catch points downwards.
→ The cam is in the central position.

First stroke

3. Extend the hydraulic cylinder by approx. 10 cm. Pull Ledger ACS (**145**) out of the climbing shoes (**161**).
4. Climb the climbing unit to the end position.

Final stroke

5. Insert Ledger ACS (**145**) into Climbing Shoe II (**161**). (Fig. D2.05)
6. Set the climbing unit down on the Ledger ACS (**145**).
7. Extend the Pressure Point Spindle M42 ACS (**146**) until the Climbing Rail ACS (**143**) swings freely and relieve the pressure on the Climbing Rail ACS (**143**). (Fig. D2.06)

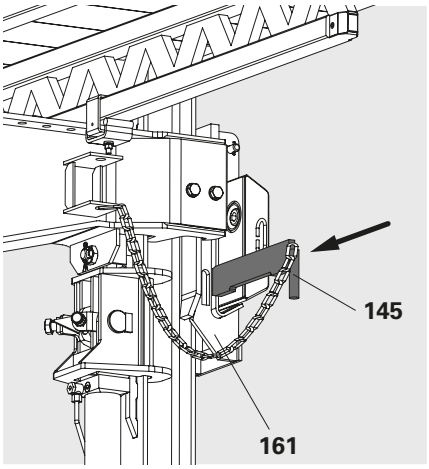


Fig. D2.05

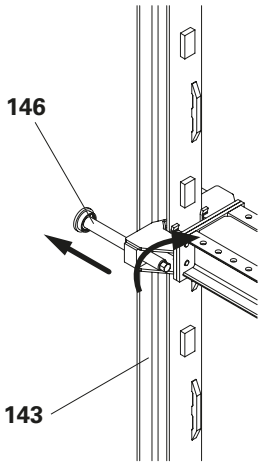


Fig. D2.06

D2 Moving the climbing unit

The climbing unit has climbed one concreting section and the subsequent work can be carried out.
(Fig. D2.07)

Concluding work

1. Remove the temporary guardrail at the end of the platforms.
2. Fit the deck covers between the climbing units.

For each subsequent concreting section, all the steps from the **concreting cycle** and **climbing cycle** are repeated.

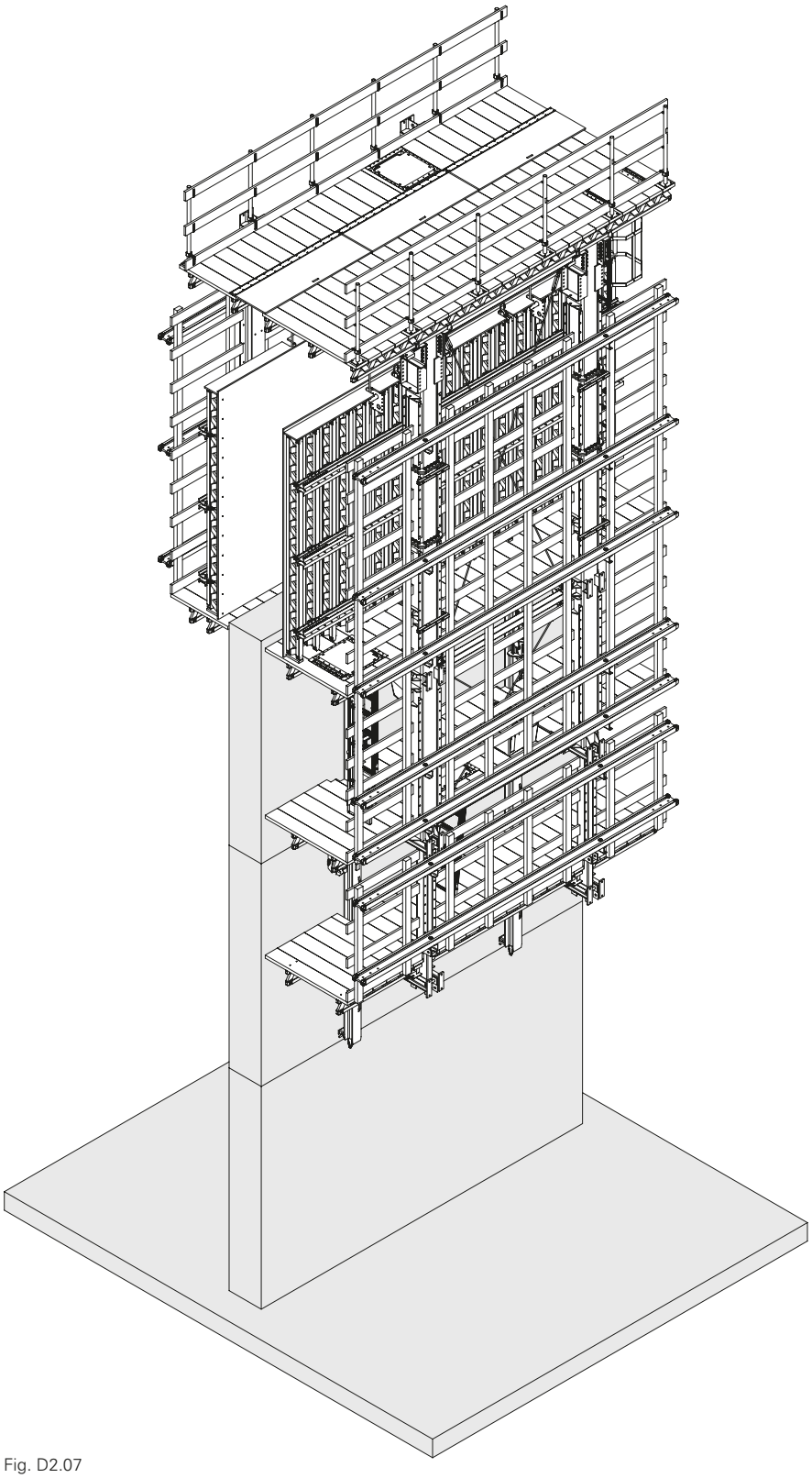


Fig. D2.07

Removing the climbing cones

Components

168 Screw-On Cone M30/DW 26
170 Climbing Cone-2 M30/DW 20
199 KK Concrete Cone M30-80/52

Disassembly

1. Loosen the cone with a ring wrench AF 46 and unscrew it completely. (Fig. D2.08)

Closing the tie holes

If necessary, seal the tie hole with KK Concrete Cone M30-80/52 (**199**) and PERI sealing compound so it is watertight. See the Instructions for Assembly and Use for concrete cones and concrete adhesives. (Fig. D2.09)

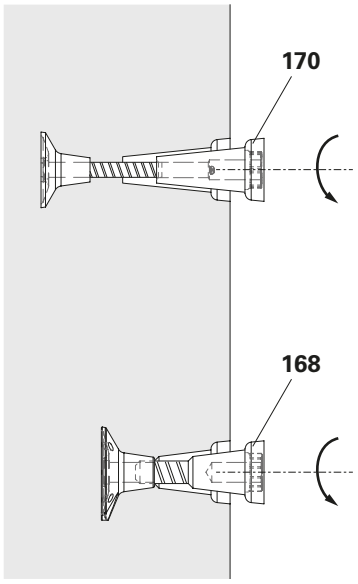


Fig. D2.08

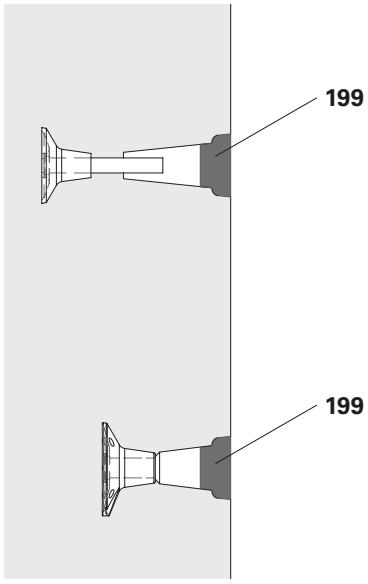


Fig. D2.09

Wall offsets

When concreting wall offsets, the formwork is moved further forward, creating an offset in the new concreting section.
(Fig. D3.01 + D3.01a)

The following parameters have an influence on the climbing procedure in the case of wall offsets:
- Concreting height
- Wall offset
- Climbing rail length
- Upper edge distance of the climbing tie.

Therefore, other combinations of climbing shoes and further measures for climbing in the case of wall offsets are possible, or may even be necessary.

Concreting section before the wall offset

Fit a piece of squared timber into the formwork before concreting the last section before the wall offset.
The resulting edge forms the stop for the formwork in the next concreting section.
(Fig. D3.02 + Tab. D3.01)

Overlap OL	min. 5 cm
Edge height A_{min}	OL + 1 cm
Wall offset B	max. 20 cm

Tab. D3.01

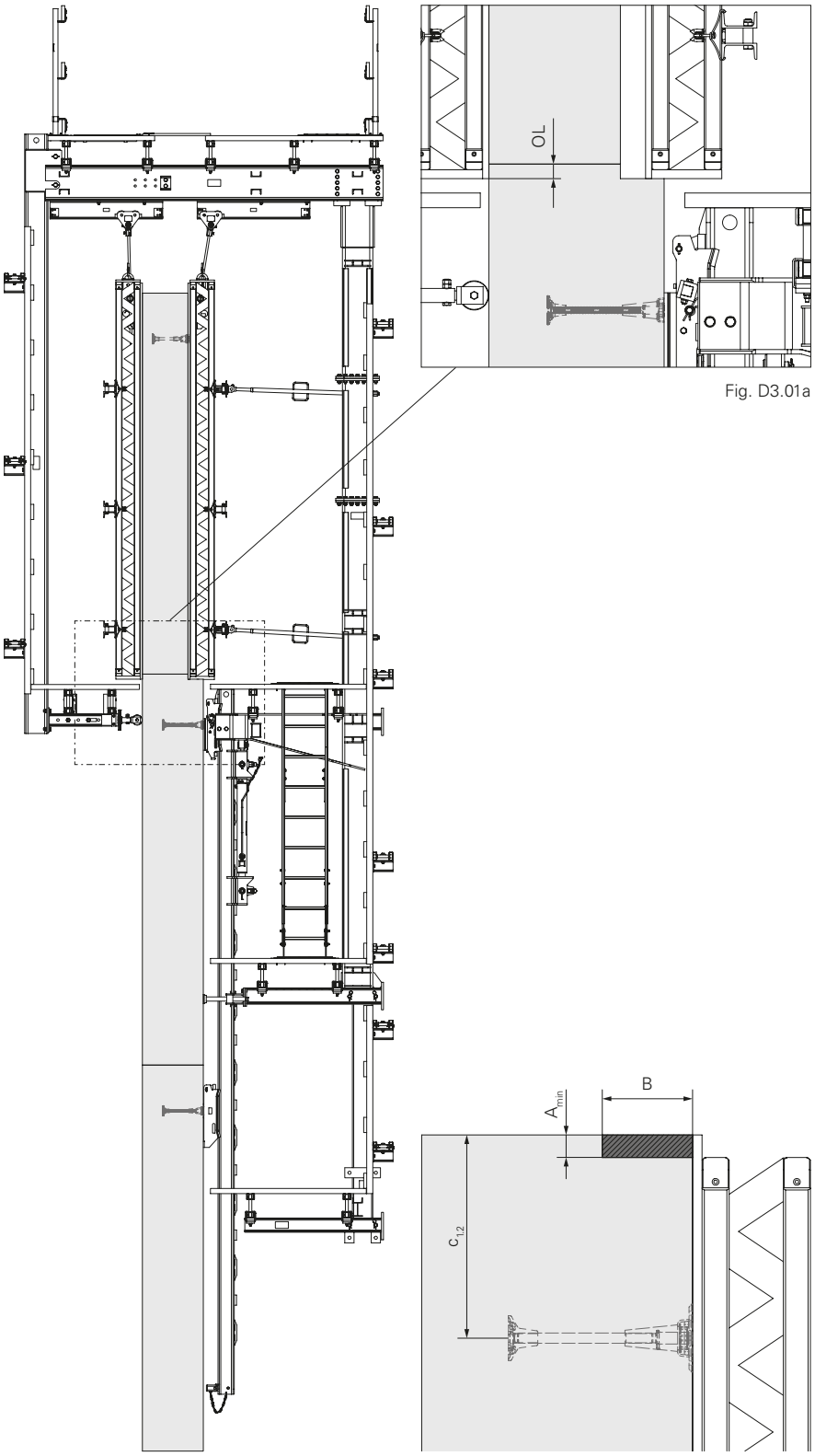


Fig. D3.01a

Fig. D3.01

Fig. D3.02

Concreting section after the wall offset

Precondition

- The climbing unit and climbing rail are hanging on the last climbing shoe before the wall offset.
- The leading ties are installed.

Reconfiguring the formwork

1. Move the formwork unit (**273**) around the offset further forward.
2. Position and support the formwork unit (**273**) with Kicker Brace AV (**61**).
3. Concrete the section.

(Fig. D3.03)

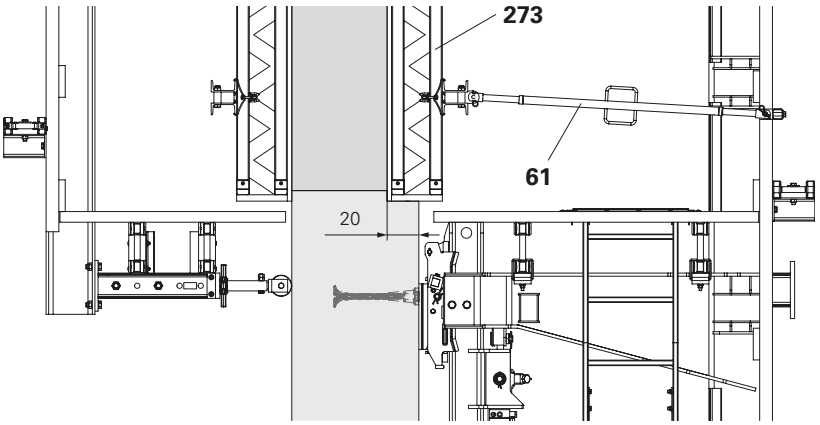


Fig. D3.03

Climbing in the case of wall offsets

Two different climbing shoes are used for climbing in the case of wall offsets:
- Climbing Shoe-2 I ACS
- Climbing Shoe IV ACS in combination with the Tie Shoe H ACS

Fig. D3.04 shows how the different climbing shoes are used and the position of the climbing rail in the individual climbing sections.

It is also possible to climb wall offsets with the Climbing Shoe II ACS.

Precondition
- The climbing unit and climbing rail are hanging on the last climbing shoe before the wall offset.
- The first concreting section after the wall offset has been concreted, cured and released for climbing.

Components

143 Climbing Rail ACS
160 Climbing Shoe-2 I ACS
162 Climbing Shoe IV ACS
166 Tie Shoe-H ACS
167 Climbing tie

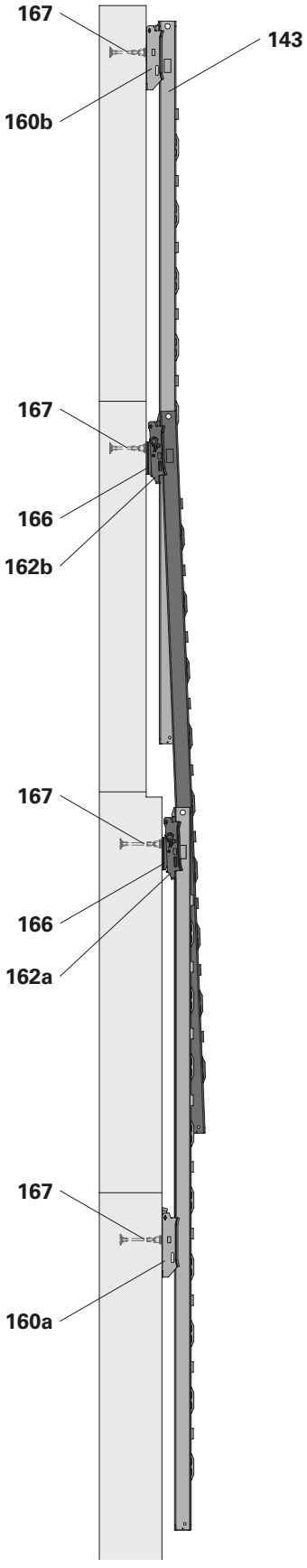


Fig. D3.04

Climbing the climbing rail

The manner in which the hydraulic system and the climbing devices are operated is not described here in order to provide a clear description of the climbing procedure. See the Assembly Instructions for the "ACS 100 Climbing Device and Hydraulics" in this regard.

Warning

- Heavy moving parts!
  Body parts can get trapped, resulting in injuries.
  ⇒ Do not reach into pinch points when pivoting the climbing rail.
  ⇒ Make sure clothing does not get caught up in the catch blocks.
- Risk of injury due to unforeseen climbing rail movements!
  ⇒ Walk away from the pivoting range in front of and behind the climbing rail.

Climbing

1. Fit Tie Shoe-H ACS (**166**) and Climbing Shoe IV ACS (**162b**).
2. Climb the Climbing Rail ACS (**143**) until it is clear of Climbing Shoe-2 I ACS (**160a**).
   → The Climbing Rail ACS is only held and guided in the Climbing Shoe IV ACS (**162a**), the rail guides in the cantilever beams and in the climbing heads of the Climbing Unit ACS 100 (**140**).
3. Pivot climbing unit with Pressure Point Spindles M42 ACS (**146**) backwards and continue to climb the climbing rail (**143**) up to the Climbing Shoe IV ACS (**162b**).

(Fig. D3.05)

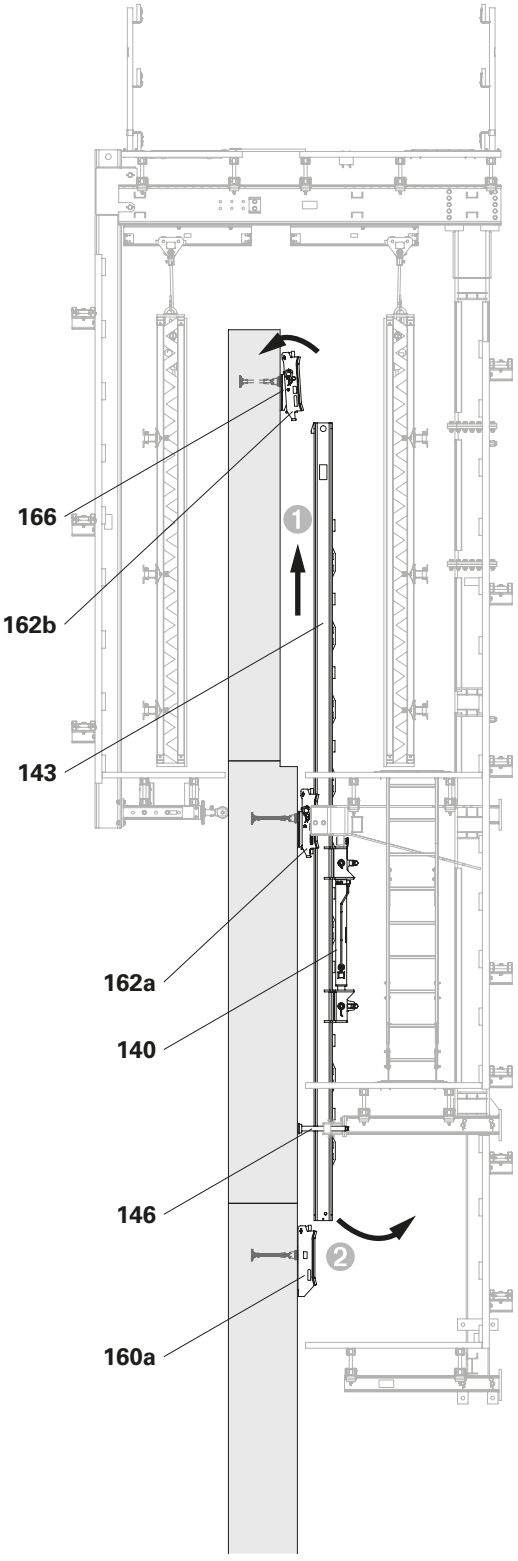


Fig. D3.05

Danger

Fall hazard for components or personnel!
Climbing over the wall offset increases the distance between the platform decking and the structure.
⇒ Close gaps between the platform decking and the structure.

PERI recommends that you install a hinged cover for this purpose.
(Fig. D3.06a)

- Make sure that the swing ledger of Climbing Shoe IV ACS (**162a**) is folded upwards.
- Readjust the Supporting Spindle ACS (**59**).
- Readjust the Pressure Point Spindles M42 ACS (**146**) and set the climbing unit at an angle.
- If necessary, prop up the Pressure Point Spindles M42 ACS (**146**) with a piece of squared timber (**271**).

4. Insert the Climbing Rail ACS (**143**) into the Climbing Shoe IV ACS (**162b**) and attach it.
(Fig. D3.06)

- Is the swing ledger of the climbing shoe (**162b**) folded down all the way?
- Are the support noses of the Climbing Rail ACS resting fully on the swing ledger?

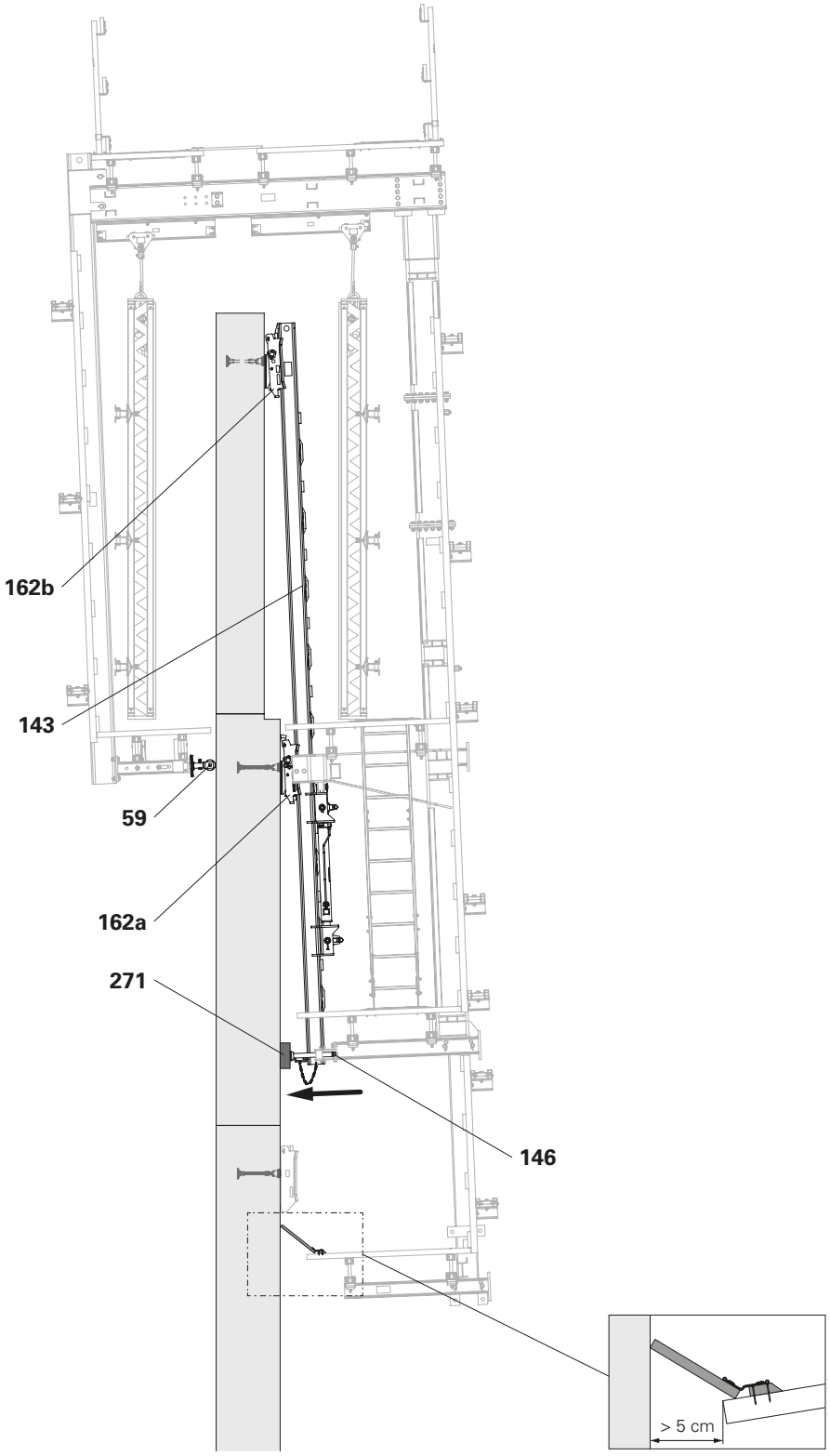


Fig. D3.06

Fig. D3.06a

Climbing the climbing unit

Warning
Risk of injury due to unforeseen formwork unit movements!
⇒ Retract the formwork and fix it to the vertical post intermediate or the platform post on the opposite side.

- To prevent the climbing rail (**143**) from bending when the climbing unit is operated, line the climbing rail at the lower end with a piece of squared timber (**271a**) before starting the climbing operation.
- Attach the squared timber (**271a**) to the climbing rail (**143**) with a chain.

Implementation steps
1. Retract the Pressure Point Spindles M42 ACS (**146**).
2. Climb the climbing unit into the next section and attach it to Climbing Shoe IV ACS (**162b**).
3. Extend the Pressure Point Spindles M42 ACS (**146**) and support the climbing unit. If necessary, prop it up with squared timber (**271b**).

(Fig. D3.07)

Has the Ledger ACS engaged fully in the climbing shoe?

Positioning the formwork unit
Given the fact that the climbing unit hangs at an angle above the wall offset, align the formwork vertically.

1. Fit the leading tie.
2. Move the formwork unit forwards and align it vertically with Kicker Brace AV.
3. Connect and anchor the formwork units.
4. Concrete the second section after the wall offset.

(Fig. D3.07)

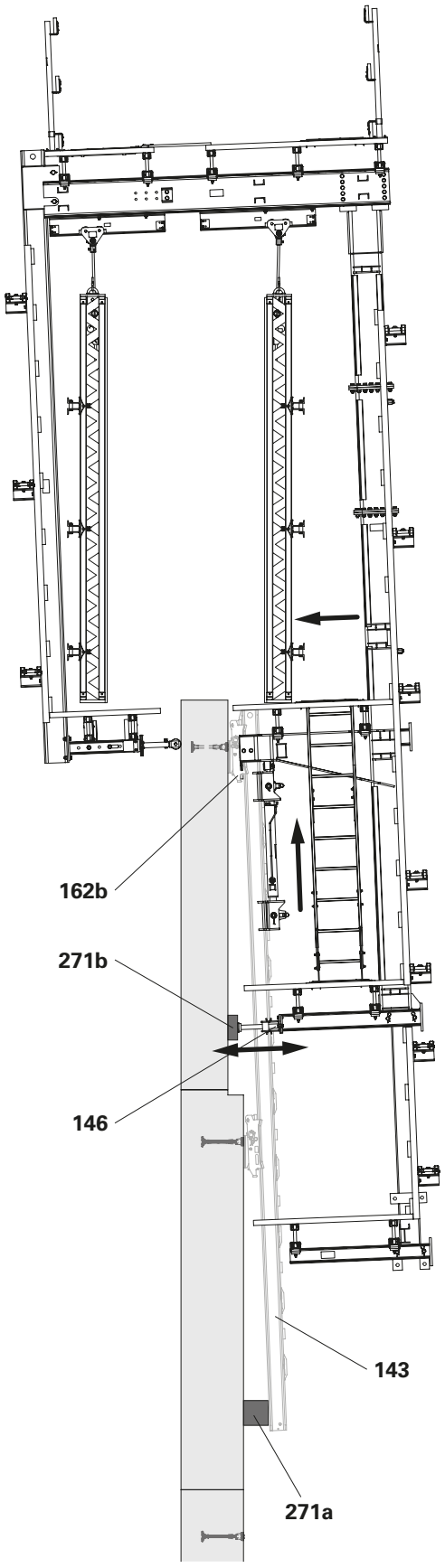


Fig. D3.07

Climbing the climbing rail

1. Fit Climbing Shoe-2 I ACS (**160b**).
2. Climb Climbing Rail ACS (**143**).
3. As soon as the Climbing Rail ACS (**143**) has climbed over the wall offset, pivot in the Climbing Rail ACS (**143**) and the climbing unit.
4. Keep climbing with the Climbing Rail ACS (**143**) and attach it to Climbing Shoe-2 I ACS (**160b**).

(Fig. D3.08)

- If necessary, readjust the Pressure Point Spindles M42 ACS (**146**) so that the climbing rail (**143**) can move into the Climbing Shoe-2 I ACS (**160b**).

- Is the swing ledger of the climbing shoe (**160b**) folded down all the way?
- Are the support noses of the Climbing Rail ACS resting fully on the swing ledger?

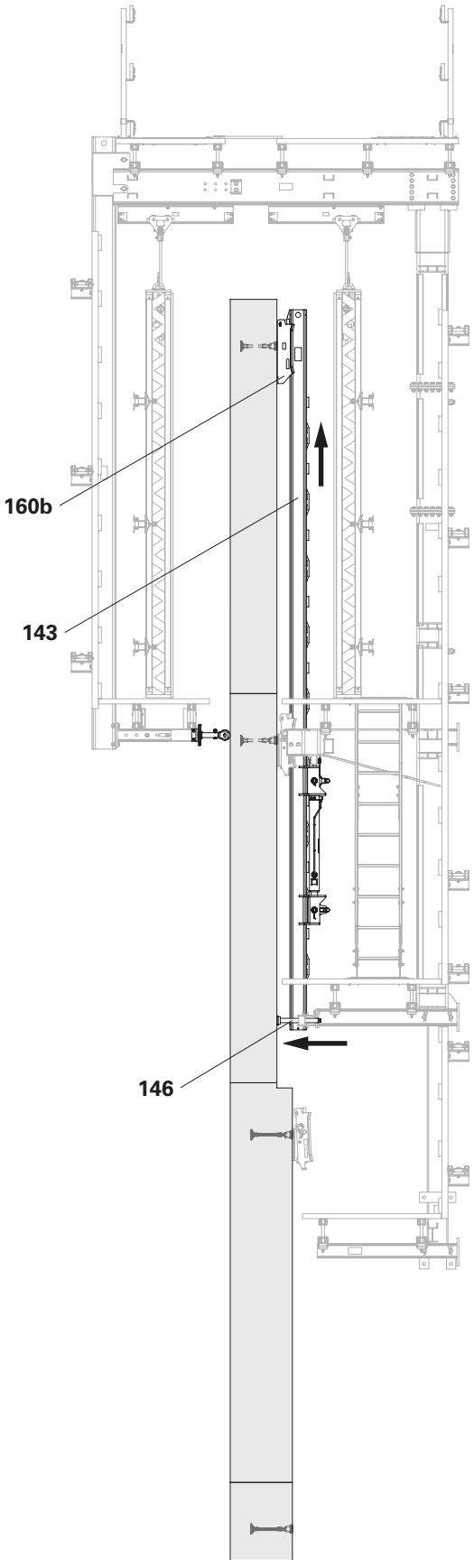


Fig. D3.08

Climbing the climbing unit

1. Retract the Pressure Point Spindles M42 ACS (**146**).
2. Climb the climbing unit into the next section and attach it to Climbing Shoe-2 I ACS (**160b**).
3. Extend the Pressure Point Spindles M42 ACS (**146**) and support the climbing unit.

(Fig. D3.09)

Has the Ledger ACS engaged fully in the climbing shoe?

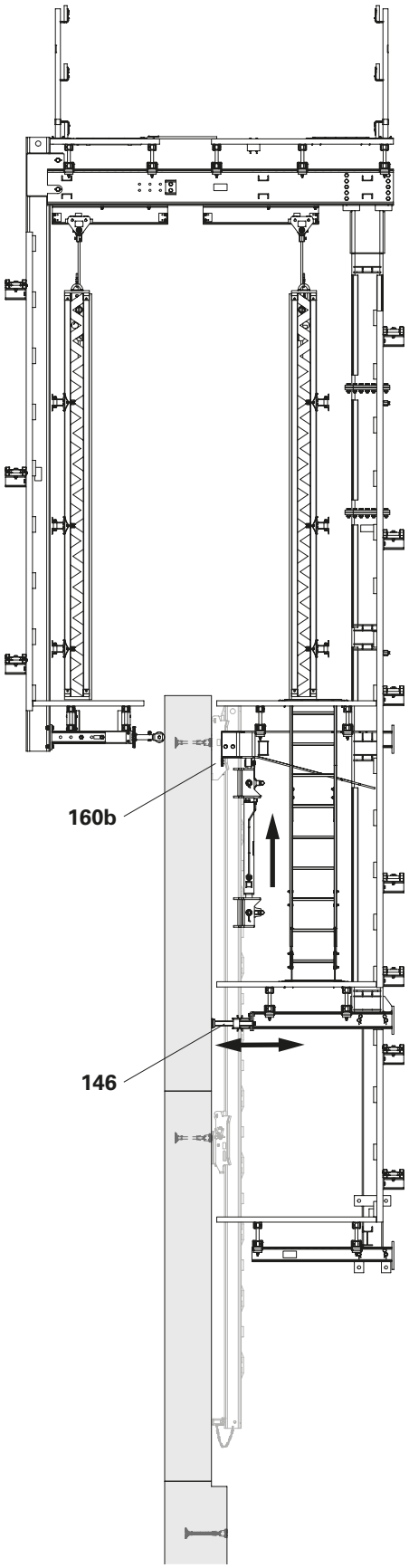


Fig. D3.09

Positioning the formwork unit

1. Fit the leading tie.
2. Move the formwork unit forwards and align it vertically with Kicker Brace AV (**61**).
3. Connect and anchor the formwork units.
4. Concrete the section.

(Fig. D3.10)

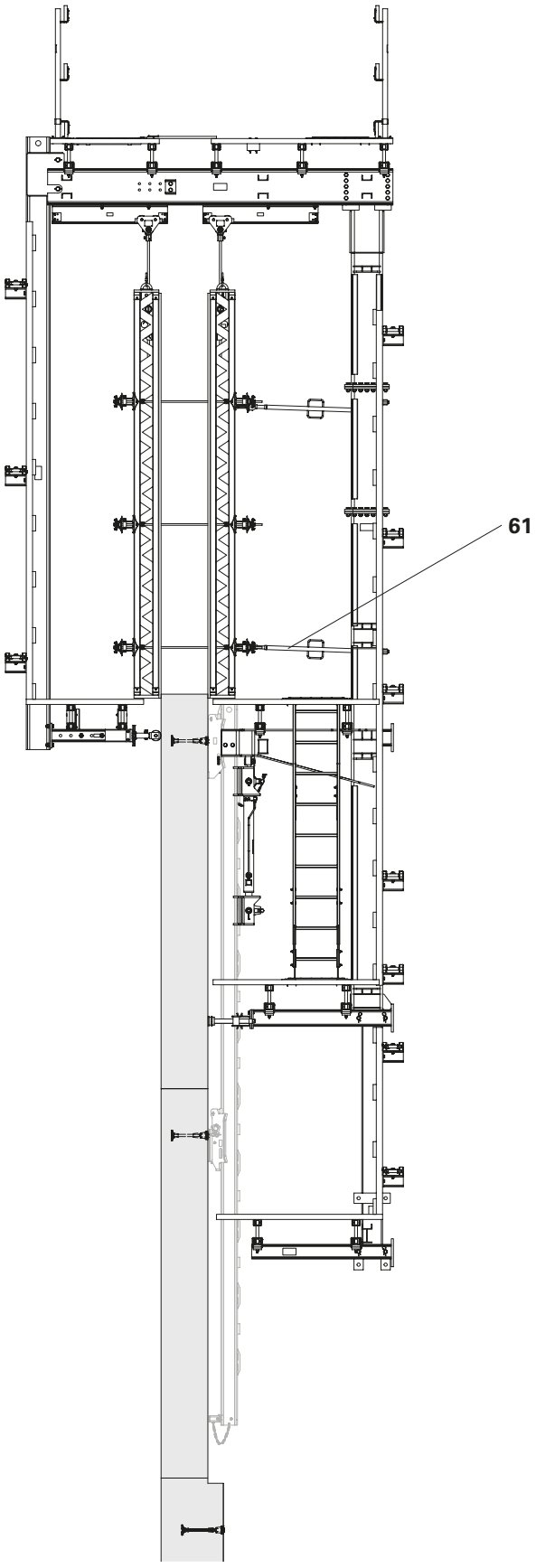


Fig. D3.10

Round building shape

- Arrange the Console Brackets ACS-G so they are parallel to each other so that the formwork units can be moved back and forth.
- The Climbing Shoe IV ACS, in combination with Tie Shoe-V ACS, compensates for angles of ±15°.
- The radius R of the structure significantly influences the maximum possible console bracket spacing c.

Figure D3.11 shows the structure of the work platform as viewed from above.

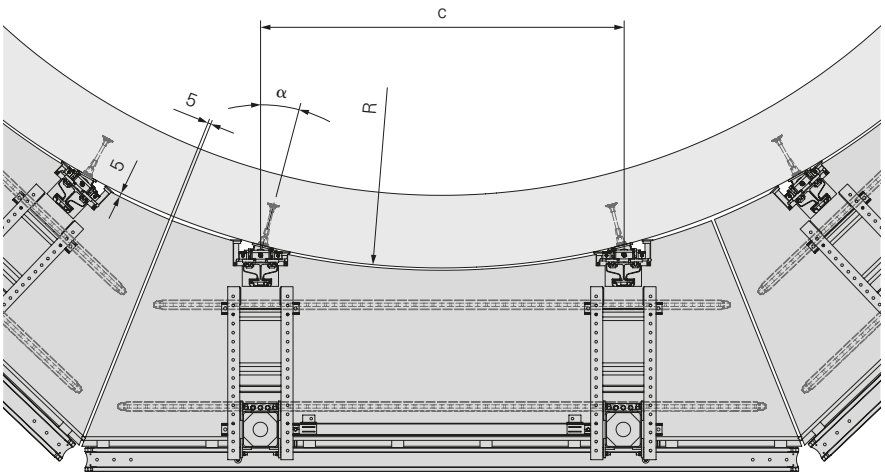


Fig. D3.11

- The platform decking runs parallel to the building contour at a distance of 5 cm.
- The maximum distance between adjacent platform decks is 5 cm.

E1 Preparing for disassembly

General information

Danger

- Risk of falling from unsecured building edges!
  A fall can result in serious injury or even death.
  ⇒ Install temporary guardrail.
  ⇒ Use personal protective equipment to prevent falling from a height (PPE).
- During the disassembly process, components may fall to the ground and hit people below!
  This can lead to serious injuries or even death.
  ⇒ Remove or secure all loose parts.
  ⇒ Cordon off danger zones.

The following work is only applicable in combination with the Assembly Instructions for "ACS 100 Climbing Device and Hydraulics".

- Disassembly is carried out individually for each climbing unit.
- Place the climbing unit and dismantled assemblies on squared timber.
- Have a sufficiently large disassembly area ready.

Disassembling the hydraulic system

Disassembly

1. Remove hydraulic lines and seal all connection points with plugs.
2. Fix the hydraulic unit to the platform decking.
3. For a description of the disassembly and removal tasks, see the Assembly Instructions for "ACS 100 Climbing Device and Hydraulics".

Disassembling the formwork

Disassembly

1. Remove the planking of the work platform (level +1) in the area near the gallows.
2. Remove the ladder from the counter-platform.
3. Move the formwork back, place it on the ground and fix it to the vertical post intermediate or platform post.
4. Detach the formwork from the trolley.
5. Slide the panel beam on the console bracket side to the side.

(Fig. E1.01)

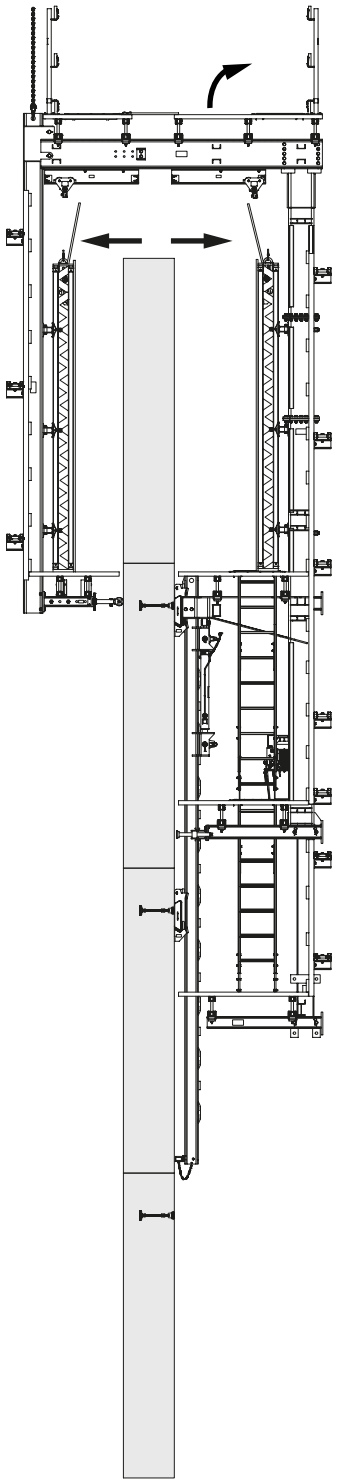


Fig. E1.01

Lifting the counter-platform out

Lifting out

1. Attach the counter-platform to the crane.
2. Detach the counter-platform from the gallows and fly it out.
3. Set the counter-platform down and disassemble it.

(Fig. E2.01)

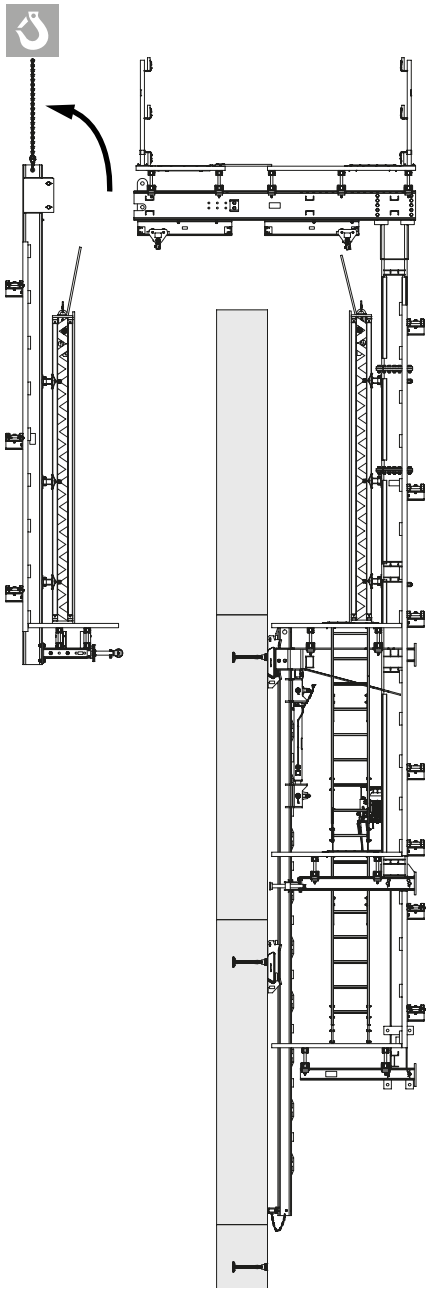


Fig. E2.01

Lifting the climbing unit out

Lifting out

1. Set all climbing devices (**140**) to the "Neutral" position.
2. Remove the spacer (**144**).
3. Attach the climbing rail (**143**) to the crane and pull it upwards and out.

(Fig. E2.02)

4. Unscrew the finishing climbing shoes and tie tubes. Remove climbing ties and seal tie points with concrete cones.
5. Detach the ledger chain from the Platform Beam GT 24.
6. Loop a round sling around the gallows at the back of the vertical post top and attach the climbing unit to the crane.
7. Unhook the climbing unit, lower it to the ground and let it hang from the crane.

(Fig. E2.03)

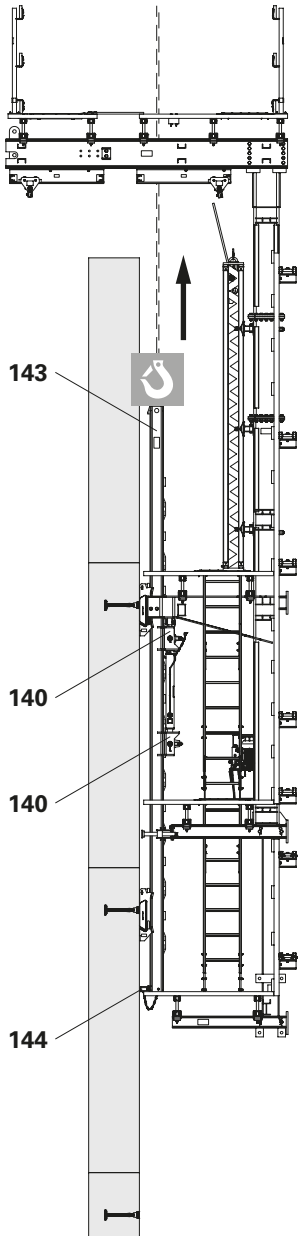


Fig. E2.02

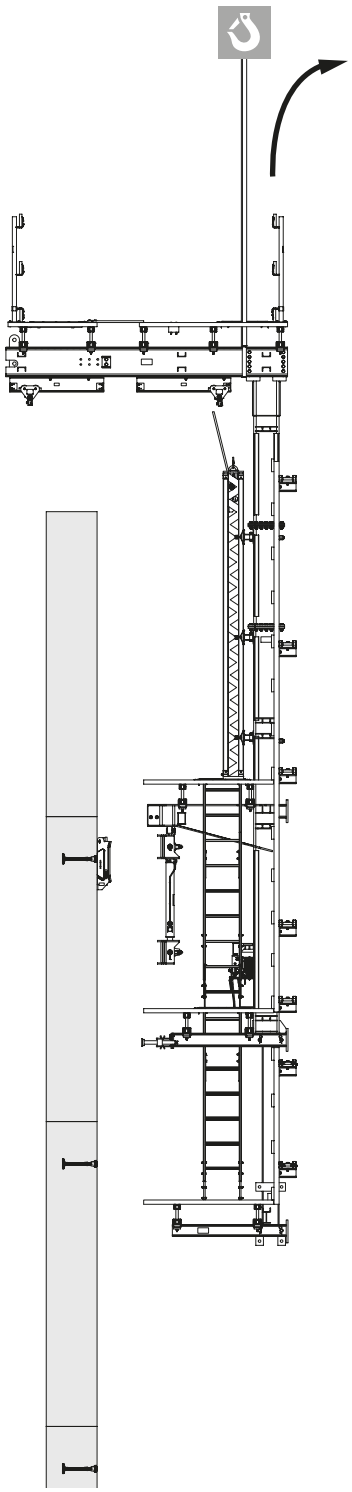


Fig. E2.03

Dismantling assemblies

Warning

Heavy components at risk of falling over!
Body parts can get trapped, resulting in injuries.
⇒ Do not linger in the danger zone.
⇒ Do not reach into pinch points.
⇒ Attach components to the crane for removal, the crane lifting gear must not sag.
⇒ Secure components to prevent them from falling over.

Disassembly

1. Disconnect the finishing platform from the climbing unit and remove it. (Fig. B3.01)
2. Lower the climbing unit to the ground and let it hang from the crane.
3. Lift out the hydraulic unit.

(Fig. E3.02)

4. Lay the climbing unit on its rear side.
5. Remove the climbing devices (**140**).
6. Remove the ladder from the climbing platform.
7. Lift out and dismantle the formwork unit.
8. Disconnect and dismantle both assemblies of the work platform (level +1).
9. Attach the gallows to the crane, unscrew it from the console bracket and dismantle.
10. Attach the climbing platform (level -1) to the crane, unscrew it from the console bracket and dismantle.
11. Attach the work platform (level 0) to the crane, unscrew it from the console bracket and dismantle.

(Fig. E3.03)

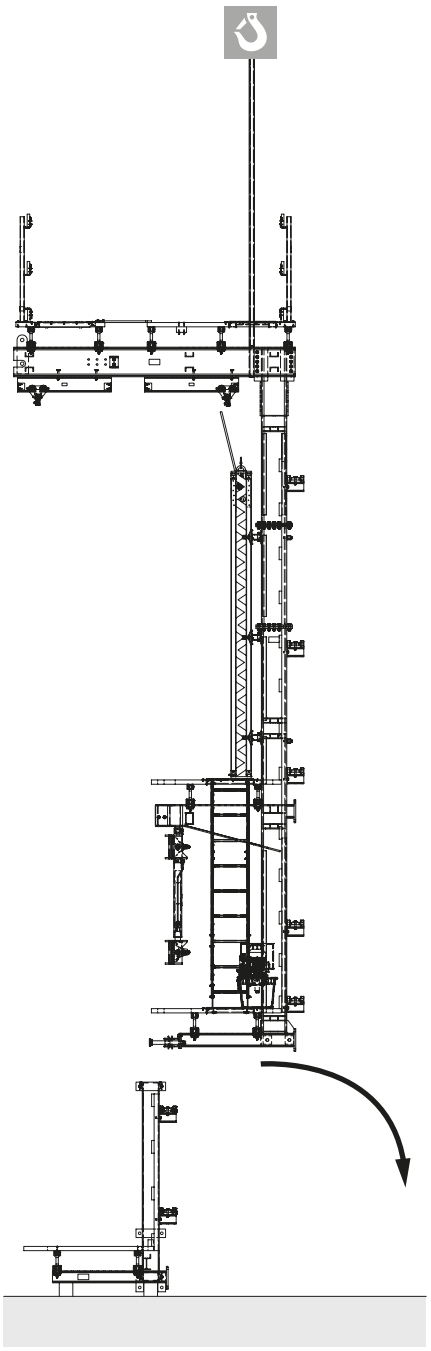


Fig. E3.01

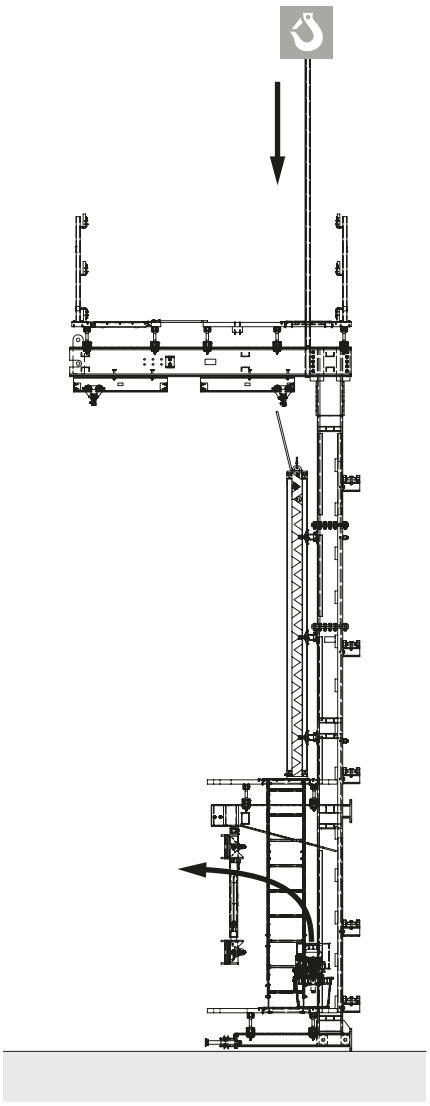


Fig. E3.02

12. Temporarily secure console bracket disc 1 to prevent it from tipping over.
13. Attach console bracket disc 2 to the cantilever beam (level 0) and the vertical post top to the crane and unscrew the Ladder Cage Connection VT 20.
14. Lay console bracket disc 2 on its side and disassemble.
15. Attach console bracket disc 1 to the cantilever beam (level 0) and the vertical post top to the crane and unscrew the Ladder Cage Connection VT 20.
16. Lay console bracket disc 1 on its side and disassemble.
17. Remove the ladder cage.

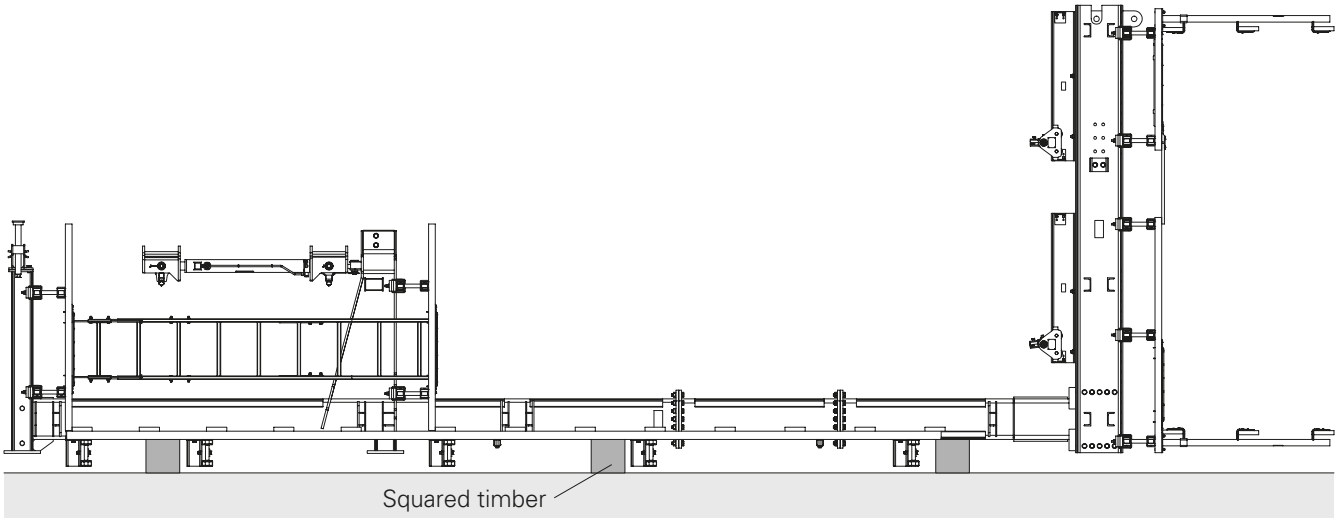


Fig. E3.03

E3 Removing the climbing unit

Concluding work

The following work is carried out using a crane cage.

Removing the uppermost tie point

1. Unscrew the climbing shoes and tie tubes.
2. Remove the climbing ties.
3. Seal tie points with concrete cones.

Disposal

The disposal of components and materials must be arranged by a person authorised to do so.

- Separate materials correctly and according to type.
- Dispose of materials according to local regulations and guidelines.
- Dispose of hydraulic oil in accordance with the applicable environmental regulations. The safety data sheet for the hydraulic oil must be taken into consideration when disposing of the hydraulic oil.

F1 Maintenance plan

Hydraulic unit For a more detailed list, see the Assembly Instructions for the "ACS 100 Climbing Device and Hydraulics"	
Period	**Check and remedy defects**
Prior to starting work	■ Hydraulic oil level ■ Hydraulic oil temperature ■ External leaks ■ Working and control pressures ■ Noises and vibrations
Weekly	■ Equipment fixings ■ Hoses (chafing, kinks)
Monthly	External condition of the hydraulic system (dirt, damage)
Quarterly	■ Condition of the hydraulic oil ■ Filter element
Yearly	Check for deposits and rust formation, remedy if necessary.

Climbing device For a more detailed list, see the Assembly Instructions for the "ACS 100 Climbing Device and Hydraulics"	
Period	**Check and remedy defects**
Prior to starting work	Check ease of movement and function: ■ Catches ■ Cams
	Check for damage, deformation and cracks: ■ Climbing heads ■ Hydraulic cylinders
	Spray with penetrating oil and check for ease of movement: ■ Locking pins ■ Spring thrust pieces

Tab. F1.01

F1 Maintenance plan

Tie tube Climbing shoe Climbing rail	
Period	**Check and remedy defects**
Before each climbing operation	Spacer: Expander and chain
Monthly	Cleaning and greasing: ■ Sliding surfaces of the climbing rails ■ Sliding surfaces of the climbing shoes
	Clean, grease and check for ease of movement: ■ Gravity pilot plate of the climbing shoes
	Check for damage, deformation and cracks: ■ Connecting links and catches on the climbing rails ■ Climbing shoes and tie tubes

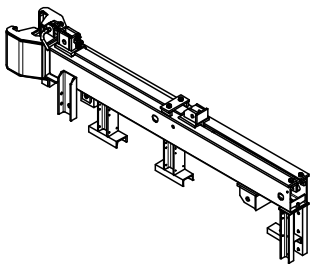
Climbing unit	
Period	**Check and remedy defects**
Before each climbing operation	■ Tighten the screw connections on the couplings. ■ Check all other bolt connections.
Monthly	Cleaning and greasing: ■ Sliding surfaces ■ Spindles
	Check all timber components for signs of damage and replace if necessary.
	Check steel structure for deformations and damage and have it replaced if necessary.
Every six months	Repair or renew the corrosion prevention on the steel parts.

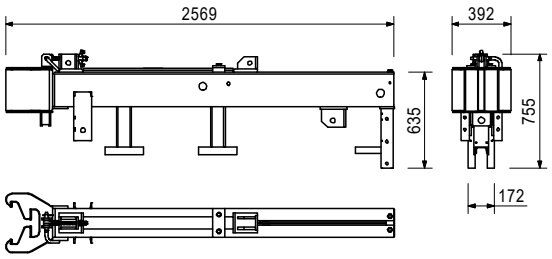
Tab. F1.02

Item no.	Weight kg
051701	271.000

Main Platform Beam ACS /Car.+ M-Dr.
For fixing Decking Supports GT 24 or Beam IPE and Angle Profile L200x100 (special).

Complete with
1 pc. 051704 Carriage ACS, compl.
1 pc. 051705 Mechanical Drive ACS, A-M
Note
Used to connect Strongback 255 or 365 by means of Strongback Adapter 50 or 200.

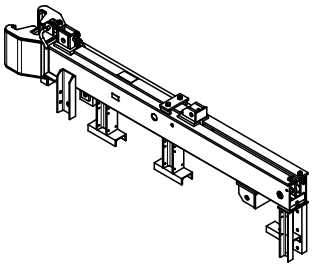


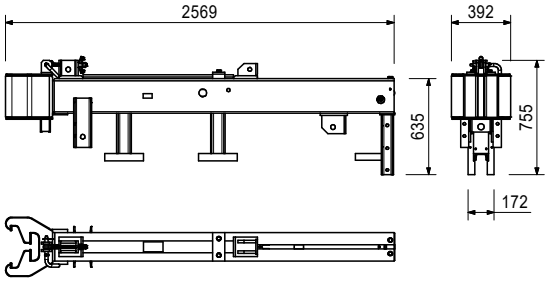


Item no.	Weight kg
051702	293.000

Main Platform Beam ACS /Car.+ H-Dr.
For fixing Decking Supports GT 24 or Beam IPE and Angle Profile L200x100 (special).

Complete with
1 pc. 051704 Carriage ACS, compl.
1 pc. 051706 Hydraulic Drive ACS, A-H
Note
Used to connect Strongback 255 or 365 by means of Strongback Adapter 50 or 200.

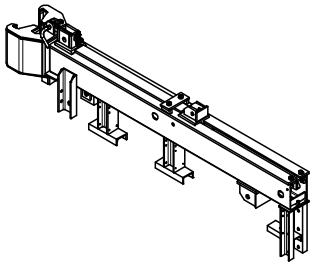


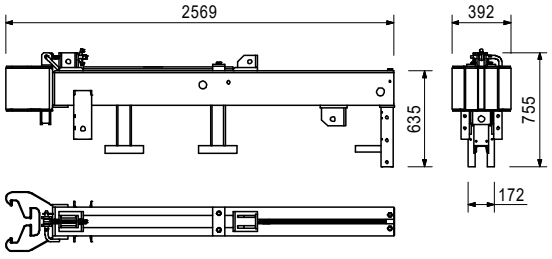


Item no.	Weight kg
051700	259.000

Main Platform Beam ACS /Carriage
For fixing Decking Supports GT 24 or Beam IPE and Angle Profile L200x100 (special).

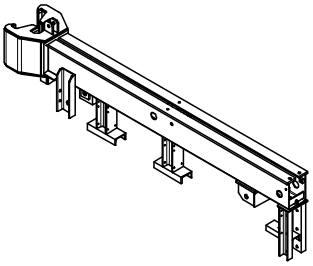
Complete with
1 pc. 051704 Carriage ACS, compl.
Note
Used to connect Strongback 255 or 365 by means of Strongback Adapter 50 or 200.

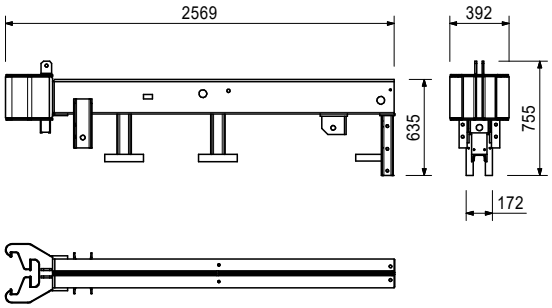




Item no.	Weight kg
051703	204.000

Main Platform Beam ACS
For fixing Decking Supports GT 24 or Beam IPE and Angle Profile L200x100 (special).

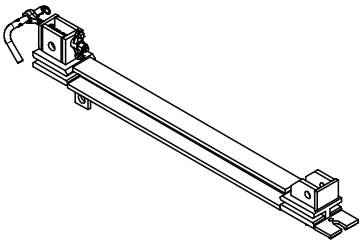


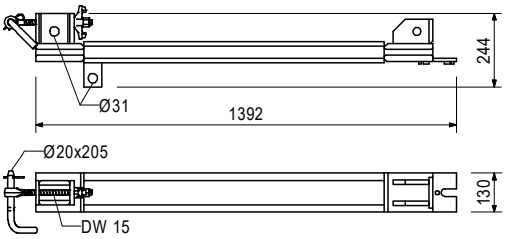


051704	51.900

Carriage ACS, compl.
Serves for retracting the formwork.

Complete with
1 pc. 037160 Bolt Ø 20 x 205, galv.
1 pc. 037150 Tie Yoke DW 15
1 pc. 030100 Wingnut DW 15, galv.
1 pc. 018060 Cotter Pin 4/1, galv.

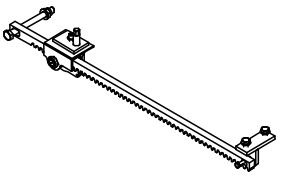


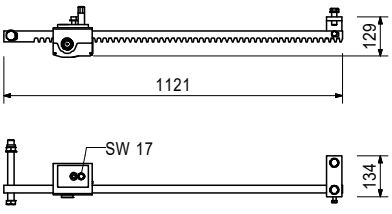


051705	13.100

Mechanical Drive ACS, A-M
Serves as a mechanical drive for the carriage ACS.

Complete with
2 pc. 710225 Bolt ISO 4017 M16 x 45-8.8, galv.
2 pc. 711074 Washer ISO 7089 200 HV, A 16, galv.
1 pc. 706462 Bolt ISO 4014 M20 x 200-8.8, galv.
1 pc. 781053 Nut ISO 7040 M20-8, galv.
1 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.
1 pc. 710593 Bolt ISO 4014 M10 x 80-8.8, galv.
1 pc. 780356 Nut ISO 7040 M10-8, galv.
1 pc. 706461 Cyl. Bolt ISO 4762 M12 x 35-8.8
1 pc. 780702 Washer ISO 7089 200 HV, A 12, galv.

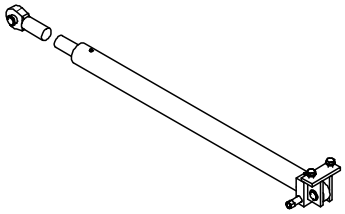


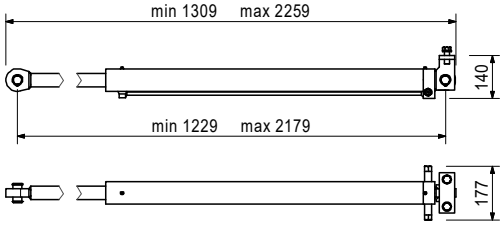


Item no.	Weight kg
051706	34.700

Hydraulic Drive ACS, A-H
Serves as a hydraulic drive for the Carriage.

Complete with
2 pc. 710225 Bolt ISO 4017 M16 x 45-8.8, galv.
2 pc. 711074 Washer ISO 7089 200 HV, A 16, galv.
2 pc. 706466 Bolt 30 x 64 ACS
4 pc. 706465 Circlip DIN 471- 30 x 1.5
2 pc. 706464 Drive Connector ACS

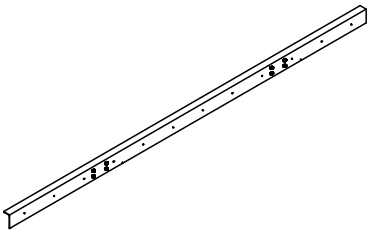


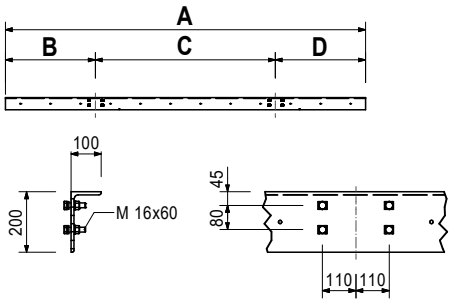


Item no.	Weight kg
051708	24.600

Spacer Profile ACS for 2 brackets per m
When ordering, specify the total length A, the cantilever arm B and the bracket spacing C, as well as the specify the control dimension D. Control dimension E= N x 500 mm.

Complete with
8 pc. 710299 Bolt ISO 4014 M16 x 60-8.8, galv.
8 pc. 710229 Nut ISO 4032 M16-8, galv.
8 pc. 711074 Washer ISO 7089 200 HV, A 16, galv.
8 pc. 710880 Washer DIN 434 18, galv.

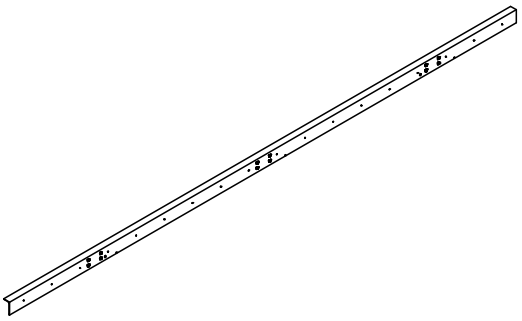


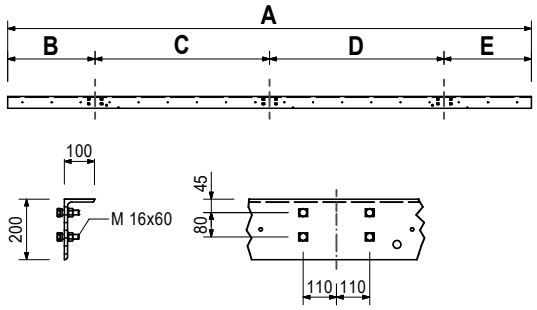


Item no.	Weight kg
051709	25.400

Spacer Profile ACS for 3 brackets per m
When ordering, specify the total length A, the cantilever arm B and the bracket spacing C and D, as well as the specify the control dimension E. Control dimension F= N x 500 mm.

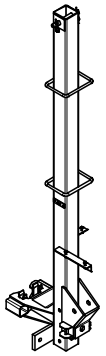
Complete with
12 pc. 710299 Bolt ISO 4014 M16 x 60-8.8, galv.
12 pc. 710229 Nut ISO 4032 M16-8, galv.
12 pc. 711074 Washer ISO 7089 200 HV, A 16, galv.
12 pc. 710880 Washer DIN 434 18, galv.

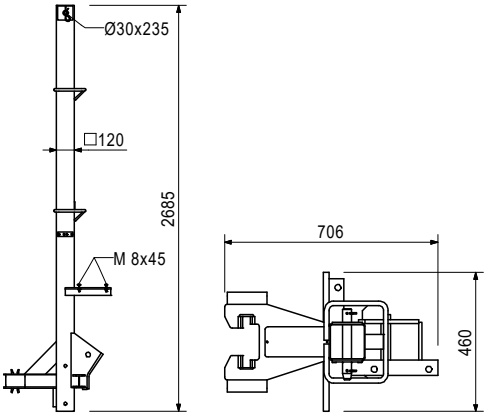




Item no.	Weight kg	
051710	83.500	**Vertical Strut ACS** For fixing to Main Platform Beam ACS.

Complete with
1 pc. 706372 Pin 30 x 235 ACS
2 pc. 022230 Cotter Pin 5/1, galv.
3 pc. 710295 F.H. Bolt DIN 603 M8 x 45 MU, galv.

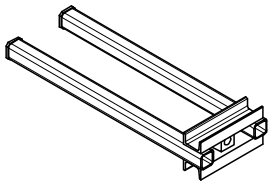


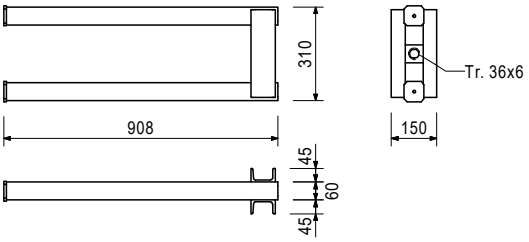


Accessories

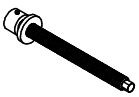
051711	20.800	**Sliding Unit ACS**
051712	4.540	**Compression Spindle ACS, compl.**
051713	2.360	**Plywood Platform ACS**

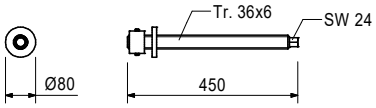
051711	20.800	**Sliding Unit ACS** For assembling in Vertical Strut ACS. Adjustable compression point.



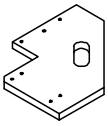


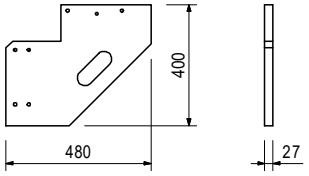
051712	4.540	**Compression Spindle ACS, compl.** For adjusting the ACS Sliding Piece, Width across flats Wrench size 24.





Item no.	Weight kg	
051713	2.360	**Plywood Platform ACS** Bonded plywood. For fitting to Vertical Strut.



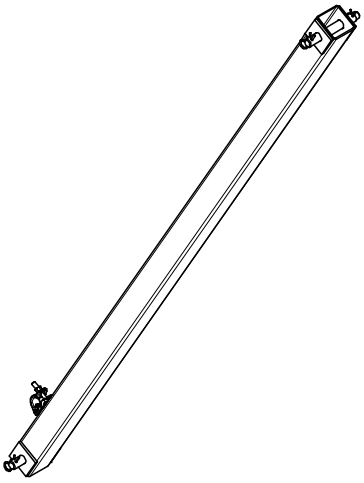


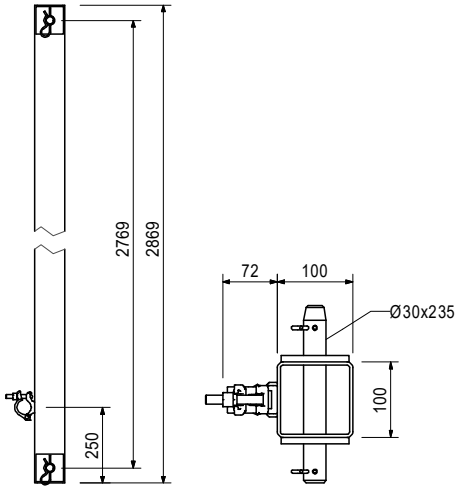
Accessories

710295	0.028	**F.H. Bolt DIN 603 M8 x 45 MU, galv.**

051714	38.800	**Compression Strut ACS** For the bracing of Sliding Units ACS.

Complete with
2 pc. 706372 Pin 30 x 235 ACS
4 pc. 022230 Cotter Pin 5/1, galv.

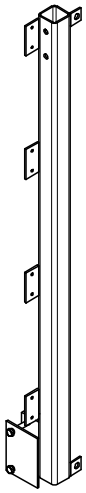


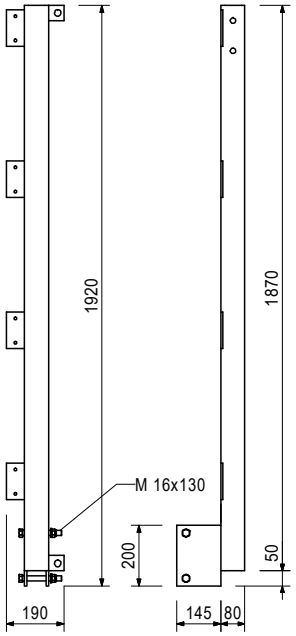


Item no.	Weight kg
051707	26.300

Guardrail Post Main Platform ACS
For fixing to Main Platform Beam ACS.

Complete with
2 pc. 710232 Bolt ISO 4014 M16 x 130-8.8, galv.
2 pc. 070890 Nut ISO 7040 M16-8, galv.
2 pc. 711074 Washer ISO 7089 200 HV, A 16, galv.





Accessories

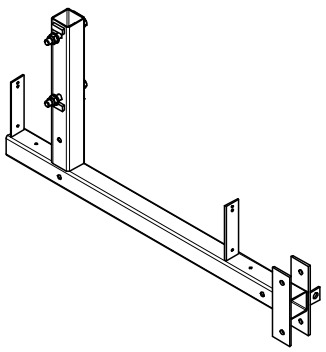
113762	0.884

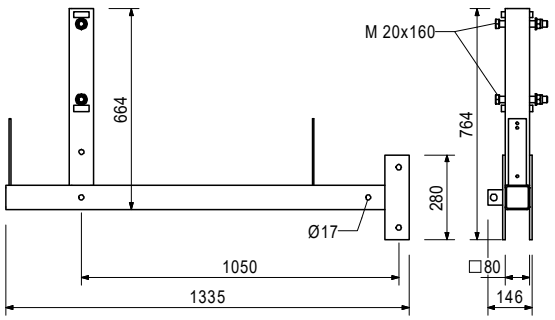
Guardrail Conn. Plate ACS/SCS

051716	23.100

Main Cantilever Beam ACS
For fixing to Vertical Strut ACS. For fixing Decking Supports GT 24 and Beams IPE.

Complete with
2 pc. 781054 Bolt ISO 4014 M20 x 160-8.8, galv.
2 pc. 781053 Nut ISO 7040 M20-8, galv.
2 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.

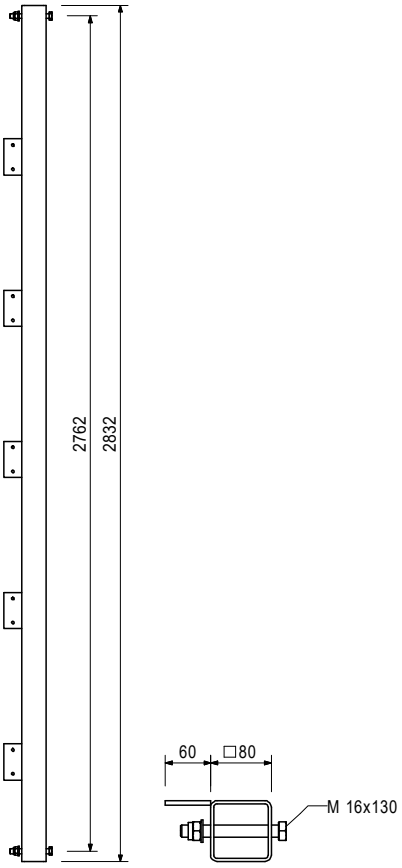




Item no.	Weight kg
051715	28.300

Guardrail Post KB ACS l = 2.83 m
For Main Cantilever Beam ACS.

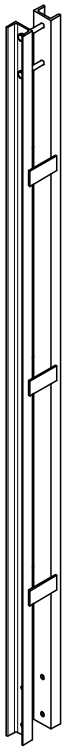
Complete with
2 pc. 710232 Bolt ISO 4014 M16 x 130-8.8, galv.
2 pc. 070890 Nut ISO 7040 M16-8, galv.
2 pc. 711074 Washer ISO 7089 200 HV, A 16, galv.

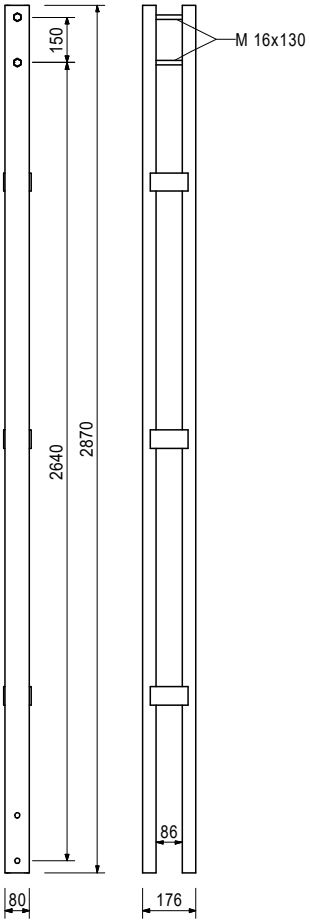


Item no.	Weight kg
051717	52.800

Platform Post 500 ACS
For fixing to Main Cantilever Beam ACS.
Serves for suspending the Finishing Platform.

Complete with
2 pc. 710232 Bolt ISO 4014 M16 x 130-8.8, galv.
2 pc. 070890 Nut ISO 7040 M16-8, galv.
2 pc. 711074 Washer ISO 7089 200 HV, A 16, galv.

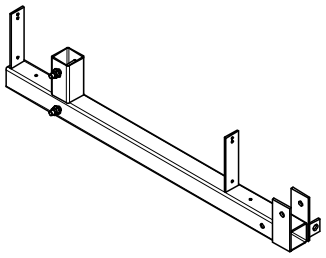


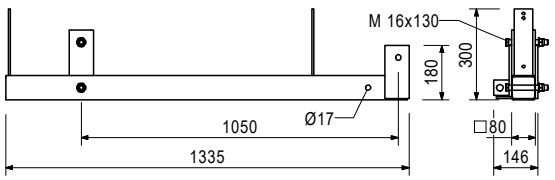


051720	17.200

Lower Cantilever Beam ACS
For fixing Decking Supports GT 24 and Beams IPE.

Complete with
2 pc. 710232 Bolt ISO 4014 M16 x 130-8.8, galv.
2 pc. 070890 Nut ISO 7040 M16-8, galv.
2 pc. 711074 Washer ISO 7089 200 HV, A 16, galv.

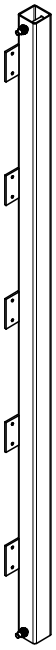


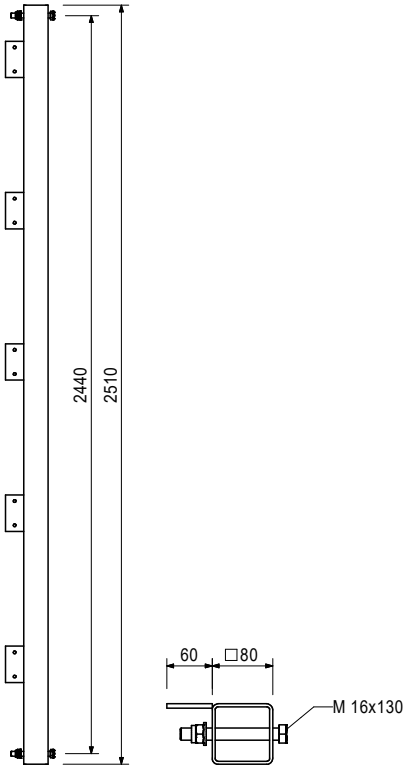


Item no.	Weight kg
051718	25.300

Guardrail Post FP ACS l = 2.51 m
For fixing between Main Cantilever Beam ACS and Lower Cantilever Beam ACS.

Complete with
2 pc. 710232 Bolt ISO 4014 M16 x 130-8.8, galv.
2 pc. 070890 Nut ISO 7040 M16-8, galv.
2 pc. 711074 Washer ISO 7089 200 HV, A 16, galv.





Accessories

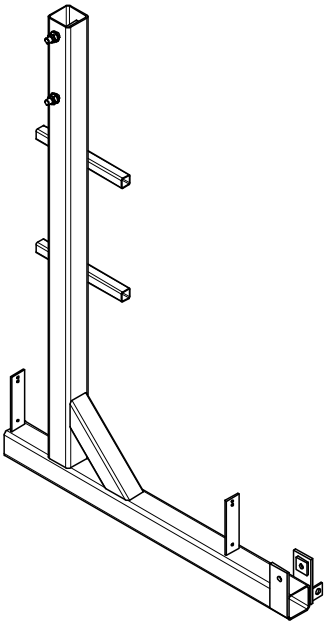
113762	0.884

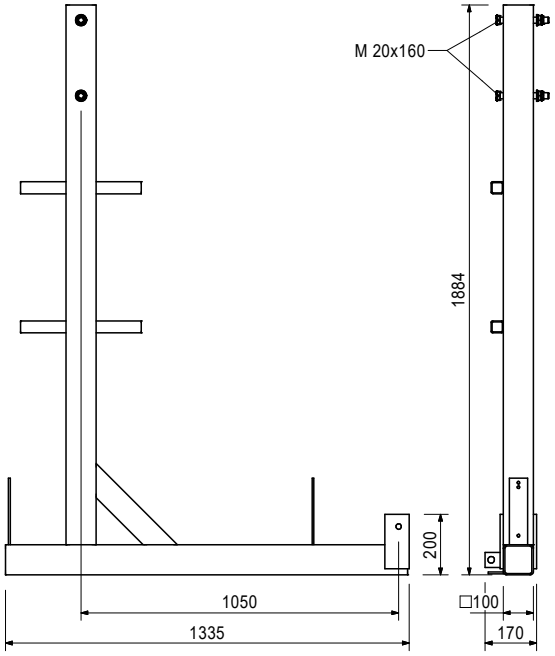
Guardrail Conn. Plate ACS/SCS

Item no.	Weight kg
051721	54.700

Lower Cantilever Beam 360 ACS
For fixing to Vertical Struit ACS in case of system structure without Climbing Platform.
For fixing Decking Supports GT 24 and Beams IPE.

Complete with
2 pc. 781054 Bolt ISO 4014 M20 x 160-8.8, galv.
2 pc. 781053 Nut ISO 7040 M20-8, galv.
2 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.

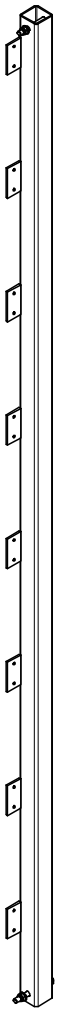


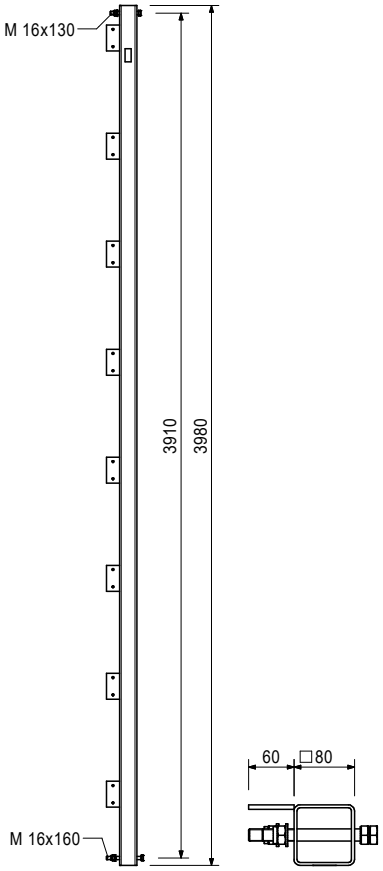


Item no.	Weight kg
051719	39.900

Guardrail Post FP ACS l = 3.98 m
For fixing between Crossbeam ACS and Lower Cantilever Beam 360 ACS.

Complete with
1 pc. 780155 Bolt ISO 4014 M16 x 160-8.8, galv.
1 pc. 710232 Bolt ISO 4014 M16 x 130-8.8, galv.
2 pc. 070890 Nut ISO 7040 M16-8, galv.
2 pc. 711074 Washer ISO 7089 200 HV, A 16, galv.





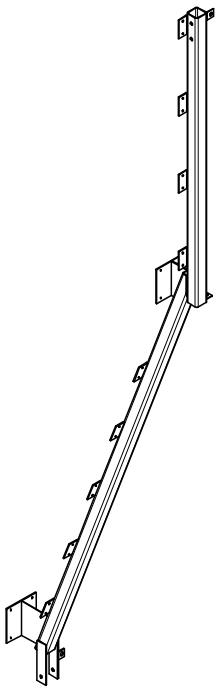
Accessories

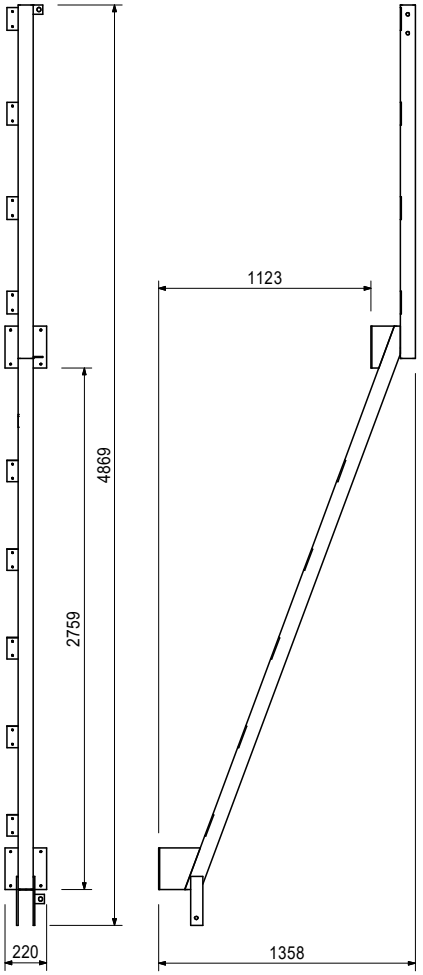
113762	0.884

Guardrail Conn. Plate ACS/SCS

Item no.	Weight kg
051722	67.800

Cantilever Post Climb. Platform ACS
Additional guardrail post for fixing to the Decking Supports of the Main and Climbing Platform at Climbing Platform Beam ACS.





Accessories

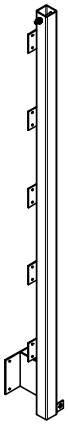
113762	0.884

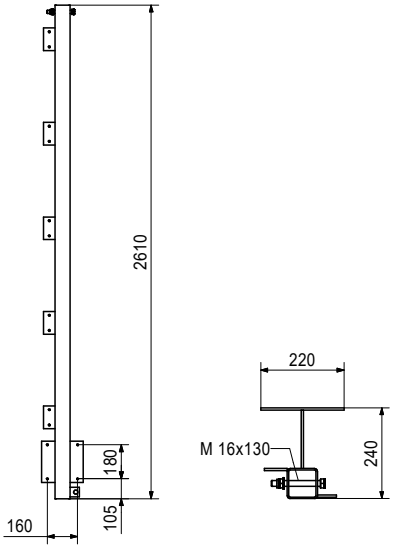
Guardrail Conn. Plate ACS/SCS

Item no.	Weight kg
051723	30.000

Cantilever Post FP ACS l = 2.61 m
Additional guardrail post for fixing to the Cantilever Post Climbing Platform ACS and Decking Supports of the Lower Cantilever Beam ACS.

Complete with
1 pc. 710232 Bolt ISO 4014 M16 x 130-8.8, galv.
1 pc. 070890 Nut ISO 7040 M16-8, galv.
1 pc. 711074 Washer ISO 7089 200 HV, A 16, galv.



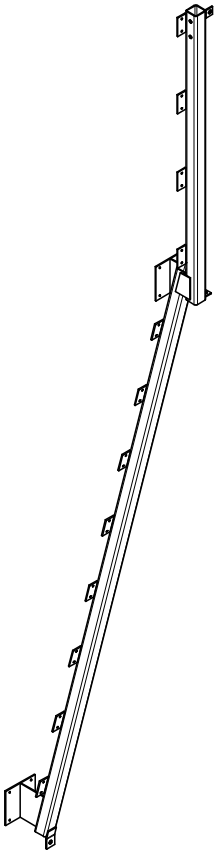


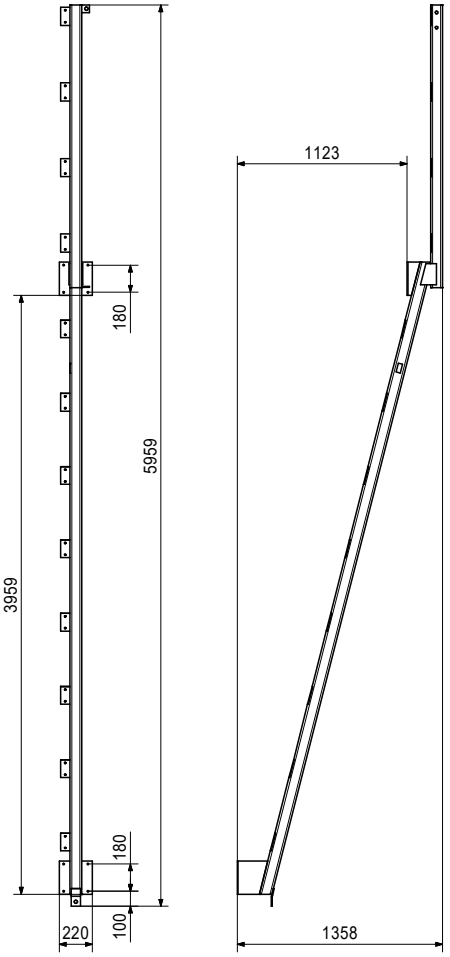
Accessories

113762	0.884

Guardrail Conn. Plate ACS/SCS

Item no.	Weight kg	
051724	80.800	**Cantilever Post Finish. Platform ACS, long** Additional guardrail post for fixing to the Decking Supports of the Main and Trailing Platform at Lower Cantilever Beam 360.

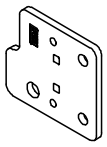


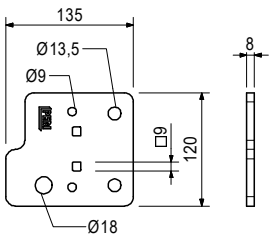


Accessories

113762	0.884	**Guardrail Conn. Plate ACS/SCS**

113762	0.884	**Guardrail Conn. Plate ACS/SCS** For assembling Scaffold Tubes Ø 48 or Ø 60 as Guardrail by means of Bail Pin A64 on Guardrail Posts ACS, SCS and GT 24. Fixation by Hex. Bolt M8, M12, M16 or Wood Screw Ø 8.





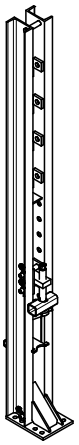
Accessories

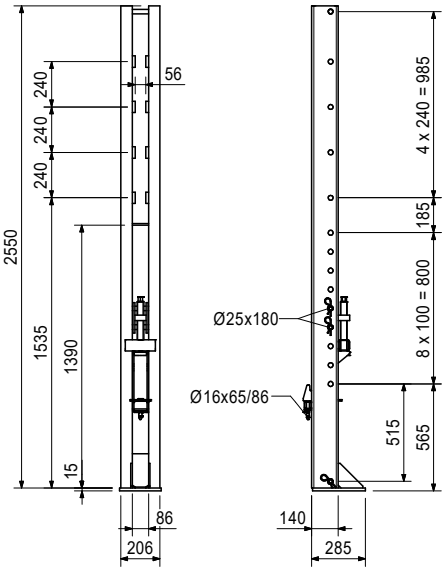
110296	0.220	**Clamp A64 DIN 3570 M12, galv.**
710330	0.017	**Nut ISO 4032 M12-8, galv.**

Item no.	Weight kg
057097	107.000

Strongback 255 ACS
For connecting the formwork to the Carriage ACS.
Standard formwork height upt to 3.30 m.

Complete with
1 pc. 057081 Adjusting Spindle ACS, compl.
1 pc. 057307 Adjusting Nut TR 36 x 6 ACS, pow.
1 pc. 057313 Ledger Bracket ACS, pow.
1 pc. 057315 Counterholder ACS, gep.
3 pc. 715936 Pin Ø 25 x 180, incl. Dowel Pin Ø 6
1 pc. 018050 Pin Ø 16 x 65/86, galv.
3 pc. 022230 Cotter Pin 5/1, galv.
1 pc. 018060 Cotter Pin 4/1, galv.





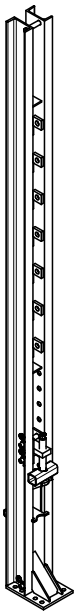
Accessories

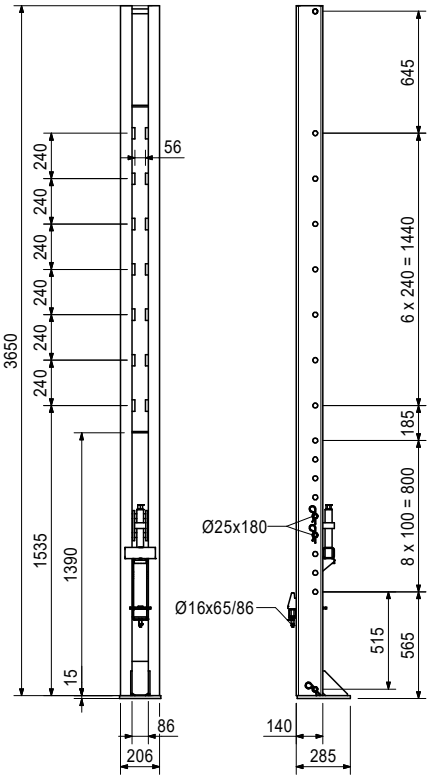
057327	11.000 **Strongback Adaptor 50, compl.**
057332	15.700 **Strongback Adaptor 200, compl.**
057099	17.300 **Adjustable Spindle Connector ACS-P**
037150	0.641 **Tie Yoke DW 15**
722137	0.849 **Cross Strap 2, galv.**
110055	0.861 **Cross Clamp, galv.**
030100	0.439 **Wingnut DW 15, galv.**
030440	0.686 **Spherical Nut DW 15, galv.**

Item no.	Weight kg
057098	145.000

Strongback 365 ACS
For connecting the formwork to the Carriage ACS.
Standard formwork height upt to 5.10 m.

Complete with
1 pc. 057081 Adjusting Spindle ACS, compl.
1 pc. 057307 Adjusting Nut TR 36 x 6 ACS, pow.
1 pc. 057313 Ledger Bracket ACS, pow.
1 pc. 057315 Counterholder ACS, gep.
3 pc. 715936 Pin Ø 25 x 180, incl. Dowel Pin Ø 6
1 pc. 018050 Pin Ø 16 x 65/86, galv.
3 pc. 022230 Cotter Pin 5/1, galv.
1 pc. 018060 Cotter Pin 4/1, galv.

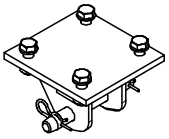


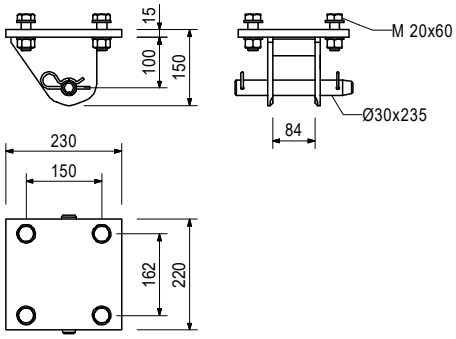


Accessories

057327	11.000 **Strongback Adaptor 50, compl.**
057332	15.700 **Strongback Adaptor 200, compl.**
057099	17.300 **Adjustable Spindle Connector ACS-P**
037150	0.641 **Tie Yoke DW 15**
722137	0.849 **Cross Strap 2, galv.**
110055	0.861 **Cross Clamp, galv.**
030100	0.439 **Wingnut DW 15, galv.**
030440	0.686 **Spherical Nut DW 15, galv.**

Item no.	Weight kg		
057327	11.000	**Strongback Adaptor 50, compl.** For connecting Strongback ACS to the Carriage ACS with wall offsets 0 - 50 mm.	**Complete with** 1 pc. 706372 Pin 30 x 235 ACS 2 pc. 022230 Cotter Pin 5/1, galv. 4 pc. 057139 Bolt ISO 4017 M20 x 60-8.8, galv. 4 pc. 710334 Nut ISO 4032 M20-8, galv. 8 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.

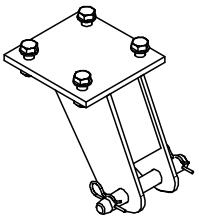


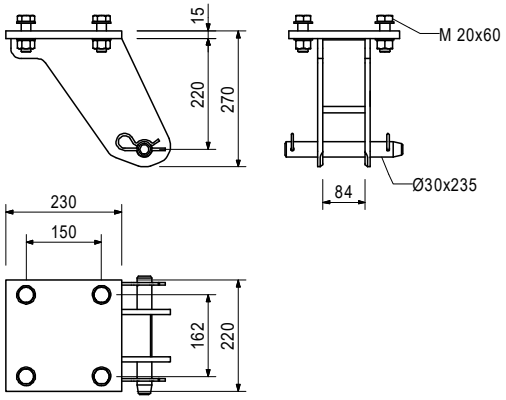


Accessories

057336	1.270	**Tie Yoke 465 ACS**

057332	15.700	**Strongback Adaptor 200, compl.** For connecting Strongback ACS to the Carriage ACS with wall offsets up to 200 mm.	**Complete with** 1 pc. 706372 Pin 30 x 235 ACS 2 pc. 022230 Cotter Pin 5/1, galv. 4 pc. 057139 Bolt ISO 4017 M20 x 60-8.8, galv. 4 pc. 710334 Nut ISO 4032 M20-8, galv. 8 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.

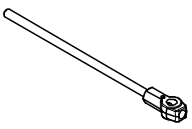


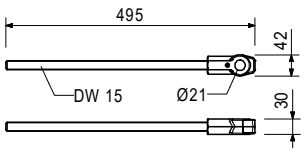


Accessories

057336	1.270	**Tie Yoke 465 ACS**

057336	1.270	**Tie Yoke 465 ACS** For securing the ACS Carriage with wall offsets.	

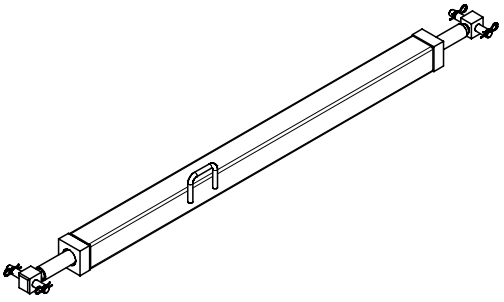


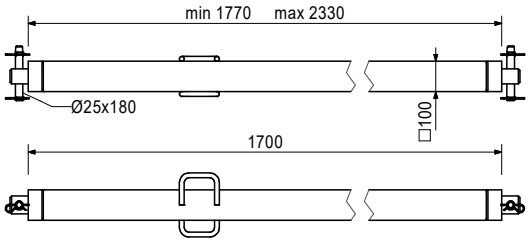


Item no.	Weight kg
057427	40.100

Compression Brace 177-233 ACS
For supporting Strongback 255 ACS.

Complete with
2 pc. 710894 Pin Ø 25 x 180, geomet.
4 pc. 018060 Cotter Pin 4/1, galv.

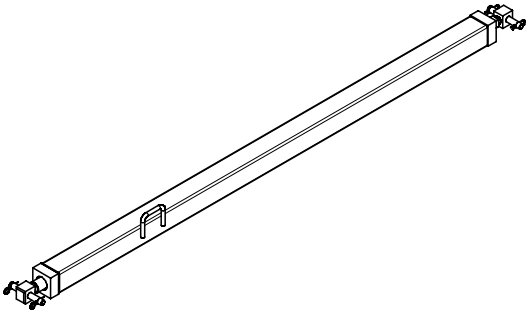


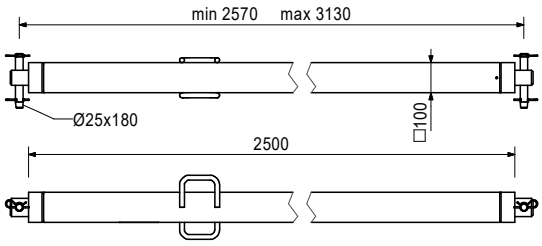


057430	49.500

Compression Brace 257-313 ACS
For supporting Strongback 365 ACS.

Complete with
2 pc. 710894 Pin Ø 25 x 180, geomet.
4 pc. 018060 Cotter Pin 4/1, galv.



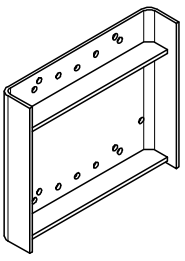


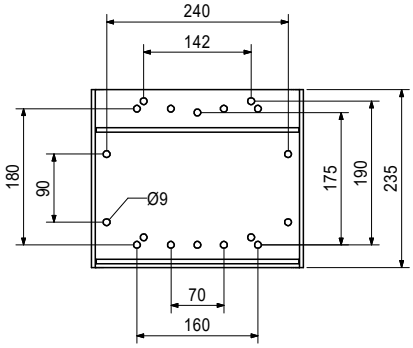
057096	4.260

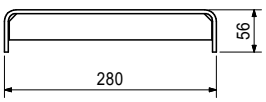
Connector IPE ACS
For fixing Platform Supports IPE 180 to IPE 250 at
- Main Platform Beam ACS
- Main Cantilever Beams ACS
- Lower Cantilever Beams ACS
- Lower Cantilever Beam 360 ACS

for fixation of
- Cantilever Supports CP ACS
- Cantilever Props FB ACS, long
- Cantilever Props FP ACS, 2.61 m

to Platform Girders IPE 180 to IPE 240.



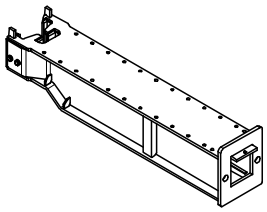


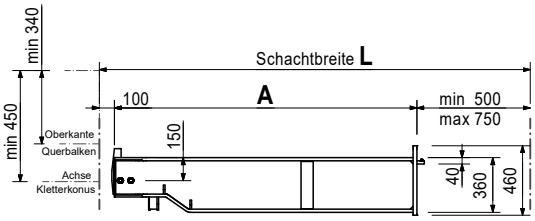


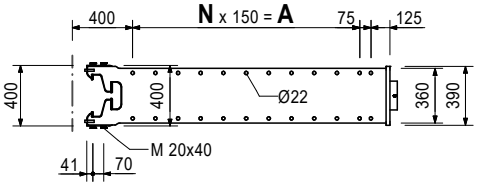
Item no.	Weight kg		A	min. L	max. L
		Main Platform Beams single ACS-P			
057000	263.000	**Main Platform Beam 1400 single ACS-P**	1400	2000	0
057001	286.000	**Main Platform Beam 1550 single ACS-P**	1550	2150	2400
057002	308.000	**Main Platform Beam 1700 single ACS-P**	1700	2300	2550
057003	331.000	**Main Platform Beam 1850 single ACS-P**	1850	2450	2700
057004	354.000	**Main Platform Beam 2000 single ACS-P**	2000	2600	2850
057005	376.000	**Main Platform Beam 2150 single ACS-P**	2150	2750	3000
057006	400.000	**Main Platform Beam 2300 single ACS-P**	2300	2900	3150

For supporting Self-Climbing Platforms ACS-P in building cores with single, telescopable Main Platform Beam Head Piece ACS-P. For shaft widths up to 3.15 m.

Complete with
4 pc. 706458 Bolt ISO 4017 M20 x 40-8.8, galv.
4 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.





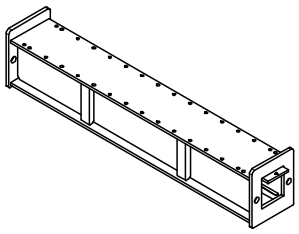


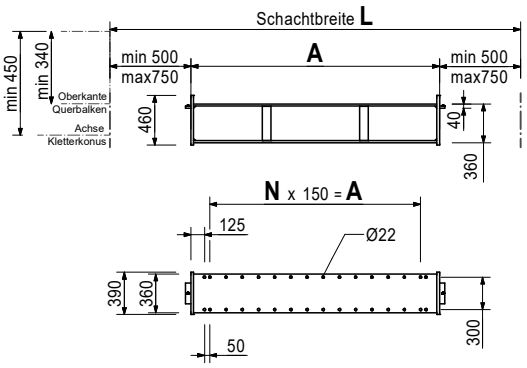
Accessories

057013	147.000	**Main Platform Beam Head Piece ACS-P**

Item no.	Weight kg		A	min. L	max. L
		Main Platform Beams double ACS-P			
057007	384.000	**Main Platform Beam 2000 double ACS-P**	2000	3000	3500
057008	430.000	**Main Platform Beam 2300 double ACS-P**	2300	3300	3800
057009	476.000	**Main Platform Beam 2600 double ACS-P**	2600	3600	4100
057010	522.000	**Main Platform Beam 2900 double ACS-P**	2900	3900	4400
057011	567.000	**Main Platform Beam 3200 double ACS-P**	3200	4200	4700
057012	613.000	**Main Platform Beam 3500 double ACS-P**	3500	4500	5000

For supporting Self-Climbing Platforms ACS-P in building cores with double, telescopable Main Platform Beam Head Piece ACS-P. For shaft widths 3.00 - 5.00 m.



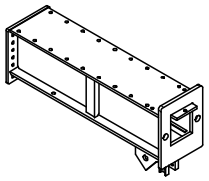


Accessories

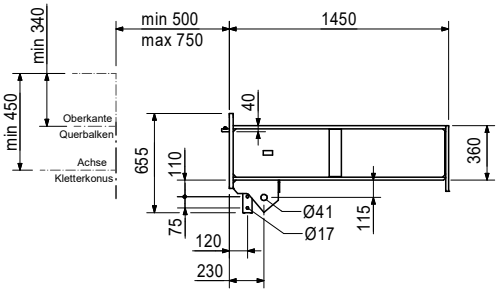
057013	147.000	**Main Platform Beam Head Piece ACS-P**
057014	4.160	**Beam Head Fixing ACS-P**

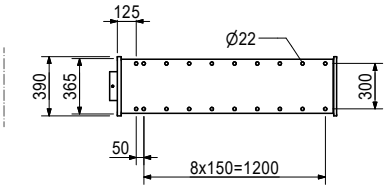
Item no.	Weight kg
057060	298.000

Main Platform Beam End Piece ACS-P
For supporting Self-Climbing Platforms ACS-P in building cores with intermediate piece (special).
For shaft widths over 5.00 m.
2 per Main Platform Beam.



Note
In conjunction with Main Platform Support Central ACS-P (special component).
Diagonal- and Vertical Braces are optional.





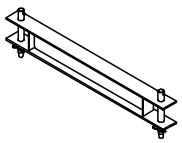
Accessories

057021	0.370

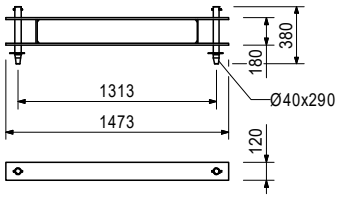
HV-Bolt Set M20 x 75-10.9

057061	49.200

Diagonal Strut 1473 ACS-P
For use in connection with the Main Platform End Piece ACS-P and Vertical Strut 1210 ACS-P when Main Beam is tensioned.

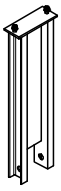


Complete with
2 pc. 057135 Pin 40 x 290
2 pc. 770012 Split Pin ISO 8752 8 x 60, galv.
2 pc. 022230 Cotter Pin 5/1, galv.

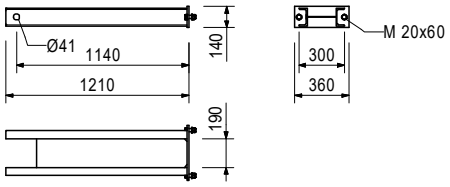


057062	45.600

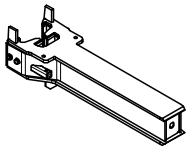
Vertical Strut 1210 ACS-P
For use in connection with the Main Platform End Piece ACS-P and Diagonal Strut 1473 ACS-P.

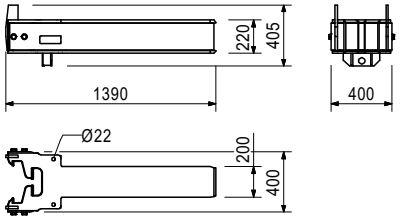


Complete with
2 pc. 057139 Bolt ISO 4017 M20 x 60-8.8, galv.
2 pc. 781053 Nut ISO 7040 M20-8, galv.
4 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.



Item no.	Weight kg		
057013	147.000	**Main Platform Beam Head Piece ACS-P** As telescopable component in Main Platform Beam ACS-P.	**Complete with** 4 pc. 706458 Bolt ISO 4017 M20 x 40-8.8, galv. 4 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.

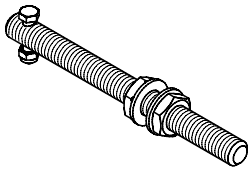


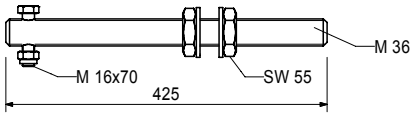


Accessories

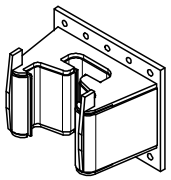
057014	4.160	**Beam Head Fixing ACS-P**

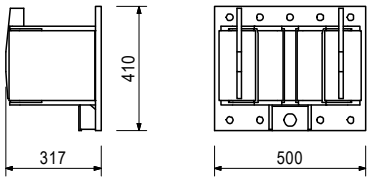
Item no.	Weight kg		
057014	4.160	**Beam Head Fixing ACS-P** For fixing Main Platform Beam Head Piece ACS-P in Main Platform Beam ACS-P.	**Complete with** 2 pc. 114792 Bolt ISO 4035 M26-5, galv. 2 pc. 114784 Washer ISO 7089 36-200 HV, galv. 1 pc. 714093 Bolt ISO 4014 M16 x 70-8.8, galv. 1 pc. 070890 Nut ISO 7040 M16-8, galv.





Item no.	Weight kg		
057391	73.600	**Head Adapter ACS-P** Fixation to Connection Beam 2150 ACS-P or 2350 ACS-P.	

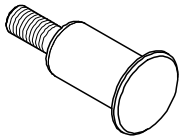


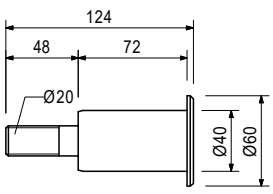


Accessories

057021	0.370	**HV-Bolt Set M20 x 75-10.9**
706454	0.017	**Washer ISO 7089 200 HV, A 20, galv.**
123803	0.913	**Head Bolt 40 x 124**

Item no.	Weight kg		
123803	0.913	**Head Bolt 40 x 124** For the fixation of Climbing Unit ACS 100 to the Head Adapter.	

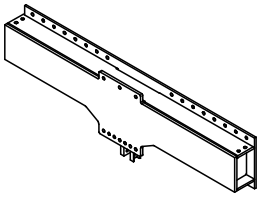


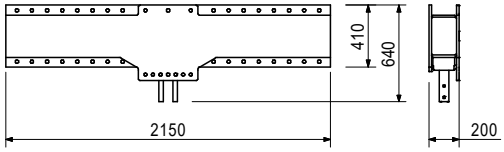


Accessories

781053	0.065	**Nut ISO 7040 M20-8, galv.**
706454	0.017	**Washer ISO 7089 200 HV, A 20, galv.**

Item no.	Weight kg	
057393	319.000	**Connection Beam 2150 ACS-P** For supporting Main Platform Beam ACS-P with 2 climbing units.

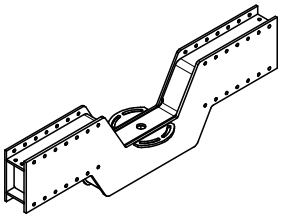


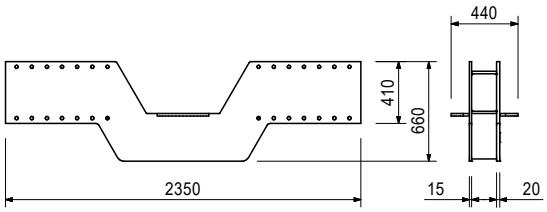


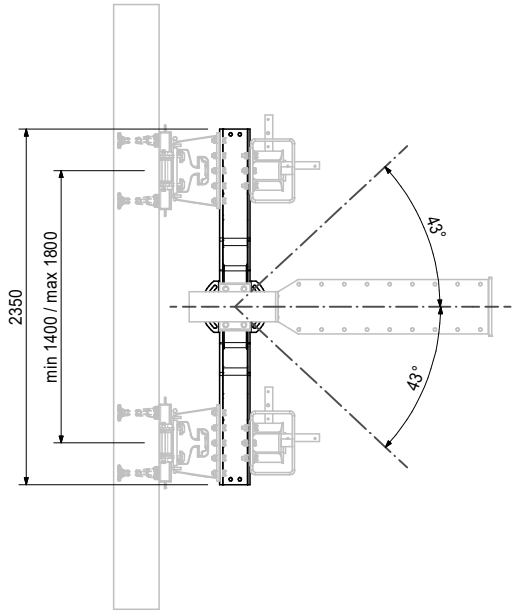
Accessories

057391	73.600	**Head Adapter ACS-P**

057395	403.000	**Connection Beam 2350 ACS-P** For articulated support of the End Pieces 2000 ACS-P with 2 climbing units on straight and sloping walls. Angle range max. ±43°.





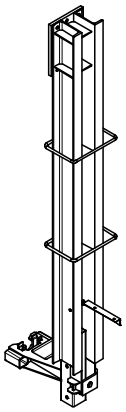


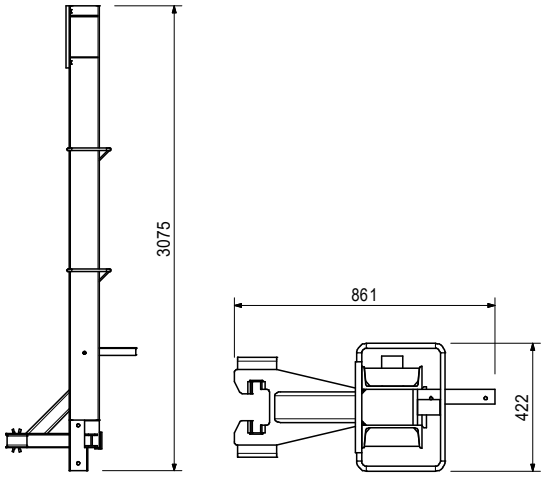
Accessories

057391	73.600	**Head Adapter ACS-P**
057400	207.000	**Vertical Strut 3075 ACS-P**
057409	23.800	**Slide Bearing Plate ACS-P**
057413	14.800	**Fixed Bearing Plate ACS-P**

Item no.	Weight kg	
057400	207.000	**Vertical Strut 3075 ACS-P** For the fixation to Connection Beam 2150 or 2350 ACS-P.

Complete with
1 pc. 057397 Landing Support, coat.
1 pc. 710225 Bolt ISO 4017 M16 x 45-8.8, galv.
1 pc. 070890 Nut ISO 7040 M16-8, galv.
2 pc. 711074 Washer ISO 7089 200 HV, A 16, galv.

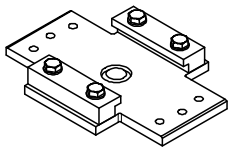


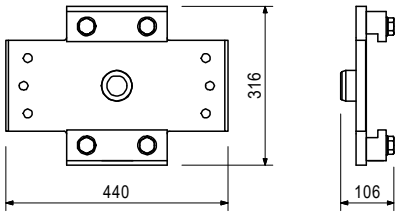


Accessories

051711	20.800	**Sliding Unit ACS**
051712	4.540	**Compression Spindle ACS, compl.**
051713	2.360	**Plywood Platform ACS**
057021	0.370	**HV-Bolt Set M20 x 75-10.9**
123839	0.440	**HV-Bolt Set M20 x 90-10.9**
123845	0.057	**U-Washer DIN 6918-21, galv.**
710295	0.028	**F.H. Bolt DIN 603 M8 x 45 MU, galv.**

057409	23.800	**Slide Bearing Plate ACS-P** Sliding connection of End Piece 2000 ACS-P to the Connection Beam 2350 ACS-P.

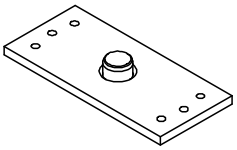


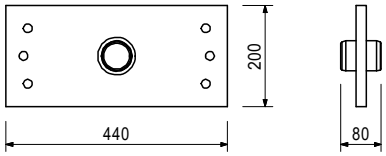


Accessories

123844	0.130	**Bolt ISO4017-M20 x 35-8.8, galv.**
706454	0.017	**Washer ISO 7089 200 HV, A 20, galv.**

057413	14.800	**Fixed Bearing Plate ACS-P** For the connection of End Piece 2000 ACS-P to the Connection Beam 2350 ACS-P.

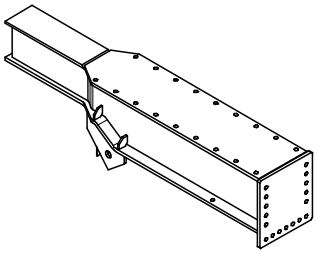


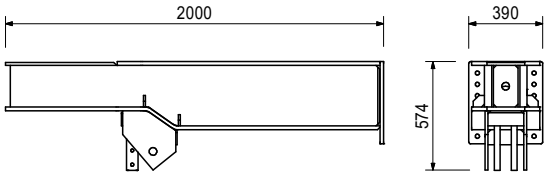


Accessories

123844	0.130	**Bolt ISO4017-M20 x 35-8.8, galv.**
706454	0.017	**Washer ISO 7089 200 HV, A 20, galv.**

Item no.	Weight kg	
057402	330.000	**End Piece 2000 ACS-P** For the support of Self-climbing Platforms ACS-P in diagonal building cores with intermediate piece (special).

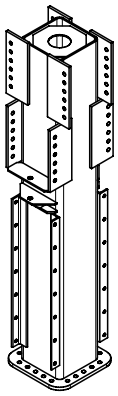


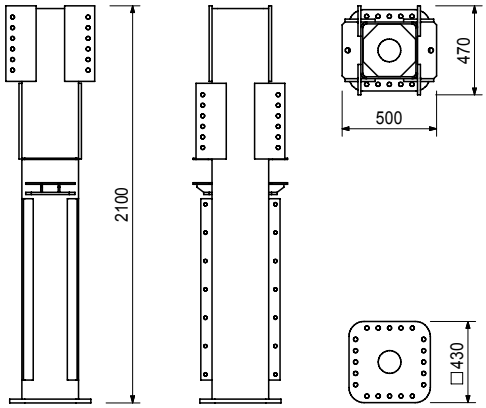


Accessories

057021	0.370	**HV-Bolt Set M20 x 75-10.9**
057061	49.200	**Diagonal Strut 1473 ACS-P**
057062	45.600	**Vertical Strut 1210 ACS-P**
057409	23.800	**Slide Bearing Plate ACS-P**
057413	14.800	**Fixed Bearing Plate ACS-P**

057016	305.000	**Vertical Post Top 2100 ACS** For the fixation on Vertical Post Base 2075 ACS or Vertical Post Intermediate to support girder grid level +1.



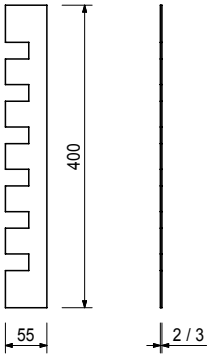


Accessories

057085	0.281	**Distance Plate 55 x 400 x 2**
057086	0.422	**Distance Plate 55 x 400 x 3**
024900	0.255	**Bolt ISO 4014 M20 x 80-8.8, galv.**
781053	0.065	**Nut ISO 7040 M20-8, galv.**
706454	0.017	**Washer ISO 7089 200 HV, A 20, galv.**

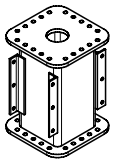
Item no.	Weight kg	
		Distance Plates 55 x 400
057085	0.281	**Distance Plate 55 x 400 x 2**
057086	0.422	**Distance Plate 55 x 400 x 3**

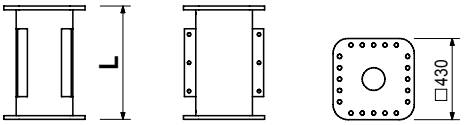
For compensating the tolerance between Vertical Post Top 2100 ACS and Main Beam ACS-P or Gallow 1430/3325 ACS-G



Item no.	Weight kg		L
		Vertical Posts Intermediate ACS	
057019	74.800	**Vertical Post Intermediate 300 ACS**	300
057018	110.000	**Vertical Post Intermediate 600 ACS**	600
057017	144.000	**Vertical Post Intermediate 900 ACS**	900
057067	179.000	**Vertical Post Intermediate 1200 ACS**	1200

Assembly between Vertical Post Top 2100 ACS and Vertical Post Base 2075 ACS as height adjustment.





Accessories

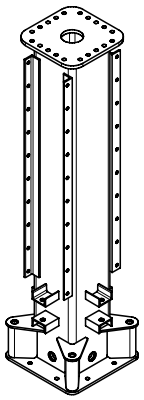
057021	0.370	**HV-Bolt Set M20 x 75-10.9**

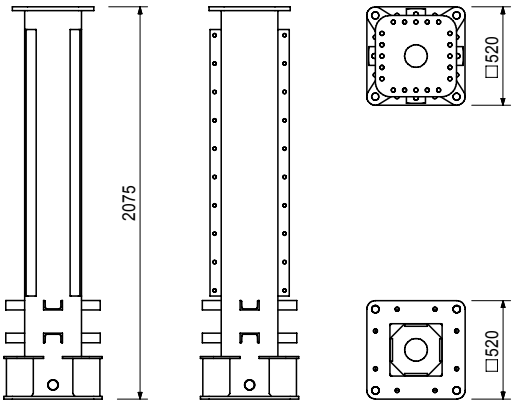
057020	309.000	**Vertical Post Base 2075 ACS**

For the fixation on Main Platform Beam ACS to support girder grid level +1.

Technical Data

Creation of the production drawing - compression strut.
ACS Cross Bracing - is made on a project-specific basis.





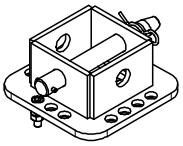
Accessories

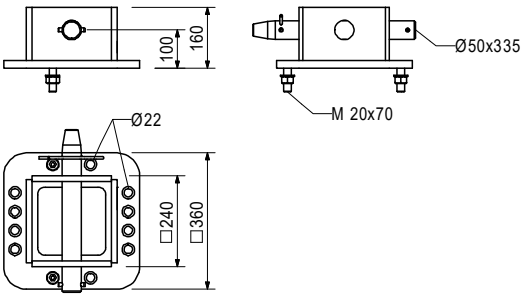
057021	0.370	**HV-Bolt Set M20 x 75-10.9**
057022	33.500	**Vertical Post Connector ACS-P**
057023	22.800	**Distance Plate 360 x 520 ACS-P**
057025	19.300	**Yoke 430 ACS-P**
057026	9.410	**Clamping Bolt M36 x 1000 ACS-P**

Item no.	Weight kg
057022	33.500

Vertical Post Connector ACS-P
For articulated connection of Vertical Post Base 2075 ACS to Main Platform Beam ACS-P.

Complete with
1 pc. 057120 Pin 50 x 335
1 pc. 722457 Dowel Pin Ø 10 x 70, galv.
1 pc. 710618 Cotter Pin 8/1, galv.
2 pc. 057121 Bolt M20 x 70 DIN 6912-8.8, galv.
2 pc. 710334 Nut ISO 4032 M20-8, galv.
2 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.

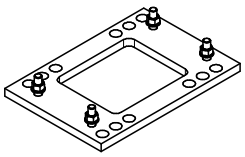


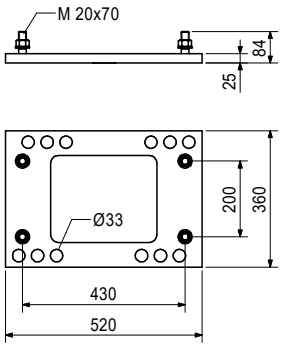


057023	22.800

Distance Plate 360 x 520 ACS-P
Is fixed below on the Vertical Post Base 2075 ACS for a stiff connection.

Complete with
4 pc. 057121 Bolt M20 x 70 DIN 6912-8.8, galv.
4 pc. 710334 Nut ISO 4032 M20-8, galv.
4 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.





Accessories

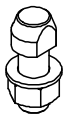
057024	0.308

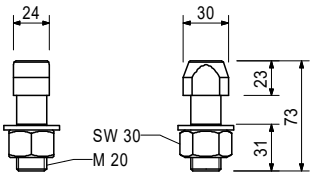
Centering Pin 30 ACS-P

057024	0.308

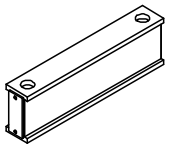
Centering Pin 30 ACS-P
For positioning the Vertical Post Base 360 x 520 ACS-P on the Main Platform Beam ACS-P for a stiff connection.
2 for each connection.

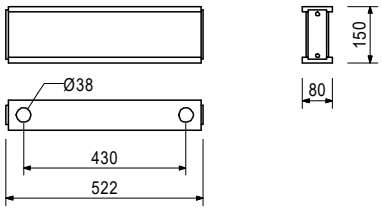
Complete with
1 pc. 710334 Nut ISO 4032 M20-8, galv.
1 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.





Item no.	Weight kg	
057025	19.300	**Yoke 430 ACS-P** For a stiff connection of the Vertical Post Base 2075 ACS to the Main Platform Beam ACS-P. 2 for each connection.



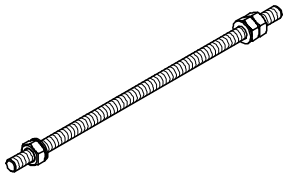


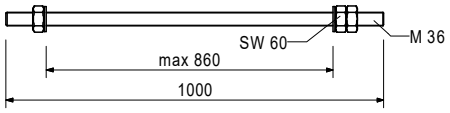
Accessories

057026	9.410	**Clamping Bolt M36 x 1000 ACS-P**

057026	9.410	**Clamping Bolt M36 x 1000 ACS-P** For a stiff connection of Vertical Post Base 2075 ACS to the Main Platform Beam single/double ACS-P. 4 for each connection.

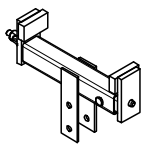
Complete with
1 pc. 057126 Hex Nut EN14399-4-M36-10-HV-GEO
1 pc. 057127 Washer 37 DIN 6916

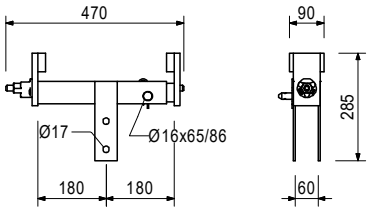




057027	9.190	**Post Connector ACS-P** For fixing the Platform Post 2995 ACS to the Main Platform Beam ACS-P.

Complete with
1 pc. 030130 Cam Nut DW 15, galv.
1 pc. 018050 Pin Ø 16 x 65/86, galv.
1 pc. 018060 Cotter Pin 4/1, galv.

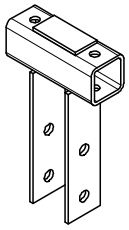


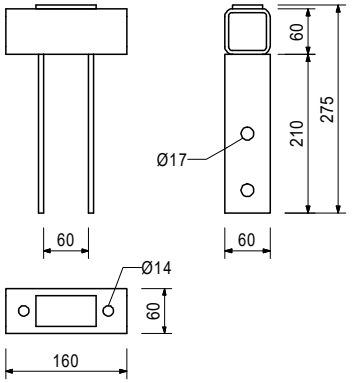


Accessories

057029	17.900	**FP Post 2995 ACS**
057030	14.900	**Post Extension 2955 ACS**
057031	8.090	**Girder Support ACS**

Item no.	Weight kg	
057065	2.550	**Post Connector VT 20 - GT 24 ACS** For fixing the Platform Post 2995 ACS to the VT 20K or GT 24 Girders



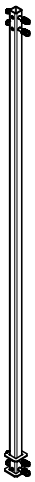


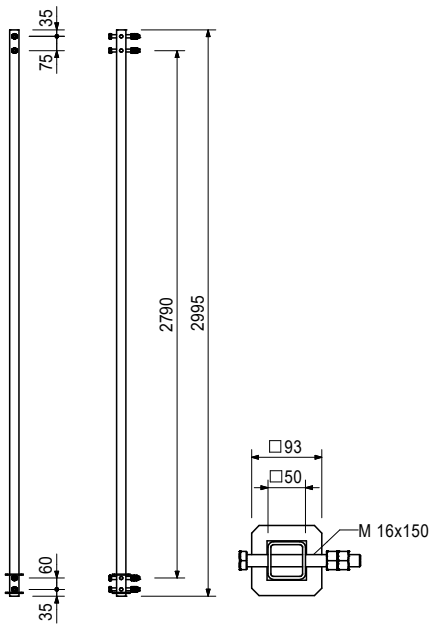
Accessories

057794	0.912	**Tension Strap complete**
057029	17.900	**FP Post 2995 ACS**
057030	14.900	**Post Extension 2955 ACS**
057031	8.090	**Girder Support ACS**

057029	17.900	**FP Post 2995 ACS** For suspending finishing platforms.

Complete with
4 pc. 710049 Bolt ISO 4014 M16 x 150-8.8
8 pc. 710229 Nut ISO 4032 M16-8, galv.
Note
Extension of FP Post with Post Extension 2955.



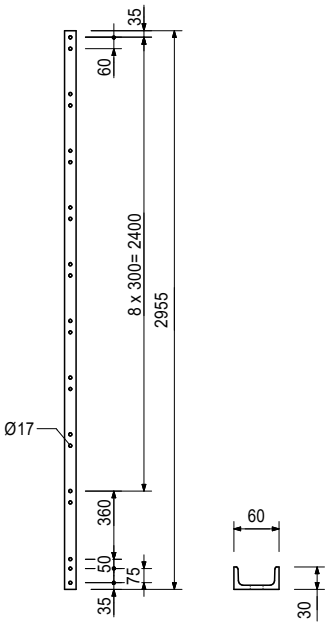


Accessories

057030	14.900	**Post Extension 2955 ACS**
057031	8.090	**Girder Support ACS**

Item no.	Weight kg
057030	14.900

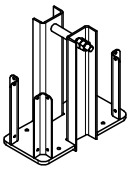
Post Extension 2955 ACS
For suspending finishing platforms.

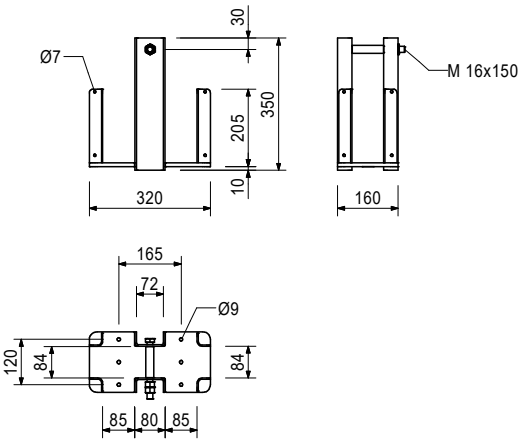


057031	8.090

Girder Support ACS
For fixing one or two GT 24 or VT 20K Girders, without tipping, on the finishing platform.

Complete with
1 pc. 710049 Bolt ISO 4014 M16 x 150-8.8
2 pc. 710229 Nut ISO 4032 M16-8, galv.

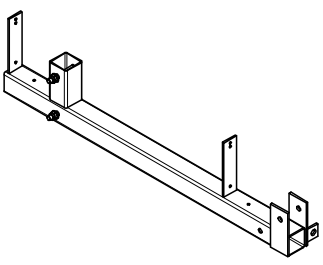


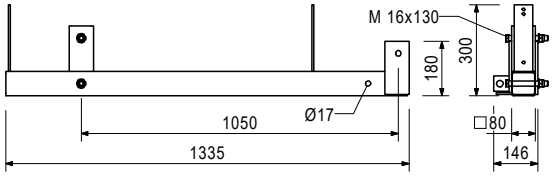


051720	17.200

Lower Cantilever Beam ACS
For fixing Decking Supports GT 24 and Beams IPE.

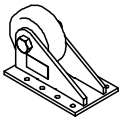
Complete with
2 pc. 710232 Bolt ISO 4014 M16 x 130-8.8, galv.
2 pc. 070890 Nut ISO 7040 M16-8, galv.
2 pc. 711074 Washer ISO 7089 200 HV, A 16, galv.

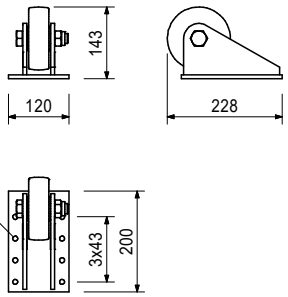




Item no.	Weight kg	
126208	3.800	**Platform Guiding Roller ACS-C** As guiding for working platforms at the building wall. Fixation with screws 8 x 65 for planking 40 mm.

Complete with
1 pc. 710226 Bolt ISO 4014 M20 x 90-8.8, galv.
1 pc. 781053 Nut ISO 7040 M20-8, galv.
1 pc. 057414 Polyamid-Rad SPO 125/20G

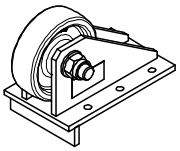


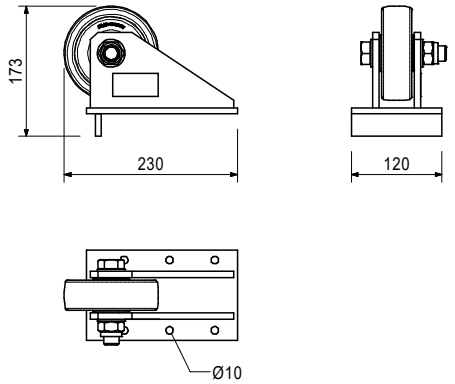


Accessories

724533	24.700	**Shuttering Panel GE 275 D 622 x 2750**
780354	0.002	**Washer ISO 7089 200 HV, A 8, galv.**
710342	0.007	**Washer ISO 7093-1-08-200 HV, galv.**
711071	0.004	**Nut ISO 7042 M8-8, galv.**
710709	0.036	**F.H. Bolt DIN 603 M8 x 65 MU, galv.**
780354	0.002	**Washer ISO 7089 200 HV, A 8, galv.**

057417	4.080	**Supporting Roller ACS** As guiding for working platforms at the building wall. Fixation with screws 8 x 65 for planking 40 mm.





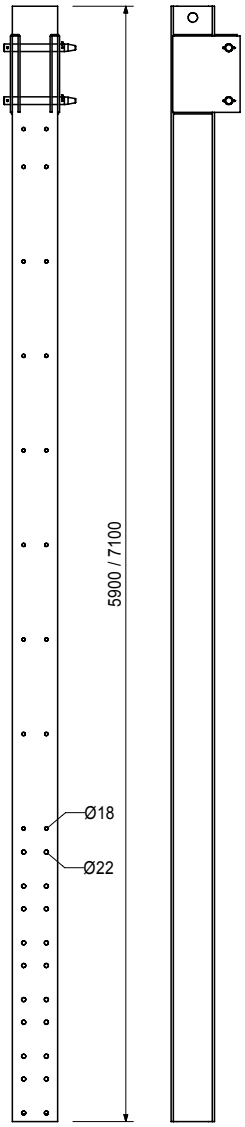
Accessories

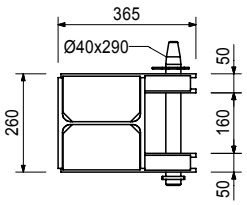
724533	24.700	**Shuttering Panel GE 275 D 622 x 2750**
780354	0.002	**Washer ISO 7089 200 HV, A 8, galv.**
710342	0.007	**Washer ISO 7093-1-08-200 HV, galv.**
711071	0.004	**Nut ISO 7042 M8-8, galv.**
710709	0.036	**F.H. Bolt DIN 603 M8 x 65 MU, galv.**
780354	0.002	**Washer ISO 7089 200 HV, A 8, galv.**

Item no.	Weight kg	
		Platform Posts IPBL 240 ACS
057032	398.000	**Platform Post 5900 IPBL 240 ACS**
057070	470.000	**Platform Post 7100 IPBL 240 ACS**

For fixing to girder grid level +1 as suspension of the external platform.
Platform Post 5900 for concreting heights up to approx. 4.20 m.
Platform Post 7100 for concreting heights up to approx. 5.40 m.

Complete with
2 pc. 057135 Pin 40 x 290
2 pc. 770012 Split Pin ISO 8752 8 x 60, galv.
2 pc. 022230 Cotter Pin 5/1, galv.





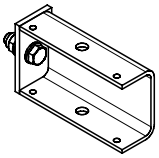
Accessories

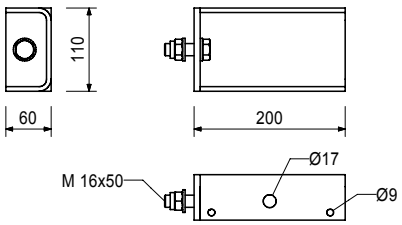
057039	2.390	**Railing Adaptor VT 20 ACS**

Item no.	Weight kg
057039	2.390

Railing Adaptor VT 20 ACS
For fixing horizontal VT 20K Girders as railing to:
Bracket ACS-G,
Finishing Platform Post 2350/3300 ACS-G,
Vertical Post ACS Intermediates,
Platform Posts ACS 5900/7100.

Complete with
1 pc. 710252 Bolt ISO 4017 M16 x 50-8.8, galv.
1 pc. 070890 Nut ISO 7040 M16-8, galv.
1 pc. 711074 Washer ISO 7089 200 HV, A 16, galv.

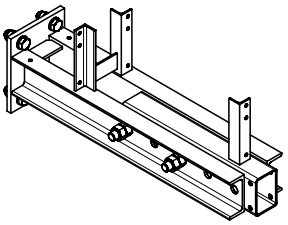


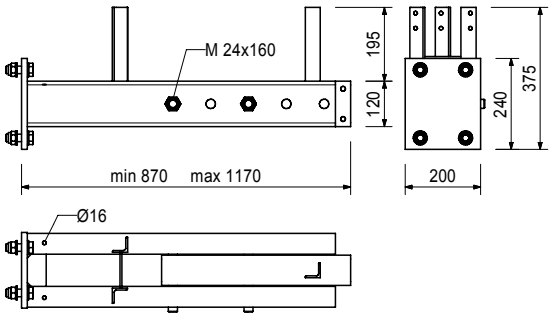


057072	39.700

Cantilever Platform Beam 870-1170 ACS
For supporting the external platform.
Telescopable 300 mm.

Complete with
1 pc. 057196 Slide Carrier 500, powder coated
2 pc. 057138 Hex. Bolt ISO 4014 M24 x 160-8.8, galv.
4 pc. 022250 Nut ISO 4032 M24-8, galv.
4 pc. 057139 Bolt ISO 4017 M20 x 60-8.8, galv.
4 pc. 781053 Nut ISO 7040 M20-8, galv.
8 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.





Accessories

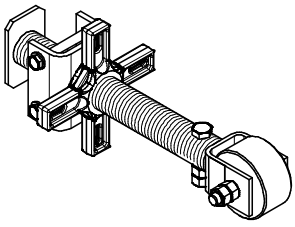
057034	7.120

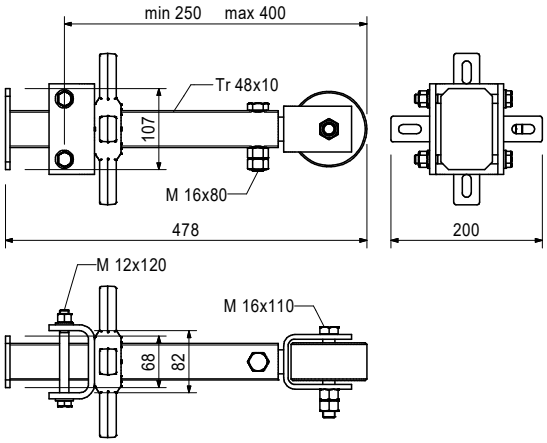
Supporting Spindle ACS

Item no.	Weight kg
057034	7.120

Supporting Spindle ACS
For fixing to Cantilever Platform Beam 570-870 ACS and Cantilever Platform Beam 870-1170 ACS if support from the structure is necessary.

Complete with
1 pc. 070100 Bolt ISO 4016 M12 x 120-4.6 MU, galv.
1 pc. 780702 Washer ISO 7089 200 HV, A 12, galv.
1 pc. 057177 Castor 100-50
1 pc. 710233 Bolt ISO 4014 M16 x 110-8.8, galv.
1 pc. 710222 Bolt ISO 4014 M16 x 80-8.8, galv.

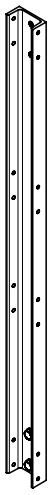


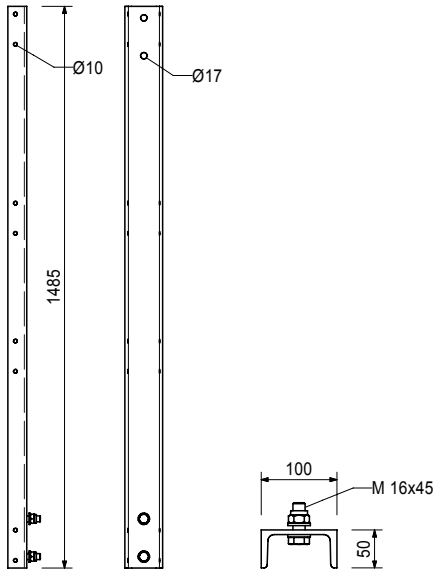


057036	16.000

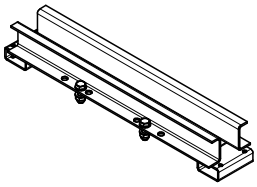
Guardrail Post 1485 ACS
For the fixation to girder grid level +1.

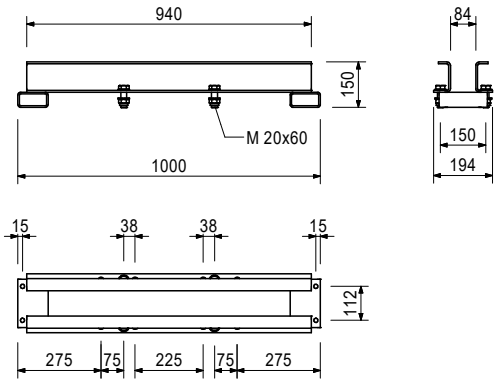
Complete with
2 pc. 710225 Bolt ISO 4017 M16 x 45-8.8, galv.
2 pc. 070890 Nut ISO 7040 M16-8, galv.
2 pc. 711074 Washer ISO 7089 200 HV, A 16, galv.





Item no.	Weight kg		
057063	19.800	**Beam Adaptor Type 1 ACS** For a stiff connection of Platform Girders VT 20K and GT 24 to Main Platform Beams ACS-P, Brackets ACS-G, Gallows 3325 or 1430 ACS-G, Finishing Platform Beams 1365 ACS-G.	**Complete with** 4 pc. 057139 Bolt ISO 4017 M20 x 60-8.8, galv. 4 pc. 781053 Nut ISO 7040 M20-8, galv. 4 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.

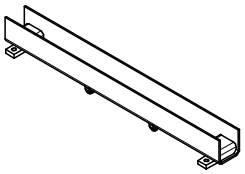


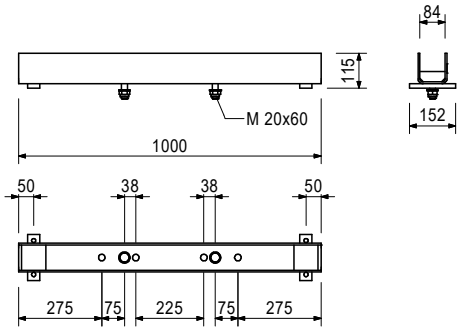


Accessories

057794	0.912	**Tension Strap complete**

057064	15.600	**Beam Adaptor Type 2 ACS** For a stiff connection of Platform Girders VT 20 and GT 24 to the Main Platform Beam Head ACS-P.	**Complete with** 2 pc. 057139 Bolt ISO 4017 M20 x 60-8.8, galv. 2 pc. 781053 Nut ISO 7040 M20-8, galv. 2 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.

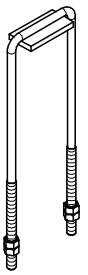


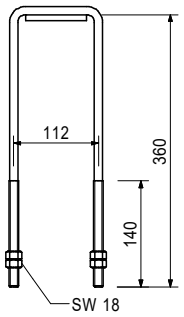


Accessories

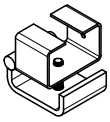
057794	0.912	**Tension Strap complete**

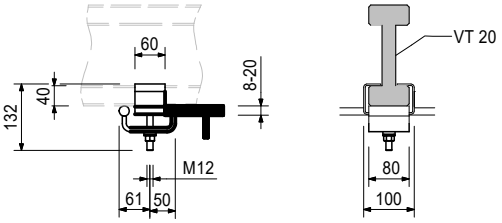
057794	0.912	**Tension Strap complete** For clamping Formwork Girders GT 24.	**Complete with** 4 pc. 710330 Nut ISO 4032 M12-8, galv.



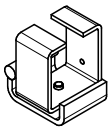


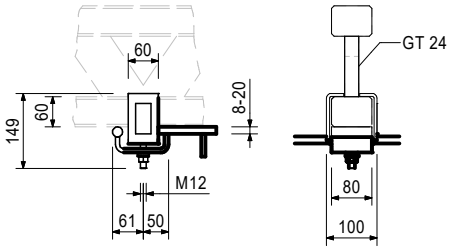
Item no.	Weight kg		
057037	1.800	**Clamp VT 20 ACS** Connection of VT 20K Formwork Girder with the steel profile.	**Note** Flange thickness t = 8 - 20



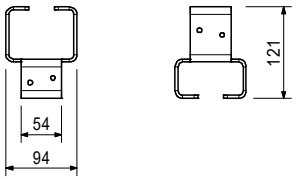


057038	1.950	**Clamp GT 24 ACS** Connection of GT 24 Formwork Girder with the steel profile.	**Complete with** 1 pc. 710330 Nut ISO 4032 M12-8, galv. 1 pc. 109112 Spherical Washer 1 pc. 109113 Socket Bevel **Note** Flange thickness t = 8 - 20





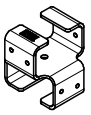
129722	0.746	**Cross Connector GT 24 / VT 20** For the connection of crossing GT 24 and VT 20 Formwork Girders.	

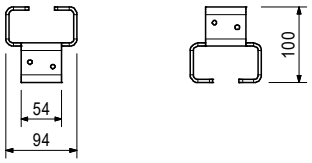


Accessories

024540	0.005	**TSS-Torx 6 x 40, galv.**
024470	0.008	**TSS-Torx 6 x 60, galv.**

Item no.	Weight kg	
129817	0.675	**Cross Connector VT 20 / VT 20** For the connection of crossing VT 20 Formwork Girders.

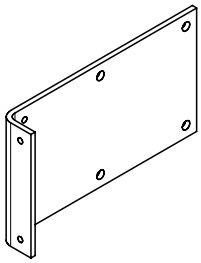


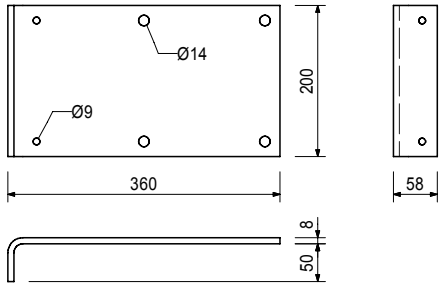


Accessories

024540	0.005	**TSS-Torx 6 x 40, galv.**
024470	0.008	**TSS-Torx 6 x 60, galv.**

057075	5.010	**Connector VT 20 Bottom ACS** For fixing vertical VT 20K Girders as railing on Platform Beams at Levels0/-1/-2 of ACS-P and ACS-G. One per VT 20K.

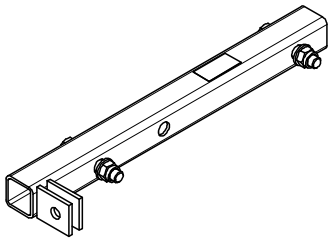


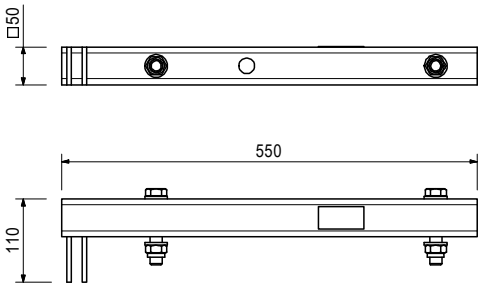


Accessories

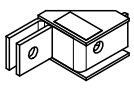
070030	0.015	**Plate Connector Ø 48/12 mm, single**
070100	0.132	**Bolt ISO 4016 M12 x 120-4.6 MU, galv.**
750350	0.027	**Washer ISO 7093-1 200 HV, A 12, galv.**

057051	3.640	**Connector AV ACS** For connecting the Kicker for panel suspension to: Bracket ACS-G, Vertical Posts ACS, Platform Posts 5900/7100 ACS.	**Complete with** 2 pc. 721729 Bolt ISO 4014 M16 x 90-8.8, galv. 2 pc. 070890 Nut ISO 7040 M16-8, galv. 4 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.





057052	0.955	**Offset Connector AV ACS** For connecting the second Kicker to the AV Connector ACS.

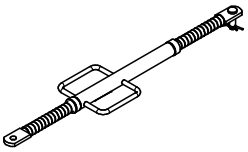


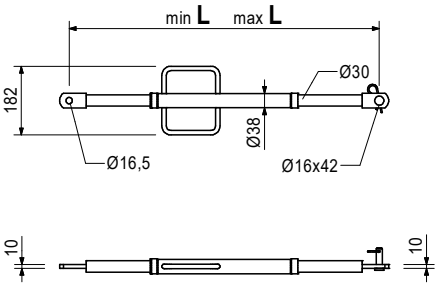
Item no.	Weight kg		min. L	max. L
		Kicker AV		
057087	3.510	**Kicker AV 82**	500	820
057088	4.200	**Kicker AV 111**	790	1110
028110	4.850	**Kicker AV 140**	1080	1400

For aligning PERI Formwork Systems.

Complete with
1 pc. 027170 Pin Ø 16 x 42, galv.
1 pc. 018060 Cotter Pin 4/1, galv.

Note
Permissible load see PERI Design Tables.



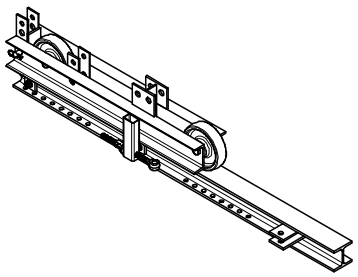


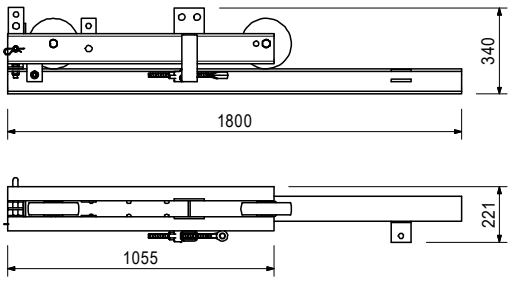
057015	77.200	**Carriage ACS-P**	

Clampable carriage on platforms to retract the formwork.

Complete with
1 pc. 037150 Tie Yoke DW 15
1 pc. 030130 Cam Nut DW 15, galv.
1 pc. 037160 Bolt Ø 20 x 205, galv.
2 pc. 710225 Bolt ISO 4017 M16 x 45-8.8, galv.
2 pc. 070890 Nut ISO 7040 M16-8, galv.
2 pc. 057164 Heavy Duty Roller SPO 201/20 K

Note
For use with Tilt Carrier 255/365 and Tilt Carrier CB 270/380.

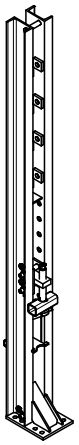


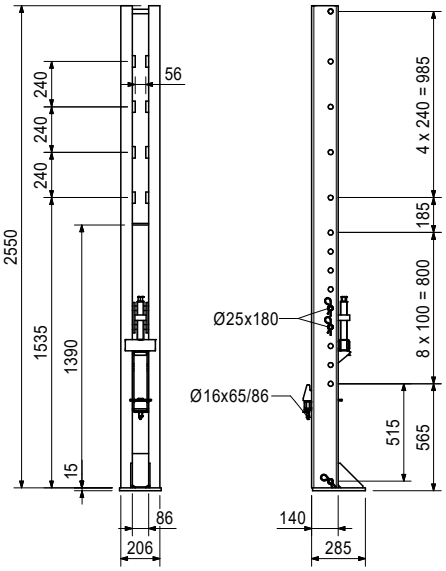


Item no.	Weight kg
057097	107.000

Strongback 255 ACS
For connecting the formwork to the Carriage ACS.
Standard formwork height upt to 3.30 m.

Complete with
1 pc. 057081 Adjusting Spindle ACS, compl.
1 pc. 057307 Adjusting Nut TR 36 x 6 ACS, pow.
1 pc. 057313 Ledger Bracket ACS, pow.
1 pc. 057315 Counterholder ACS, gep.
3 pc. 715936 Pin Ø 25 x 180, incl. Dowel Pin Ø 6
1 pc. 018050 Pin Ø 16 x 65/86, galv.
3 pc. 022230 Cotter Pin 5/1, galv.
1 pc. 018060 Cotter Pin 4/1, galv.



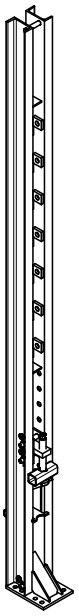


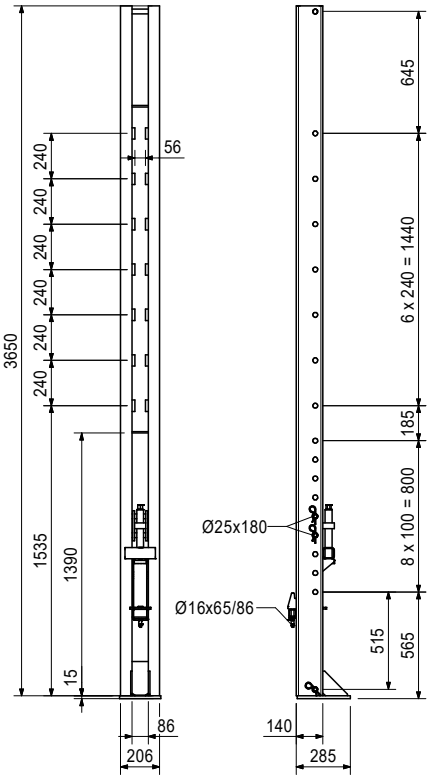
Accessories

057327	11.000 **Strongback Adaptor 50, compl.**
057332	15.700 **Strongback Adaptor 200, compl.**
057099	17.300 **Adjustable Spindle Connector ACS-P**
037150	0.641 **Tie Yoke DW 15**
722137	0.849 **Cross Strap 2, galv.**
110055	0.861 **Cross Clamp, galv.**
030100	0.439 **Wingnut DW 15, galv.**
030440	0.686 **Spherical Nut DW 15, galv.**

Item no.	Weight kg	
057098	145.000	**Strongback 365 ACS** For connecting the formwork to the Carriage ACS. Standard formwork height upt to 5.10 m.

Complete with
1 pc. 057081 Adjusting Spindle ACS, compl.
1 pc. 057307 Adjusting Nut TR 36 x 6 ACS, pow.
1 pc. 057313 Ledger Bracket ACS, pow.
1 pc. 057315 Counterholder ACS, gep.
3 pc. 715936 Pin Ø 25 x 180, incl. Dowel Pin Ø 6
1 pc. 018050 Pin Ø 16 x 65/86, galv.
3 pc. 022230 Cotter Pin 5/1, galv.
1 pc. 018060 Cotter Pin 4/1, galv.



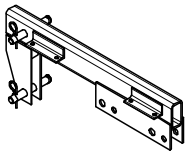


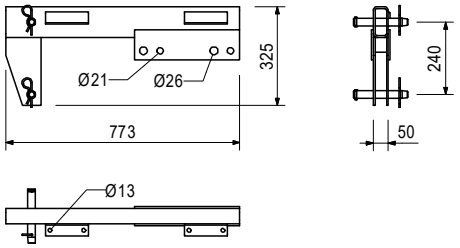
Accessories

057327	11.000	**Strongback Adaptor 50, compl.**
057332	15.700	**Strongback Adaptor 200, compl.**
057099	17.300	**Adjustable Spindle Connector ACS-P**
037150	0.641	**Tie Yoke DW 15**
722137	0.849	**Cross Strap 2, galv.**
110055	0.861	**Cross Clamp, galv.**
030100	0.439	**Wingnut DW 15, galv.**
030440	0.686	**Spherical Nut DW 15, galv.**

057099	17.300	**Adjustable Spindle Connector ACS-P** For the connection of Adjustable Brace 164-224 or Heavy-Duty Spindle SLS to the Strongback.

Complete with
2 pc. 715936 Pin Ø 25 x 180, incl. Dowel Pin Ø 6
2 pc. 022230 Cotter Pin 5/1, galv.





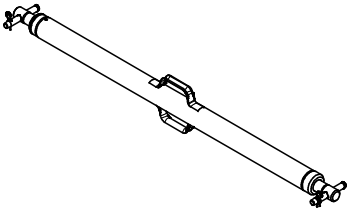
Accessories

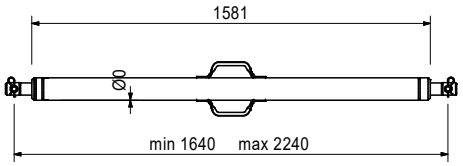
101776	24.900	**Heavy Duty Spindle SLS 140/240**
051110	25.300	**Adjustable Brace CB 164-224**

Item no.	Weight kg
051110	25.300

Adjustable Brace CB 164-224
For aligning the Strongback CB.

Complete with
2 pc. 715936 Pin Ø 25 x 180, incl. Dowel Pin Ø 6
2 pc. 018060 Cotter Pin 4/1, galv.

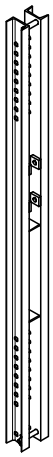


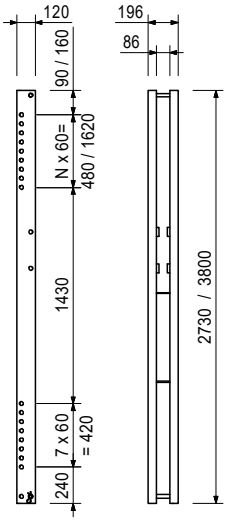


051060	73.400
051150	103.000

Strongbacks CB
Strongback CB 270
Strongback CB 380
For assembling system formwork on Climbing Brackets CB 240 and 160. For formwork heights up to 5.40 m.

Complete with
1 pc. 715936 Pin Ø 25 x 180, incl. Dowel Pin Ø 6
1 pc. 018060 Cotter Pin 4/1, galv.
Technical Data
Permissible load-bearing point capacity 1.9 t.





Accessories

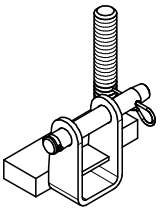
051030	5.530

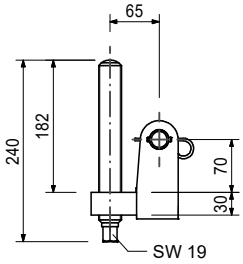
Height Adjusting Unit CB, SCS

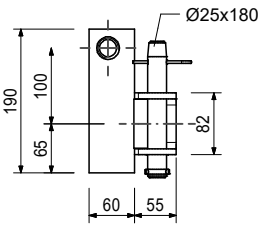
051030	5.530

Height Adjusting Unit CB, SCS
For height adjustment of VARIO GT 24 Panels on the Strongbacks CB and SCS.

Complete with
1 pc. 715936 Pin Ø 25 x 180, incl. Dowel Pin Ø 6
1 pc. 018060 Cotter Pin 4/1, galv.





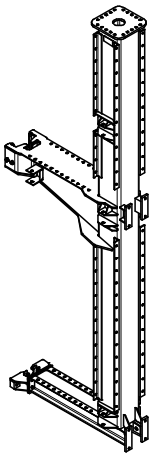


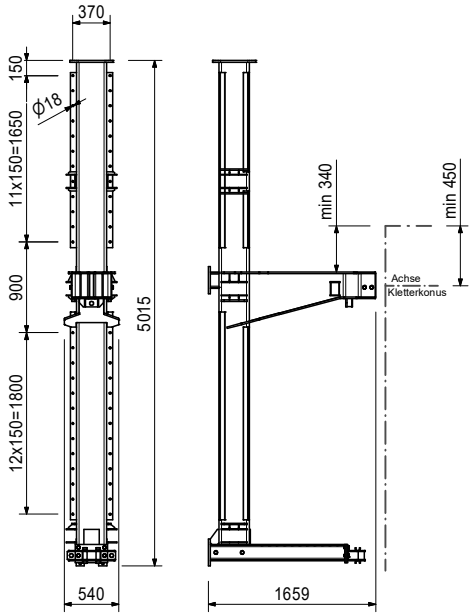
Item no.	Weight kg
057053	863.000

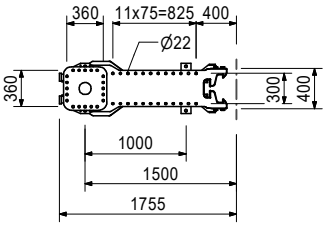
Bracket ACS-G
For the support of suspended self-climbing units ACS-G in building cores or on or on building walls.

Complete with
1 pc. 057211 Pressure Point Pilot Pin
4 pc. 706458 Bolt ISO 4017 M20 x 40-8.8, galv.
4 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.

Technical Data
Creation of the production drawing - Compression Strut ACS Cross Bracing - is made on a project-specific basis.







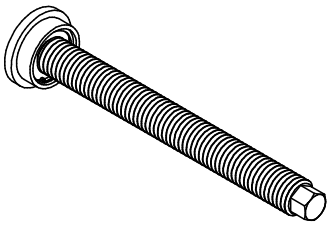
Accessories

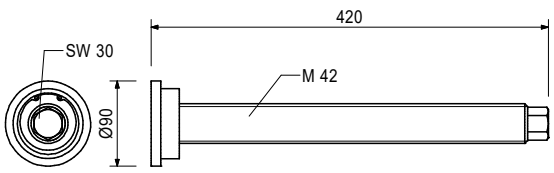
057054	5.110

Compression Spindle M42 ACS

057054	5.110

Compression Spindle M42 ACS
2 for each Brackets ACS-G

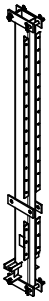


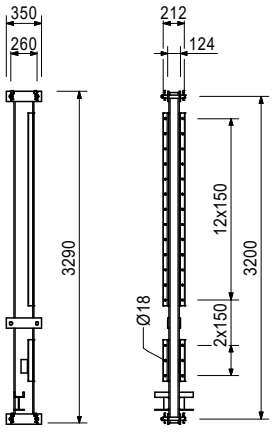


Item no.	Weight kg
057056	148.000

Finishing Platform Post 3300 ACS-G
For the fixation to Bracket ACS-G. For concreting heights up to 5.10 m.

Complete with
4 pc. 706372 Pin 30 x 235 ACS
8 pc. 022230 Cotter Pin 5/1, galv.





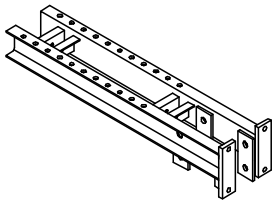
Accessories

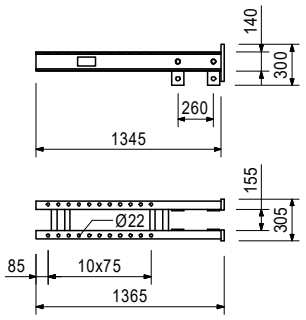
057039	2.390

Railing Adaptor VT 20 ACS

057057	59.500

Finishing Platform Beam 1365 ACS-G
For the fixation to Finishing Platform Post 3300 ACS-G.



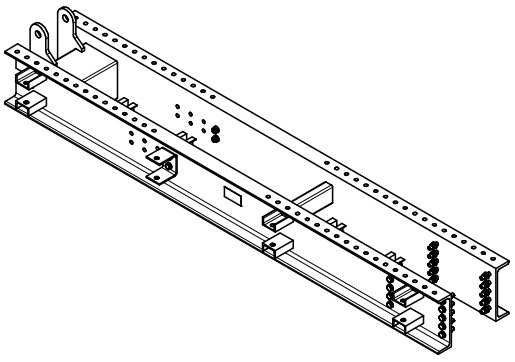


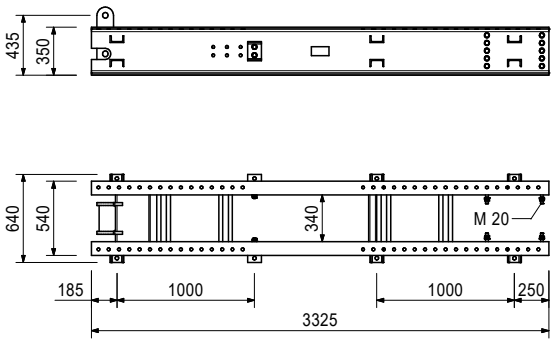
057058	481.000

Gallow 3325 ACS-G
For the suspension of the retracted formwork on both sides. Fixation of the Vertical Post Top 2100 ACS.

Complete with
20 pc. 024900 Bolt ISO 4014 M20 x 80-8.8, galv.
4 pc. 780357 Bolt ISO 4017 M20 x 50-8.8, galv.
24 pc. 781053 Nut ISO 7040 M20-8, galv.
48 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.

Technical Data
Creation of the production drawing - compression strut ACS cross bracing - is made on a project-specific basis.



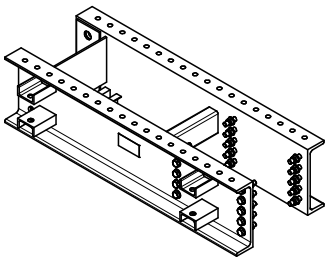


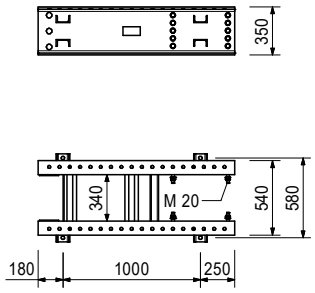
Item no.	Weight kg
057059	214.000

Gallow 1430 ACS-G
For the suspension of the one-sided retracted formwork. Fixation of the Vertical Post Top 2100 ACS.

Complete with
20 pc. 024900 Bolt ISO 4014 M20 x 80-8.8, galv.
20 pc. 781053 Nut ISO 7040 M20-8, galv.
40 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.

Technical Data
Creation of the production drawing - compression strut ACS cross bracing - is made on a project-specific basis.



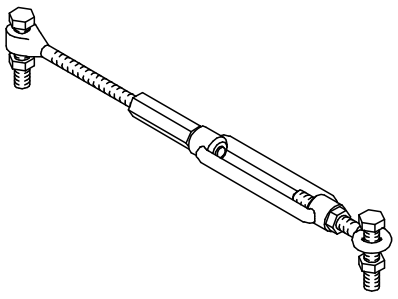


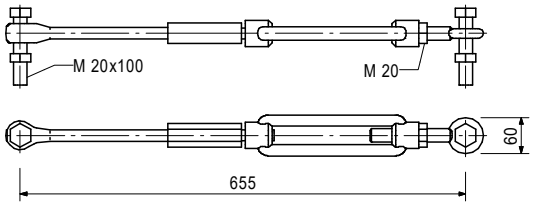
057083	3.820

Bracing DW 15 ACS
For bracing scaffolds. For bracing large VARIO GT 24 Elements.

Complete with
1 pc. 037150 Tie Yoke DW 15
1 pc. 030090 Hex. Nut DW 15 SW 30/108, galv.
1 pc. 701335 Stess Steel DW 15x0.10m
1 pc. 711059 Turnbuckle for tension anchor CB
1 pc. 711060 Eye Bolt M20, left, galv.
1 pc. 057263 Nut ISO 4032 M20-8, galv. left
2 pc. 024910 Bolt ISO 4014 M20 x 100-8.8, galv.
2 pc. 710334 Nut ISO 4032 M20-8, galv.

Note
Tie Rod DW 15 must be ordered seperately transport dimension 655.





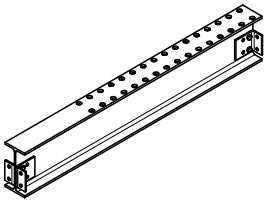
Accessories

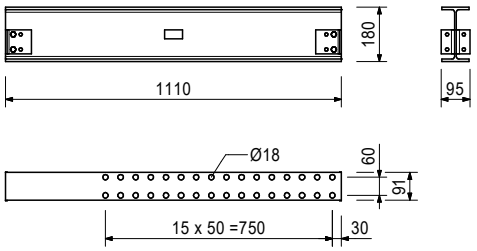
030030	1.440
030050	0.000

Tie Rod DW 15, spec. length
Cutting Cost Tie Rod DW 15, B 15

Item no.	Weight kg	
057040	21.900	**Panel Carrier Beam 1110 ACS** Traveling rail for Trolley HTP size A.

Complete with
4 pc. 057082 Trolley Stopper
4 pc. 057264 Bolt ISO 4017 M10 x 25-8.8, galv.
4 pc. 710234 Nut ISO 4032 M10-8, galv.

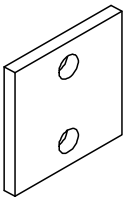


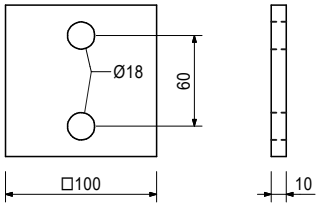


Accessories

057073	0.745	**Counterplate 100 x 100 x 10 ACS**

Item no.	Weight kg	
057073	0.745	**Counterplate 100 x 100 x 10 ACS** For fixing Panel Carrier Beam 1110 ACS to Yoke Beams ACS-P and Gallow ACS-G. 2 for each panel carrier beam.

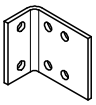


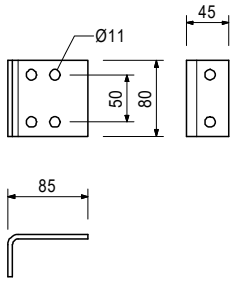


Accessories

710233	0.200	**Bolt ISO 4014 M16 x 110-8.8, galv.**
070890	0.030	**Nut ISO 7040 M16-8, galv.**
711074	0.011	**Washer ISO 7089 200 HV, A 16, galv.**

Item no.	Weight kg	
057082	0.359	**Trolley Stopper** End stop for Trolley HTP. Used for beam flange width of 90 to 200 mm. Used in pairs.

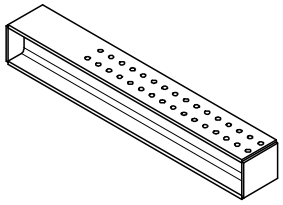


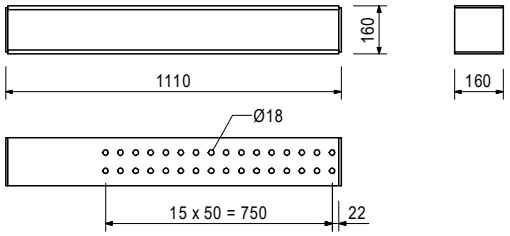


Accessories

057264	0.026	**Bolt ISO 4017 M10 x 25-8.8, galv.**
710234	0.010	**Nut ISO 4032 M10-8, galv.**

Item no.	Weight kg	
057389	48.700	**Panel Carrier Beam 1110 IPB 160 ACS** Travelling rail for Trolley HTP size A and B.

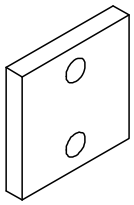


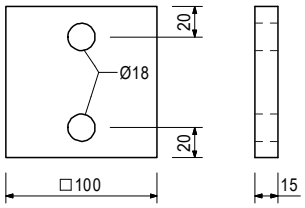


Accessories

057387	1.120	**Counter Plate 100 x 100 x 15 ACS**

057387	1.120	**Counter Plate 100 x 100 x 15 ACS**

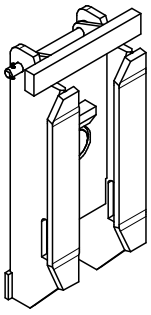


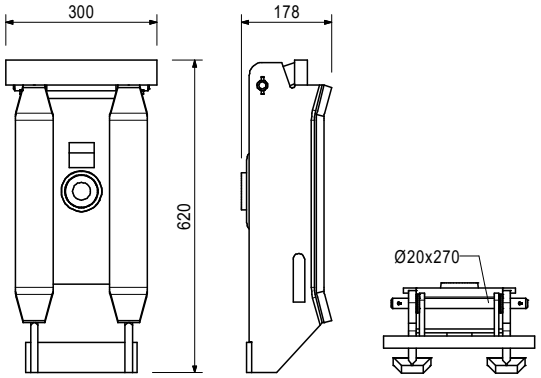


Accessories

105402	0.200	**Bolt ISO 4014 M16 x 120-8.8, galv.**
070890	0.030	**Nut ISO 7040 M16-8, galv.**
711074	0.011	**Washer ISO 7089 200 HV, A 16, galv.**

Item no.	Weight kg		
051725	38.600	**Climbing Shoe I ACS** For use on Climbing Cone-2 M30/DW 20.	**Complete with** 1 pc. 706455 Bolt 20 x 270 ACS, galv. 4 pc. 706454 Washer ISO 7089 200 HV, A 20, galv. 2 pc. 711063 Dowel Pin Ø 5 x 35 **Note** Permissible load-bearing capacity see PERI Design Information (on request).

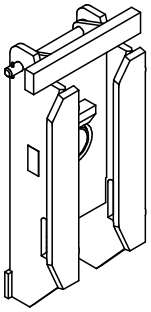


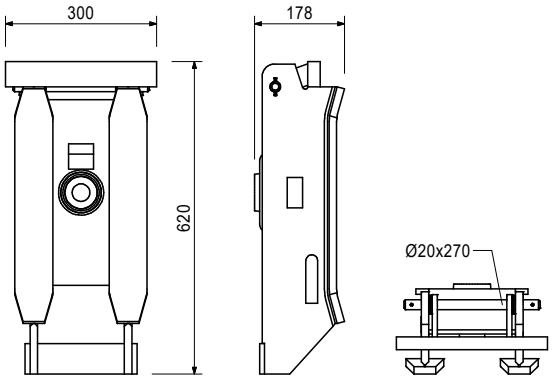


Accessories

051728	0.800	**Cyl. Bolt ISO 4762 M30 x 110-10.9**

057875	39.300	**Climbing Shoe-2 ACS** For anchoring the ACS Self-Climbing System to the structure and as a replacement for the Climbing Shoe I ACS (yellow).	**Complete with** 1 pc. 706455 Bolt 20 x 270 ACS, galv. 4 pc. 706454 Washer ISO 7089 200 HV, A 20, galv. 2 pc. 711063 Dowel Pin Ø 5 x 35 **Note** Red color version. Permissible load capacity see Design Information (on request).



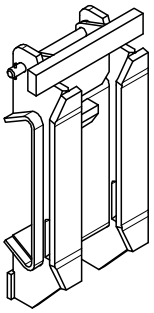


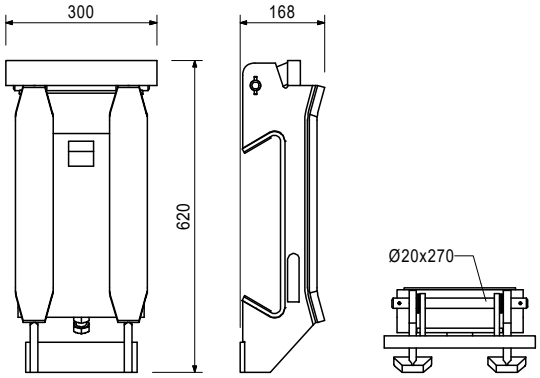
Accessories

051728	0.800	**Cyl. Bolt ISO 4762 M30 x 110-10.9**

Item no.	Weight kg	
051726	33.300	**Climbing Shoe II ACS** For anchoring on Double Anchor Support right or left.

Complete with
1 pc. 706455 Bolt 20 x 270 ACS, galv.
4 pc. 706454 Washer ISO 7089 200 HV, A 20, galv.
2 pc. 711063 Dowel Pin Ø 5 x 35
Note
Permissible load-bearing capacity see PERI Design Information (on request).

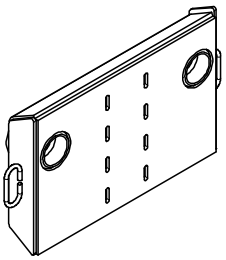


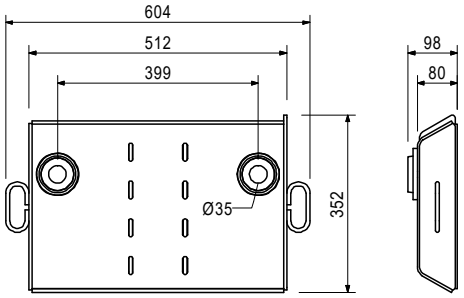


Accessories

051727	30.200	**Double Anchor Support, right**
051774	30.100	**Double Anchor Support, left**

051727	30.200	**Double Anchor Support, right** For anchoring on two Climbing-Cones-2 M30 / DW 20. Double Anchor Supports right and left must always be used in pairs.

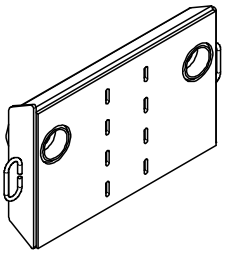


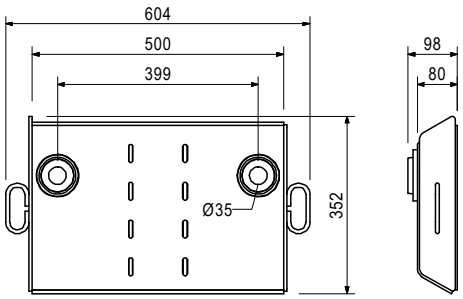


Accessories

051728	0.800	**Cyl. Bolt ISO 4762 M30 x 110-10.9**

Item no.	Weight kg	
051774	30.100	**Double Anchor Support, left** For anchoring on two Climbing-Cones-2 M30 / DW 20. Double Anchor Supports right and left must always be used in pairs.

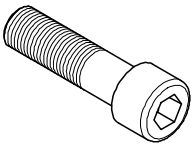


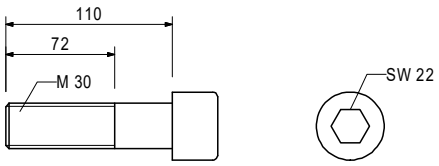


Accessories

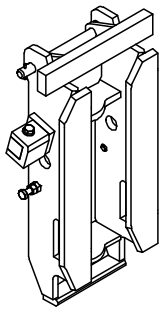
051728	0.800	**Cyl. Bolt ISO 4762 M30 x 110-10.9**

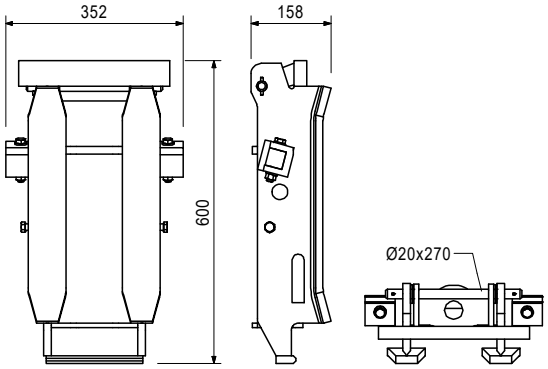
051728	0.800	**Cyl. Bolt ISO 4762 M30 x 110-10.9** For attaching climbing shoe I ACS, Climbing Shoe-2 I ACS and anchor tube right or left to Climbing Cone-2 M30/DW20 or Screw-On Cone M30/DW26





Item no.	Weight kg		
057568	33.600	**Climbing Shoe IV ACS** Pivotable anchoring in horizontal and vertical axis.	**Complete with** 1 pc. 706455 Bolt 20 x 270 ACS, galv. 4 pc. 706454 Washer ISO 7089 200 HV, A 20, galv. 2 pc. 711063 Dowel Pin Ø 5 x 35 2 pc. 057594 Distance Piece 60 x 60 x 50, pow. 2 pc. 710220 Bolt ISO 4014 M12 x 80-8.8, galv. 2 pc. 710710 Bolt ISO 4017 M12 x 55-8.8, galv. 4 pc. 710330 Nut ISO 4032 M12-8, galv. 4 pc. 780702 Washer ISO 7089 200 HV, A 12, galv. **Note** Permissible load-bearing capacity see PERI Design Information (on request).

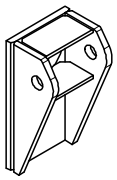


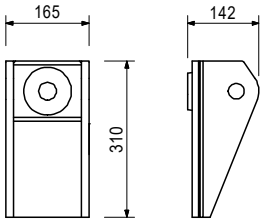


Accessories

057566	13.200	**Anchor Shoe-H ACS**
057567	17.200	**Anchor Shoe-V ACS**

057566	13.200	**Anchor Shoe-H ACS** Pivotable anchoring in vertical axis with Climbing Shoe IV ACS.	

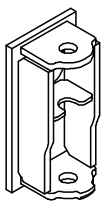


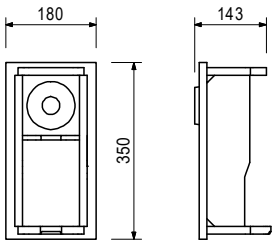


Accessories

123843	0.623	**Bolt ISO 4017 M30 x 80-10.9**
057569	1.510	**Bolt 30 x 280 ACS**

057567	17.200	**Anchor Shoe-V ACS** Pivotable anchoring in horizontal axis with Climbing Shoe IV ACS.	

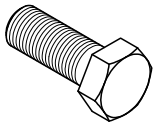


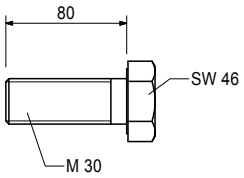


Accessories

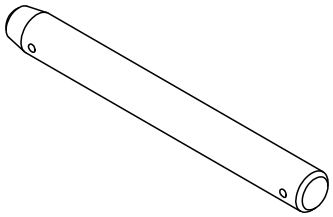
123843	0.623	**Bolt ISO 4017 M30 x 80-10.9**
057570	4.080	**Bolt Ø 35 x 525 ACS**

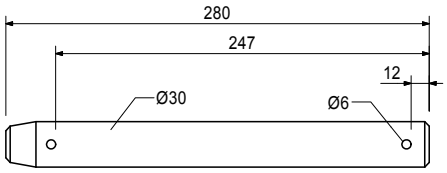
Item no.	Weight kg	
123843	0.623	**Bolt ISO 4017 M30 x 80-10.9** For attaching Anchor Shoe-H and Anchor Shoe-V to Climbing Cone-2 M30/DW20 or Screw-On Cone M30/DW26.





057569	1.510	**Bolt 30 x 280 ACS**



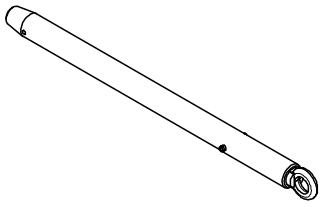


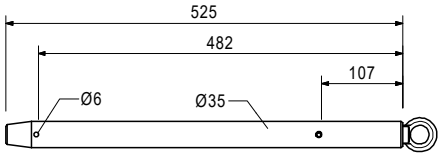
Accessories

022230	0.033	**Cotter Pin 5/1, galv.**

057570	4.080	**Bolt Ø 35 x 525 ACS**

Complete with
1 pc. 710914 Split Pin ISO 8752 8 x 45, galv.
1 pc. 722802 Eye Bolt M10 DIN 580, galv.



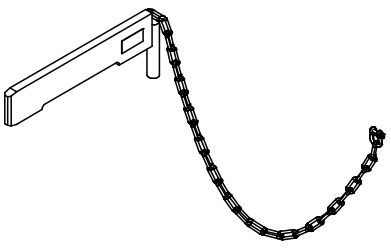


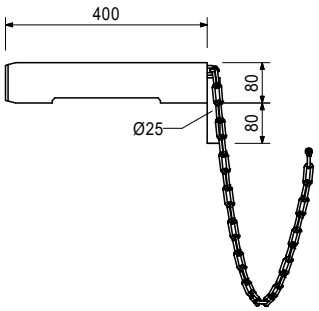
Accessories

022230	0.033	**Cotter Pin 5/1, galv.**

051729	5.160	**Locking Bar ACS** For supporting the Climbing Bracket ACS in the Climbing Shoe ACS.

Complete with
1 pc. 706452 Chain DIN5685-G-05x35-LFM, galv.
1 pc. 706451 Schackle curved 1/4 inch, galv.

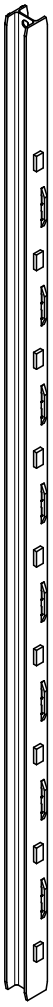


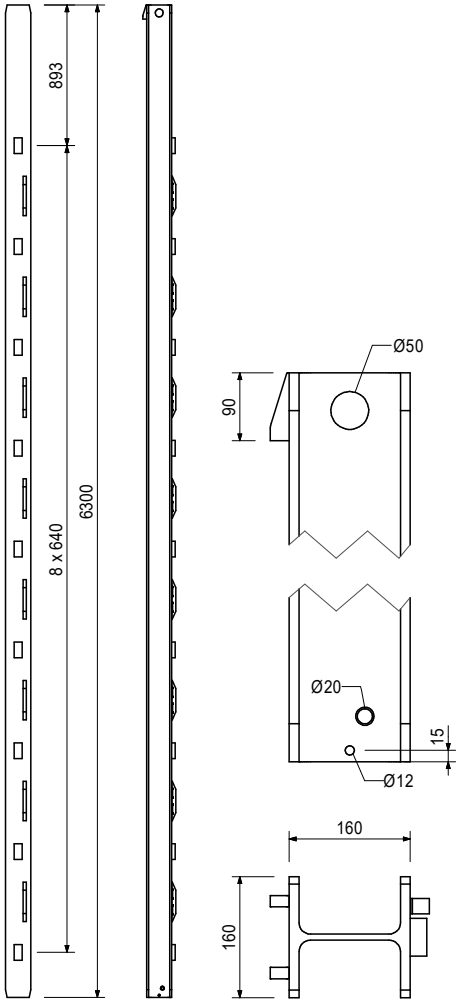


Item no.	Weight kg
051731	282.000

Climbing Rail 630 ACS
Guiding rail for Self-Climbing System ACS with Hydraulic Climbing Mechanism ACS 100.
Climbing Rail ACS special length on request.

Note
Corresponding concrete heights see Product Information (on request).





Accessories

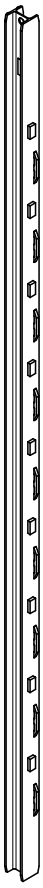
051736	3.910

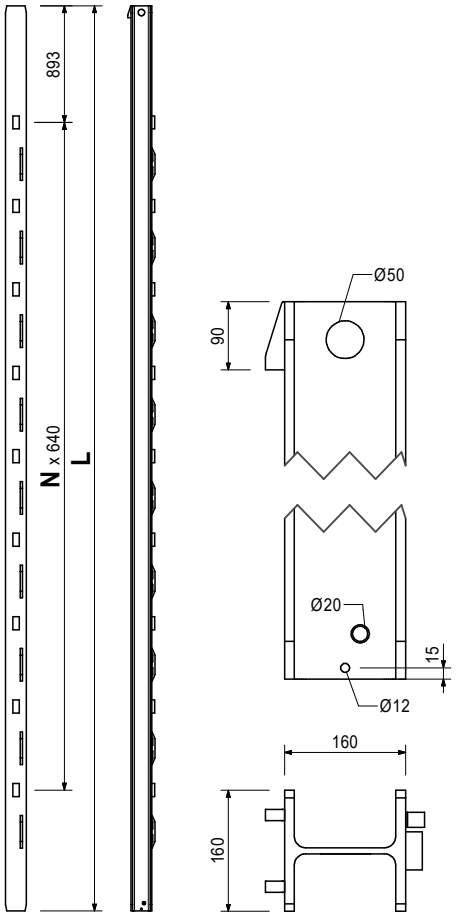
Distance Piece cpl.

Item no.	Weight kg		L
		Climbing Rails ACS	
057213	311.000	**Climbing Rail 694 ACS**	6940
051732	340.000	**Climbing Rail 758 ACS**	7580
057215	368.000	**Climbing Rail 822 ACS**	8220
051733	45.100	**Climbing Rail spec.length/m**	

Guiding rail for Self-Climbing System ACS with Hydraulic Climbing Mechanism ACS 100.
Climbing Rail ACS special length on request.

Note
Corresponding concrete heights see Product Information (on request).





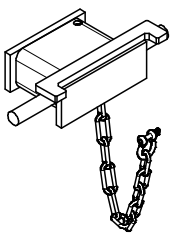
Accessories

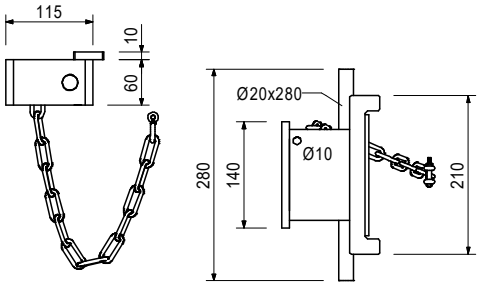
051736	3.910	**Distance Piece cpl.**

051736	3.910	**Distance Piece cpl.**

2 Distance Pieces are necessary for each ACS-R/G rail from a climbing rail length of 8220 mm.

Complete with
1 pc. 706452 Chain DIN5685-G-05x35-LFM, galv.
1 pc. 706451 Schackle curved 1/4 inch, galv.

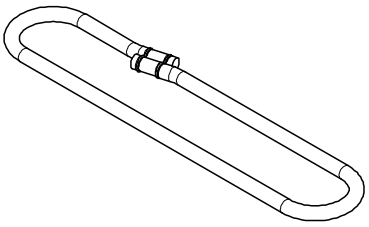


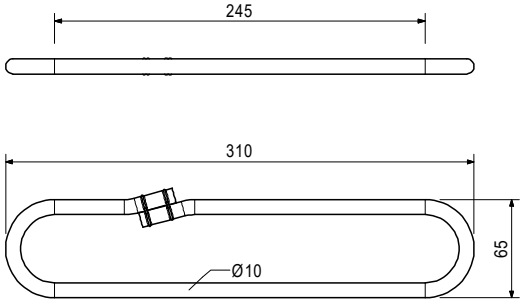


Accessories

051737	0.050	**Expander ACS**

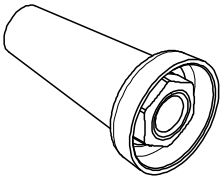
Item no.	Weight kg	
051737	0.050	**Expander ACS** For Distance Piece ACS.

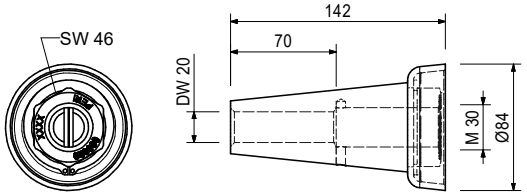




030920	1.650	**Climbing Cone-2 M30/DW 20, galv.** Anchor System M30. For anchoring climbing systems.

Note
Separate Design Information on request.



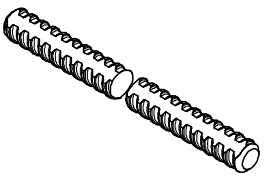


Accessories

030860	0.792	**Threaded Anchor Plate DW 20**
030700	2.560	**Tie Rod DW 20, spec. length**
030745	2.600	**Tie Rod B 20, spec. length**

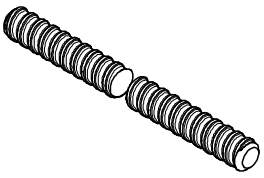
		Tie Rods DW 20
030700	2.560	**Tie Rod DW 20, spec. length**
030800	0.000	**Cutting Cost Tie Rod DW 20/B 20**

Note
Non-weldable! Take official Approval into consideration!
Technical Data
Permissible tension force 150 kN.

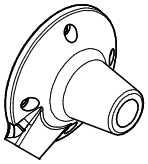


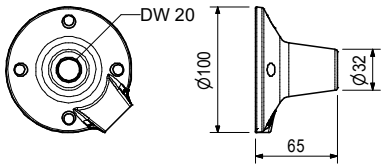
		Tie Rods B 20
030745	2.600	**Tie Rod B 20, spec. length**
030800	0.000	**Cutting Cost Tie Rod DW 20/B 20**

Note
Weldable! Take official Approval into consideration!
Technical Data
Permissible tension force 150 kN.

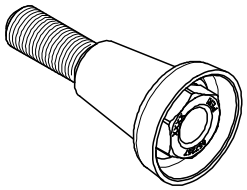


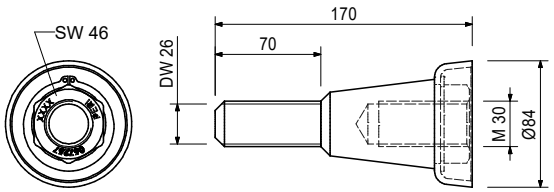
Item no.	Weight kg		
030860	0.792	**Threaded Anchor Plate DW 20** For use with Tie Rod DW 20, B 20 or Screw-On Cone-2 M24/DW 20. For anchoring in concrete.	**Note** Lost anchor component.





057257	1.810	**Screw-On Cone M30/DW 26, galv.** Anchor System M30. For anchoring climbing systems.	**Note** Separate dimensioning information on request.

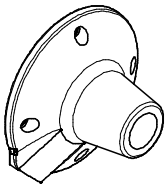


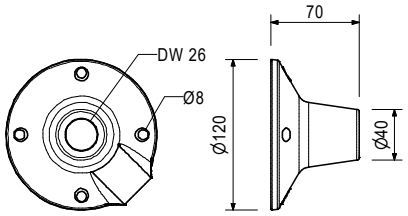


Accessories

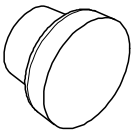
030870	1.260	**Threaded Anchor Plate DW 26**

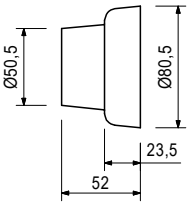
030870	1.260	**Threaded Anchor Plate DW 26** For use with Tie Rod DW 26 or Screw-On Cone M36/DW 26. For anchoring in concrete.	**Note** Lost anchor part.





031653	0.364	**KK Concrete Cone M30-80/52** For closing anchor points with Climbing Cone-2 M30/DW 20 or Screw-On Cone M30/DW 26.	**Note** Delivery unit 50 pieces.

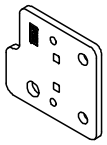


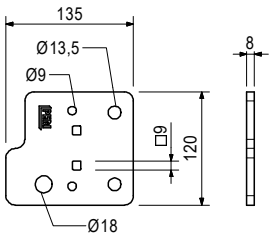


Accessories

113127	5.400	**Glue for Concrete Cones-3, 5,4-kg-Set**

Item no.	Weight kg	
113762	0.884	**Guardrail Conn. Plate ACS/SCS** For assembling Scaffold Tubes Ø 48 or Ø 60 as Guardrail by means of Bail Pin A64 on Guardrail Posts ACS, SCS and GT 24. Fixation by Hex. Bolt M8, M12, M16 or Wood Screw Ø 8.

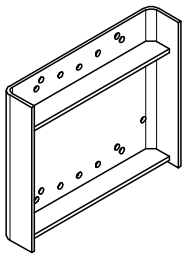


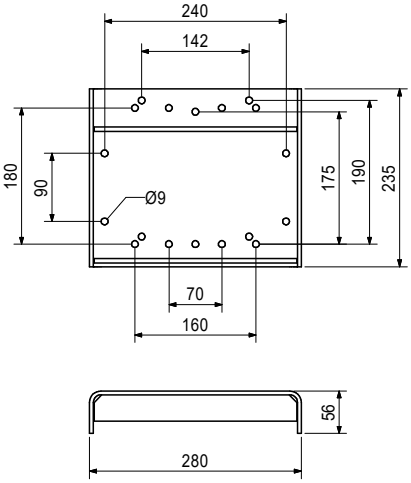


Accessories

110296	0.220	**Clamp A64 DIN 3570 M12, galv.**
710330	0.017	**Nut ISO 4032 M12-8, galv.**

057096	4.260	**Connector IPE ACS** For fixing Platform Supports IPE 180 to IPE 250 at - Main Platform Beam ACS - Main Cantilever Beams ACS - Lower Cantilever Beams ACS - Lower Cantilever Beam 360 ACS for fixation of - Cantilever Supports CP ACS - Cantilever Props FB ACS, long - Cantilever Props FP ACS, 2.61 m to Platform Girders IPE 180 to IPE 240.



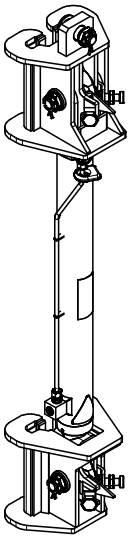


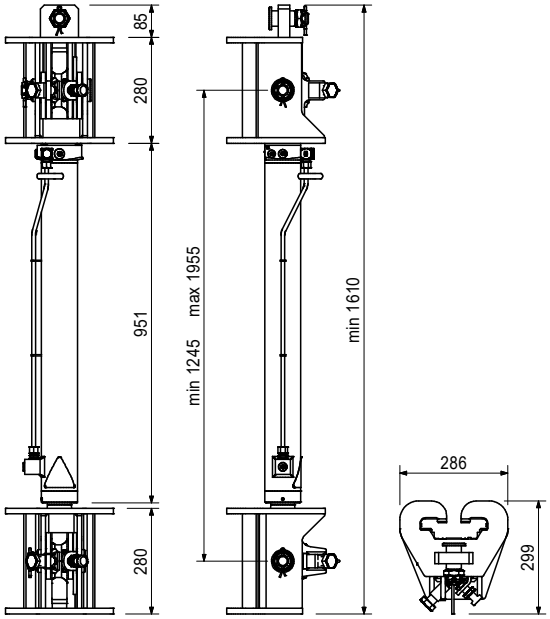
Item no.	Weight kg
051738	111.000

Hydraulic Climbing Mechanism ACS 100, cpl.
For hydraulic climbing of Self-Climbing Systems ACS.

Complete with
1 pc. 706468 Hammer Headed Pin 40 x 75 ACS
1 pc. 706476 Castle Nut M30 DIN 979-05, galv.
1 pc. 706475 Cotter Pin ISO 1234-06, 3 x 060-ST

Note
Manuf. item-no. 109.080C-710
Follow Instructions for Use!

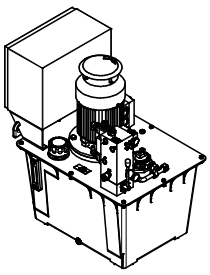


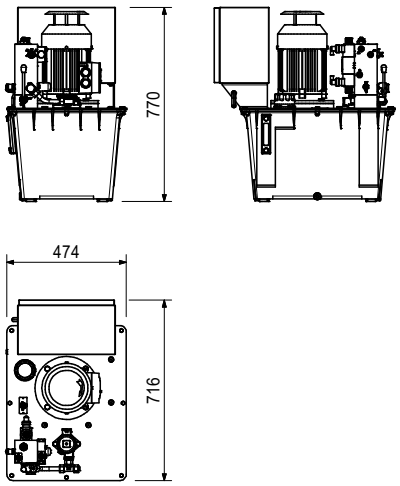


		Hydraulic Pumps 2-fold
051739	93.000	**Hydraulic Pump 2-fold 400V/50Hz**
051762	93.000	**Hydraulic Pump 2-fold 460V/60Hz**
057637	93.000	**Hydraulic Pump 2-fold 50HT/4CCM**
057638	93.000	**Hydraulic Pump 2-fold 60HT/4CCM**
057766	93.000	**Hydraulic Pump ACS 2 x 240/460C CSA**

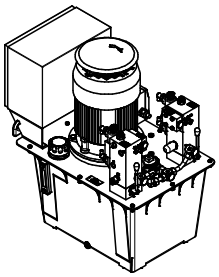
Hydraulic Pumps for the connection of 2 Hydraulic Climbing Mechanisms ACS 100. Different versions concerning power supply, operating pressure, delivery rate and certification.

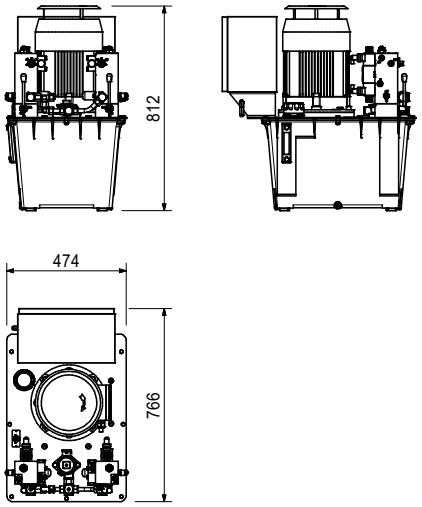
Note
Manuf. item-no. 964.007C-050
Manuf. item-no. 964.007C-060
Manuf. item-no. 964-007C-4,0-050
Manuf. item-no. 964-007C-4,0-060
Manuf. item-no. 964-007C-4,0-060-CSA
Follow Assembly Instruction!
Remote Conroler with 12 m cable included.



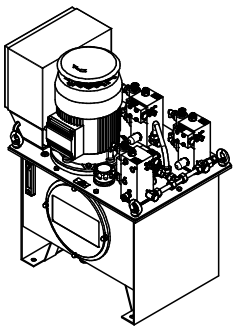


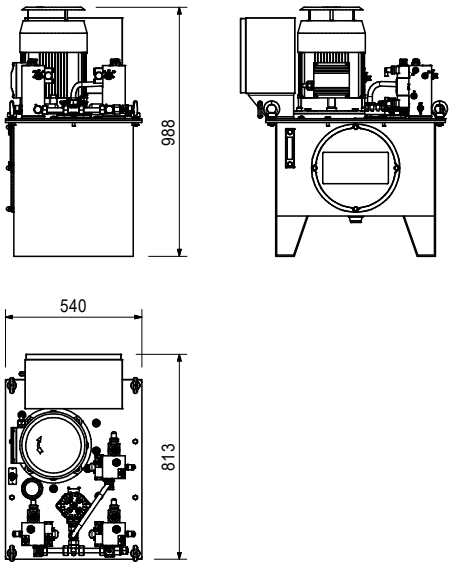
Item no.	Weight kg		
		Hydraulic Pumps 4-fold	**Note**
051740	135.000	**Hydraulic Pump 4-fold 400V/50Hz**	Manuf. item-no. 964.003C-050
051741	135.000	**Hydraulic Pump 4-fold 460V/60Hz**	Manuf. item-no. 964.003C-060
057639	135.000	**Hydraulic Pump 4-fold 50HT/4CCM**	Manuf. item-no. 964-003C-4,0-050
057640	135.000	**Hydraulic Pump 4-fold 60HT/4CCM**	Manuf. item-no. 964-003C-4,0-060
057767	135.000	**Hydraulic Pump ACS 4 x 240/460V CSA**	Manuf. item-no. 964-003C-4,0-060-CSA
		Hydraulic Pumps for the connection of 4 Hydraulic Climbing Mechanisms ACS 100. Different versions concerning power supply, operating pressure, delivery rate and certification.	Follow Assembly Instruction! Remote Conroler with 12 m cable included.





		Hydraulic Pump 6-fold	**Note**
051742	204.000	**Hydraulic Pump 6-fold 400V/50Hz**	Manuf. item-no. 964.009C-050
051743	204.000	**Hydraulic Pump 6-fold 460V/60Hz**	Manuf. item-no. 964.009C-060
057641	204.000	**Hydraulic Pump 6-fold 50HT/4CCM**	Manuf. item-no. 964-009C-4,0-050
057642	204.000	**Hydraulic Pump 6-fold 60HT/4CCM**	Manuf. item-no. 964-009C-4,0-060
057768	204.000	**Hydraulic Pump ACS 6 x 240/460V CSA**	Manuf. item-no. 964-009C-4,0-060-CSA
		Hydraulic Pumps for the connection of 6 Hydraulic Climbing Mechanisms ACS 100. Different versions concerning power supply, operating pressure, delivery rate and certification.	Remote Controler included. Follow Assembly Instructions!

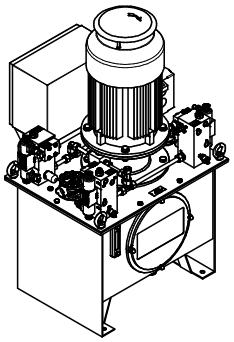


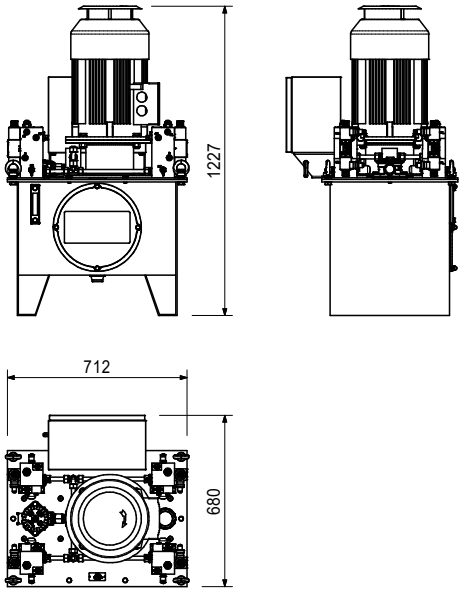


Item no.	Weight kg		
		Hydraulic Pump 8-fold	**Note**
051746	267.000	**Hydraulic Pump 8-fold 400V/50Hz**	Manuf. item-no. 964.010C-050
051747	267.000	**Hydraulic Pump 8-fold 460V/60Hz**	Manuf. item-no. 964.010C-060
057518	267.000	**Hydraulic Pump ACS 8 x 240/400V**	Manuf. item-no. 964-010C-4,0-050
057643	267.000	**Hydraulic Pump 8-fold 60HT/4CCM**	Manuf. item-no. 964-010C-4,0-060
057769	267.000	**Hydr. Pump ACS 8x240/460V CSA**	Manuf. item-no. 964-010C-4,0-060-CSA

Hydraulic Pumps for the connection of 8 Hydraulic Climbing Mechanisms ACS 100. Different versions concerning power supply, operating pressure, delivery rate and certification.

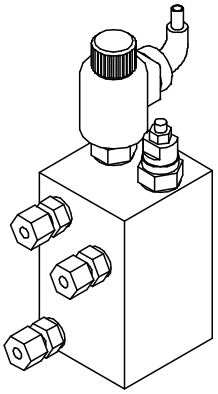
Remote Controler included.
Follow Assembly Instructions!

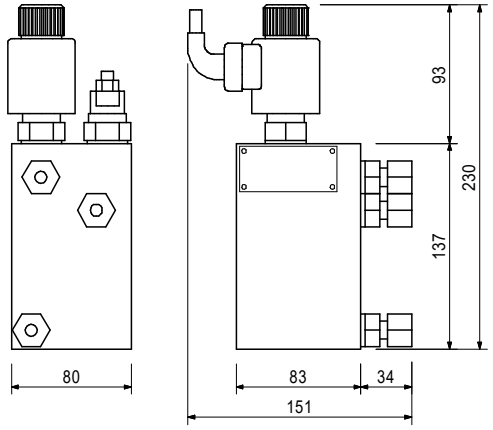




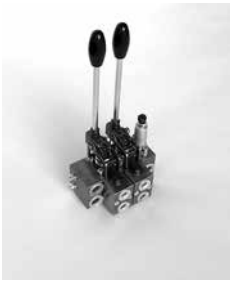
		Control Blocks
057358	10.000	**Control Block 3/50Hz**
057359	10.000	**Control Block 3/60Hz**

Complete with hose, cable and connections.
For installing on 4-fold, 6-fold and 8-fold Hydraulic Pumps, when only 3, 5 or 7 climbing mechanisms are connected to these.



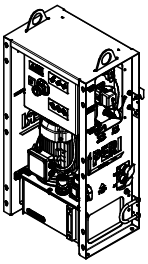


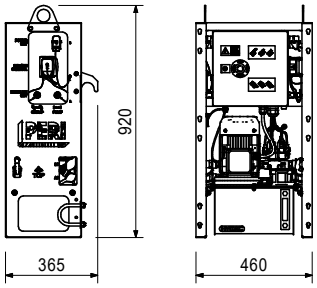
Item no.	Weight kg	
057375	5.000	**Direc. Control Valve with End Plate 3** When using Mechanical Drive ACS for the operation of the carriage. Fixation at the guardrail post of platform level 0.



135500	47.000	**Hydraulic Pump RCS MAX 2 x 210bar, 380-460V** Hydraulic Pump for driving two Climbing Devices, RCS MAX 75 and Climbing Device-2 RCS 50. Connecting several units enables synchronous climbing of all climbing units.

Note
Follow Assembly Instructions of the manufacturer! See PERI Product Information.
Only use original PERI Hydraulic Fluid.

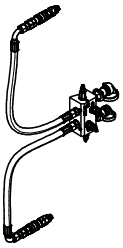


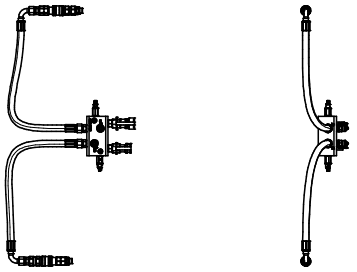


Accessories

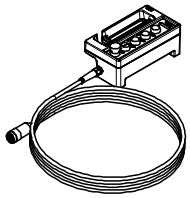
135606	0.100	**Return Filter RCS MAX**
135607	0.100	**Tank Breather Filter RCS MAX**

136533	3.400	**Conv. set climbing device ACS**

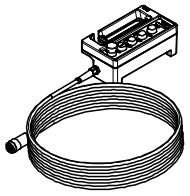




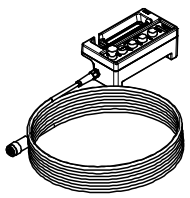
Item no.	Weight kg		
057362	5.000	**Remote Controler for 2-fold Hyd. Pump ACS**	**Note** Manuf. item-no. K039.049 Cable length = 12 m.



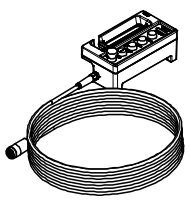
057363	5.000	**Remote Controler for 4-fold Hyd. Pump ACS**	**Note** Manuf. item-no. K039.027 Cable length = 12 m.



057364	5.000	**Remote Controler for 6-fold Hyd. Pump ACS**	**Note** Manuf. item-no. K039.037 Cable length = 12 m.



057366	5.000	**Remote Controler for 8-fold Hyd. Pump ACS**	**Note** Manuf. item-no. K039.076 Cable length = 12 m.

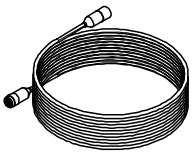


Item no.	Weight kg		
		Remote Controlers ACS	**Note**
123833	8.000	**Remote Controler for 2 Pumps ACS**	Manuf. item-no. K039.103
128303	8.000	**Rem. Controler for 2 Pumps ACS (CSA)**	Manuf. item-no. K039.321
		Remote control for the simultaneous operation of 2 Hydraulic Pumps ACS.	Follow Instructions for Use! Incl. two connecting cables, each 12 m length.

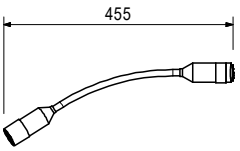
Accessories

123834	4.000	**Extension Cable 18 m ACS**	
123836	0.300	**Adapter Cable 2-fold 3/07C ACS**	
123835	0.300	**Adapter Cable 4-fold 2/03C ACS**	
123837	0.300	**Adapter Cable 6-fold 1/09C ACS**	
123838	0.300	**Adapter Cable 8-fold 5/10C ACS**	

123834	4.000	**Extension Cable 18 m ACS**	**Note** Manuf. item-no. K039.104 Only for Remote Controlers for 2 Pumps item-no 123833 and 128303.



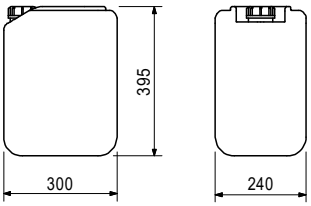
		Adapter Cables ACS	**Note**
123836	0.300	**Adapter Cable 2-fold 3/07C ACS**	Manuf. item-no. K039.106
123835	0.300	**Adapter Cable 4-fold 2/03C ACS**	Manuf. item-no. K039.105
123837	0.300	**Adapter Cable 6-fold 1/09C ACS**	Manuf. item-no. K039.107
123838	0.300	**Adapter Cable 8-fold 5/10C ACS**	Manuf. item-no. K039.108



Item no.	Weight kg	
		Hydraulic Oils in canister
131270	17.900	**Hydraulic Oil ISO 11158 HM10, 20 l**
131274	18.300	**Hydraulic Oil ISO 11158 HVI22, 20 l**
137373	18.300	**Hydraulic Oil ISO 11158 HVI32, 20 l**
057376	18.300	**Hydraulic Oil ISO 11158 HVI46, 20 l**

High-quality synthetic hydraulic oils for PERI Hydraulic Power Unitswith different viscosity suitable for certain temperature ranges.

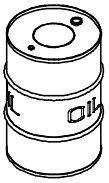
Note
Filter with filter pump before filling the aggregates.
Technical Data
Observe Safety Data Sheet and applicable National Safety Regulations regarding hydraulic oil, in particular for transport, storage and disposal! Observe the technical documentation for the hydraulic power unit! Product Data Sheet on request.

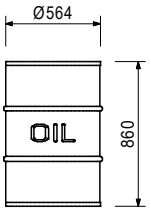


		Hydraulic Oils in barrel
131273	200.000	**Hydraulic Oil ISO 11158 HM10, 210 l**
131275	200.000	**Hydraulik Oil ISO 11158 HVI22, 210 l**
137374	201.000	**Hydraulic Oil ISO 11158 HVI32, 210 l**
131277	201.000	**Hydraulic Oil ISO 11158 HVI46, 210 l**

High-quality synthetic hydraulic oils for PERI Hydraulic Power Unitswith different viscosity suitable for certain temperature ranges.

Note
Filter with filter pump before filling the aggregates.
Technical Data
Observe Safety Data Sheet and applicable National Safety Regulations regarding hydraulic oil, in particular for transport, storage and disposal! Observe the technical documentation for the hydraulic power unit! Product Data Sheet on request.

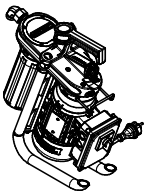


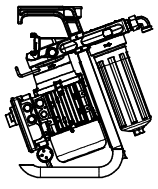


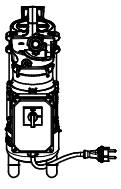
137281	14.000	**Hydraulic oil pump CE**

Filter pump for quick and clean transfer of hydraulic oil with simultaneous filtration.

Note
Follow Instructions for Use!
Technical Data
Power connection 220V/50Hz, plug CEE 7/7





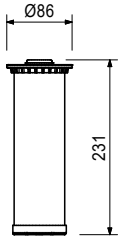


Accessories

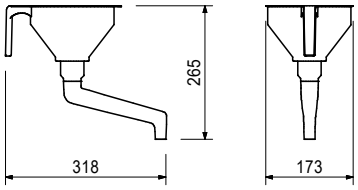
137282	1.000	**Hydraulic Oil Filterelement 5M**
137283	1.000	**Suction-pressure hose 2,5m**

Item no.	Weight kg	
137282	1.000	**Hydraulic Oil Filterelement 5M** Wear part of the hydr. oil filter pump.

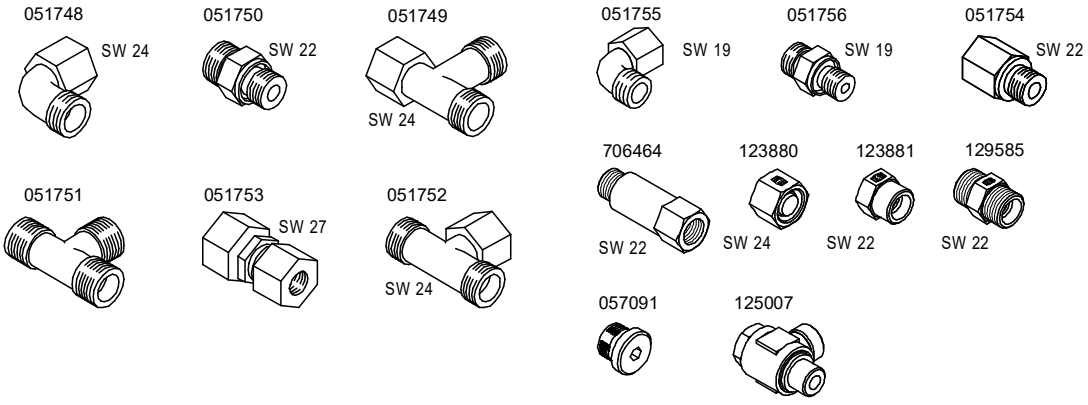
Note
Follow Instruction for use!
Observe the maintenance instructions in the
Observe the maintenance instructions in the technical documentation for the oil filter pump!
Observe disposal instructions!



130685	0.225	**Universal Funnel** For easy filling of hydraulic pumps with oil.

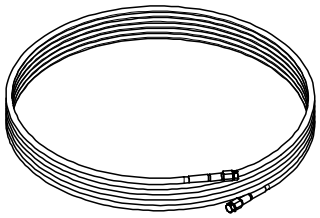


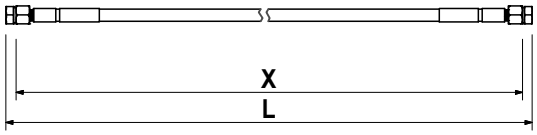
		Connections
051748	0.140	**Elbow Stud X-EVW 12PS**
051750	0.010	**Male Stud Coupler X-GE12PSR-ED**
051749	0.200	**L-Stud X-EVL 12PS**
051751	0.280	**T-Connector X-T 12PS**
051753	0.150	**Reducing Coupler KOR15PL 12PS**
051752	0.140	**T-Stud X-EVT 12PS**
051755	0.080	**Elbow Stud X-EVW 8PS**
051756	0.080	**Male Stud Coupler X-GE8-PSR-ED**
051754	0.070	**Reducing Stud RI 3/8 x 1/4**
706464	0.144	**Drive Connector ACS**
057091	0.027	**Threaded Plug VSTI R 3/8"-ED**
123881	0.050	**Tube Screw Plug ROV 12SX**
129585	0.060	**Hydr. Hose Coupling G12S**
123880	0.055	**Threaded Plug VKAM 12S VIT**
125007	0.190	**Swivel Fitting WH12SRKDSOMD ACS**



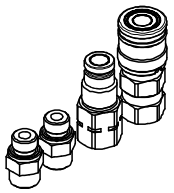
Item no.	Weight kg		L	X
		Hydr. Hoses EN853-2SN-DN008		
129587	0.260	**Hydr. Hose EN853-2SN-DN08 0.3 m**	326	300
129592	0.349	**Hydr. Hose EN853-2SN-DN08 0.5 m**	526	500
129593	0.656	**Hydr. Hose EN853-2SN-DN08 1.0 m**	1026	1000
129594	1.090	**Hydr. Hose EN853-2SN-DN08 2.0 m**	2026	2000
129595	2.350	**Hydr. Hose EN853-2SN-DN08 5.0 m**	5026	5000
129596	4.560	**Hydr. Hose EN853-2SN-DN08 10.0 m**	10026	10000
129597	6.780	**Hydr. Hose EN853-2SN-DN08 15.0 m**	15026	15000
129598	8.990	**Hydr. Hose EN853-2SN-DN08 20.0 m**	20026	20000

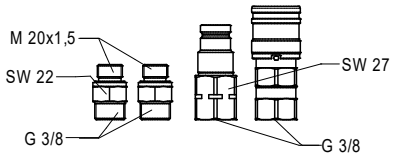
Complete with
2 pc. 123881 Tube Screw Plug ROV 12SX



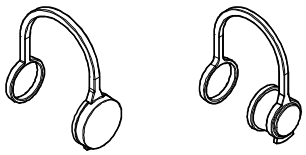


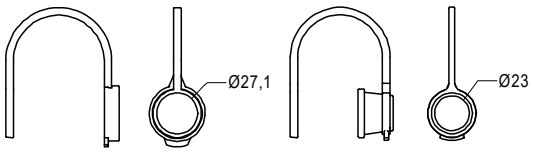
129424	0.440	**FF-Coupling Pair X-GE12PSR-ED+** Spare parts set for PERI Hydraulic Components with quick couplings X-GE 12PSR-ED+.	**Complete with** 1 pc. 128992 Pin ISO16028 DN10 R3/8IG 1 pc. 128993 Sleeve ISO16028 DN10 R3/8IG 2 pc. 051750 Male Stud Coupler X-GE12PSR-ED **Note** For assembling on hydraulic hoses EN853-2SN-DN08.





125632	0.050	**Protect. Covers Climb. Device RCS** Spare part. To protect unplugged quick couplings against dirt and damage.	**Note** Use with hydraulic hoses with FF couplings possible. **Technical Data** 1 set for 1 Climbing Device RCS 50 (2x bushing and 2x nipple each).





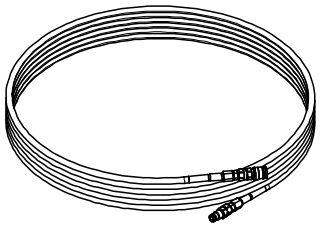
Item no.	Weight kg	
		Hydraulic Hoses 2SN-DN008-FF
129035	0.996	**Hydraulic Hose 2SN-DN08-FF 1.0 m**
129036	1.430	**Hydraulic Hose 2SN-DN08-FF 2.0 m**

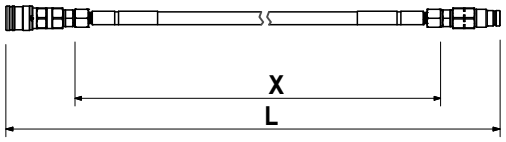
Hydraulic hoses with quick couplings and nominal diameter 8 mm.

L	X
1169	1000
2169	2000

Complete with
1 pc. 128992 Pin ISO16028 DN10 R3/8IG
1 pc. 128993 Sleeve ISO16028 DN10 R3/8IG
2 pc. 051750 Male Stud Coupler X-GE12PSR-ED
1 pc. 129424 FF-Coupling Pair X-GE12PSR-ED+

Note
Follow applicable Safety Regulations for the installation and maintenance of hydraulic lines!





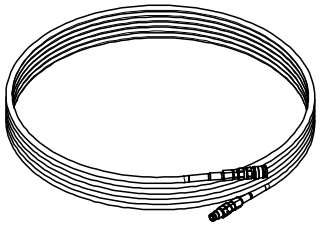
		Hydraulic Hoses 2SN-DN08-FF
129419	2.690	**Hydraulic Hose 2SN-DN08-FF 5.0 m**
129420	4.900	**Hydraulic Hose 2SN-DN08-FF 10.0 m**
129421	7.120	**Hydraulic Hose 2SN-DN08-FF 15.0 m**
129422	9.330	**Hydraulic Hose 2SN-DN08-FF 20.0 m**

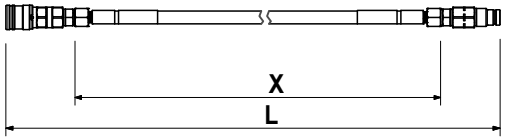
Hydraulic hoses with quick couplings and nominal diameter 8 mm.

L	X
5170	5000
10170	10000
15170	15000
20170	20000

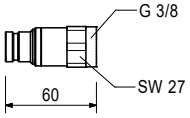
Complete with
1 pc. 128992 Pin ISO16028 DN10 R3/8IG
1 pc. 128993 Sleeve ISO16028 DN10 R3/8IG
2 pc. 051750 Male Stud Coupler X-GE12PSR-ED
1 pc. 129424 FF-Coupling Pair X-GE12PSR-ED+

Note
Follow applicable Safety Regulations for the installation and maintenance of hydraulic lines!

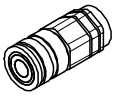


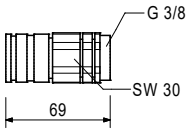


		Quick Coupler Nipples
110823	0.171	**Quick Coupler Nipple RCS**
128992	0.140	**Pin ISO16028 DN10 R3/8IG**



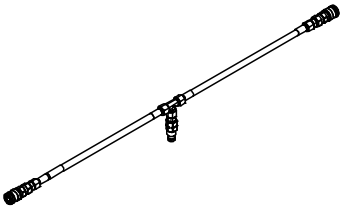
Item no.	Weight kg	
		Quick Coupler Bushings
110822	0.297	**Quick Coupler Bushing RCS**
128993	0.280	**Sleeve ISO16028 DN10 R3/8IG**

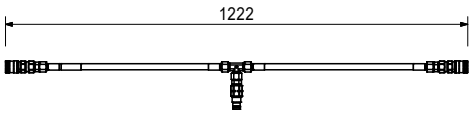




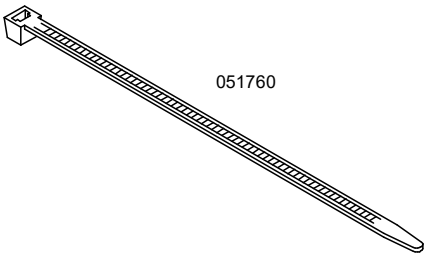
129423	1.370	**Hydr. T-Piece 2SN-DN08-FF**

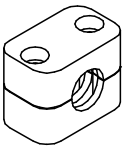
Complete with
2 pc. 128993 Sleeve ISO16028 DN10 R3/8IG
1 pc. 128992 Pin ISO16028 DN10 R3/8IG
3 pc. 051750 Male Stud Coupler X-GE12PSR-ED





		Connector
051760	0.004	**Cable Binder NT-240H**
051758	0.100	**Clip Unit 319 PA**
051759	0.050	**Zyl. Bolt ISO 1207 M6 x 30-4,8, galv.**
051775	0.010	**Washer US**

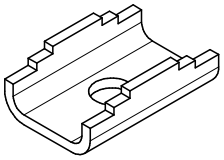


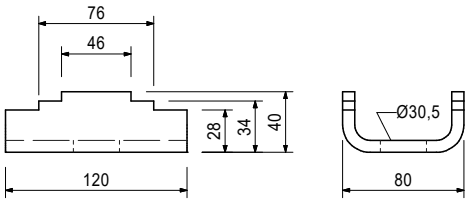

051758


051759


051775

Item no.	Weight kg	
110055	0.861	**Cross Clamp, galv.** For fixing formwork at the Strongbacks by means of Tie Yokes DW 15.

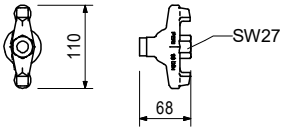




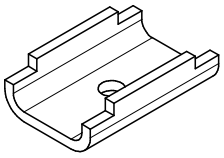
Accessories

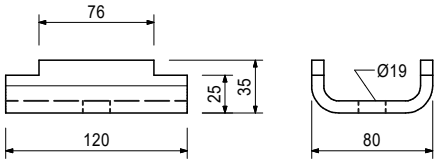
030440	0.686	**Spherical Nut DW 15, galv.**

030440	0.686	**Spherical Nut DW 15, galv.** For pivotable anchoring with Tie Rod DW 15 and B 15.



722137	0.849	**Cross Strap 2, galv.** For fixing formwork at the Strongbacks by means of Tie Yokes DW 15.

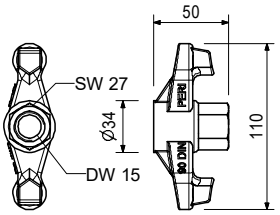




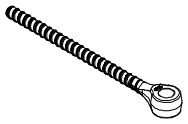
Accessories

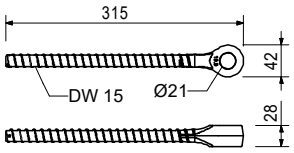
030100	0.439	**Wingnut DW 15, galv.**

030100	0.439	**Wingnut DW 15, galv.** For anchoring with Tie Rod DW 15 and B 15.	**Technical Data** Permissible load 90 kN.



Item no.	Weight kg	
037150	0.641	**Tie Yoke DW 15** For fixing SRZ Steel Walers to the strongback.

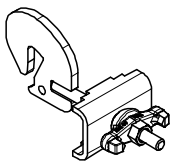


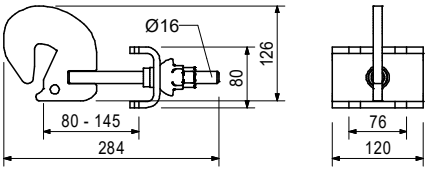


Accessories

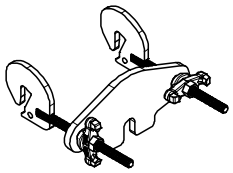
037160	0.736	**Bolt Ø 20 x 205, galv.**
710226	0.340	**Bolt ISO 4014 M20 x 90-8.8, galv.**
781053	0.065	**Nut ISO 7040 M20-8, galv.**

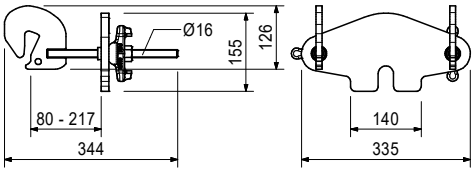
110059	2.840	**Waler Fixation U100 – U120** For fixing VARIO GT 24 Panels to Strongbacks CB, SCS and Steel Waler SRU. **Complete with** 1 pc. 110055 Cross Clamp, galv. 1 pc. 118260 Spherical Nut RD 16, galv.



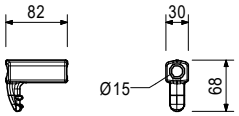


129720	8.040	**Waler Fixation-2 U100 – U120** For fixing VARIO GT 24 Panels to Strongbacks CB, SCS, Steel Waler SRU if anchoring is done through the strongback. **Complete with** 2 pc. 118260 Spherical Nut RD 16, galv.

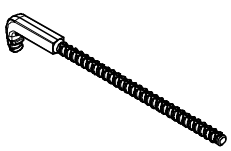


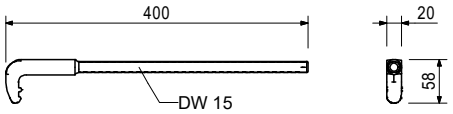


023820	0.375	**Hook Tie Head DW 15, galv.** For connecting accessories to MAXIMO and TRIO Panels. DW 15 thread. **Technical Data** Permissible tension force 20.0 kN.



023650	0.769	**Hook Tie DW 15, l = 400 mm, galv.** For connecting accessories to MAXIMO and TRIO Panels. DW 15 thread. **Technical Data** Permissible tension force 20.0 kN.

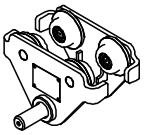


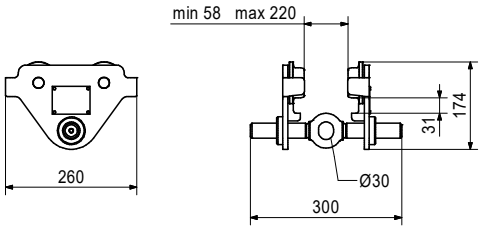


Item no.	Weight kg
057043	9.000

Trolley HTP 1000 kg size A
For the movable suspension of the formwork on Steel Profiles HEB, IPE or similar.
Width = 58 - 220 mm.

Note
Follow Instruction For Use!

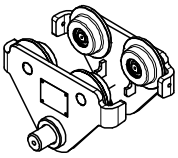


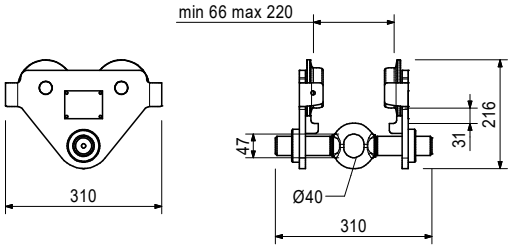


057045	16.000

Trolley HTP 2000 kg size A
For the movable suspension of the formwork on Steel Profiles HEB, IPE or similar.
Width = 66 - 220 mm.

Note
Follow Instruction For Use!

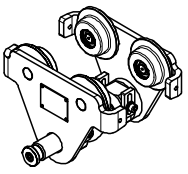


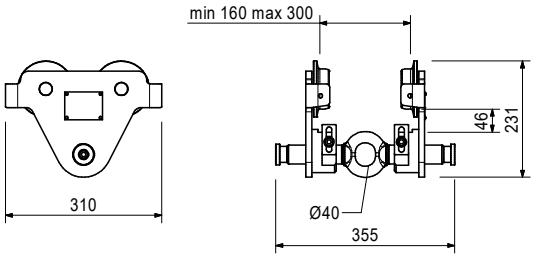


057046	19.300

Trolley HTP 2000 kg size B
For the movable suspension of the formwork on Steel Profiles HEB, IPE or similar.
Width = 160 - 300 mm.

Note
Follow Instruction For Use!

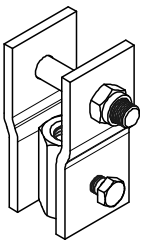


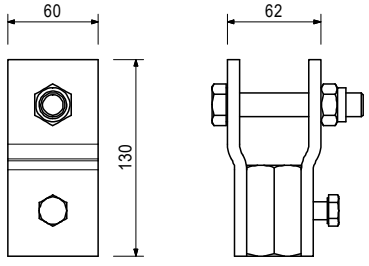


057049	2.570

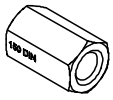
Panel Suspension Adaptor DW 20 ACS
Connecting Betomax 20 with Trolley HTP.

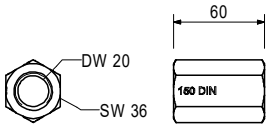
Complete with
1 pc. 721729 Bolt ISO 4014 M16 x 90-8.8, galv.
1 pc. 070890 Nut ISO 7040 M16-8, galv.
1 pc. 710266 Bolt ISO 4017 M12 x 25-8.8, galv.



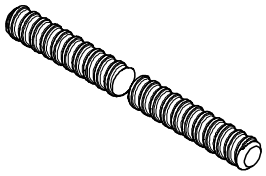


Item no.	Weight kg		
030580	0.371	**Hex. Nut DW 20 SW 36/60, weldable** For anchoring with Tie Rod DW 20 and B 20.	**Note** Weldable! **Technical Data** Permissible load 150 kN.

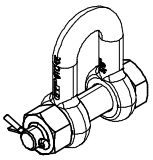


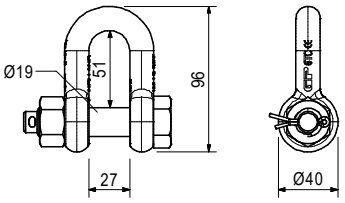


030745	2.600	**Tie Rod B 20, spec. length**	**Note** Weldable! Take official Approval into consideration! **Technical Data** Permissible tension force 150 kN.

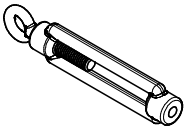


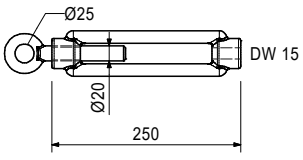
130616	0.670	**Shackle 3.25 t Ø 16/19, NUT** For attaching loads or mounting formwork elements, Trolleys HTP 2000 kg by means of Turnbuckle CB M20 / DW 15.	



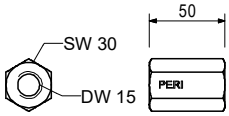


116807	1.850	**Turnbuckle CB M20/DW 15** For tensioning of Tie Rod DW 15.	**Complete with** 1 pc. 711059 Turnbuckle for tension anchor CB 1 pc. 711060 Eye Bolt M20, left, galv.

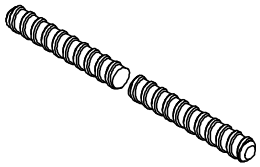




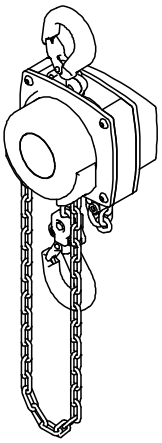
Item no.	Weight kg		
030070	0.222	**Hex. Nut DW 15 SW 30/50, galv.** For anchoring with Tie Rod DW 15 and B 15.	**Technical Data** Permissible load 90 kN.

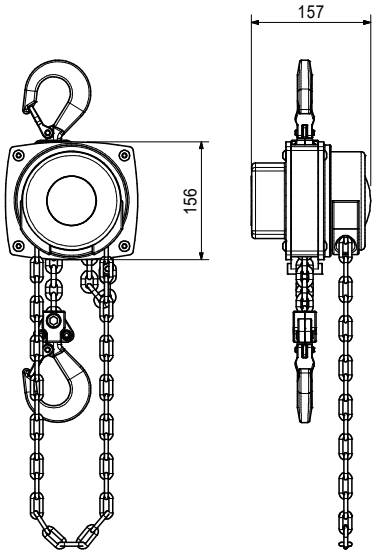


030740	1.550	**Tie Rod B 15, spec. length**	**Note** Weldable! Observe the permissions! **Technical Data** Permissible tension force 82 kN.



057517	13.000	**Winch 1.0 t** For the height-adjustable suspension of the formwork or for lifting and lowering loads.	**Note** Follow Instructions for Use! **Technical Data** Lifting height 2.00 m. Hand chain 3.00 m.

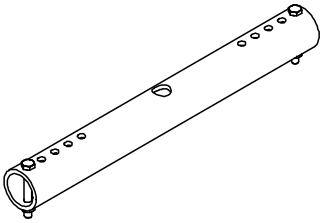


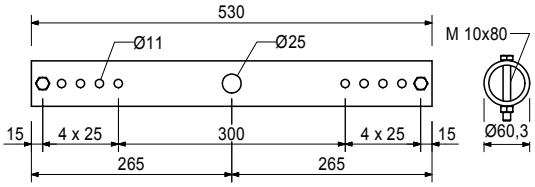


129981	20.000	**Winch 2.0 t** For the height-adjustable suspension of the formwork or for lifting and lowering loads.	**Note** Follow Instructions for Use!

Item no.	Weight kg	
057050	4.450	**Suspension Tube Vario 53** For attaching VARIO GT 24 Elements.

Complete with
2 pc. 710593 Bolt ISO 4014 M10 x 80-8.8, galv.
2 pc. 710234 Nut ISO 4032 M10-8, galv.

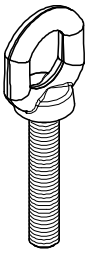


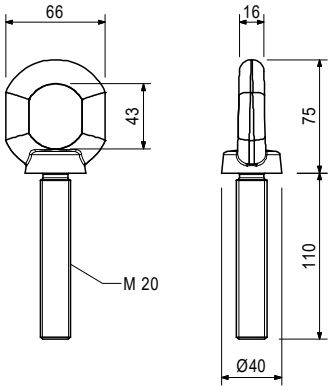


Accessories

057095	0.902	**Plywood Insert GT 24 ACS**
125823	2.170	**Formwork Suspension VARIO GT 24, Ø 60**
724812	0.656	**Stair Tower Eye Bolt M20 x 110, galv.**

724812	0.656	**Stair Tower Eye Bolt M20 x 110, galv.**



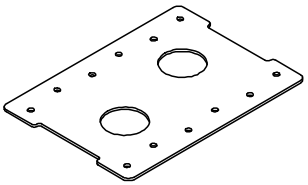


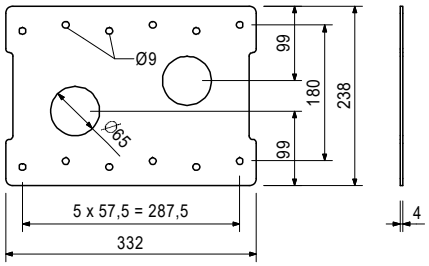
Accessories

781053	0.065	**Nut ISO 7040 M20-8, galv.**
113350	0.174	**Washer ISO 7094 100 HV, A 20, galv.**

125823	2.170	**Formwork Suspension VARIO GT 24, Ø 60** For connecting the Suspension Tube VARIO 53 to Formwork Girders GT 24.

Note
Permissible load-bearing capacity see PERI Design Information (on request).
At least 2 pieces per fixing point.

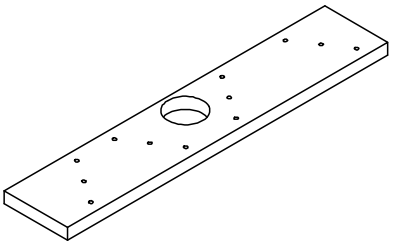


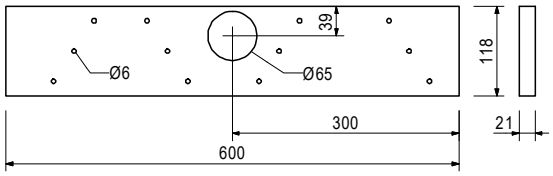


Accessories

024540	0.005	**TSS-Torx 6 x 40, galv.**
024470	0.008	**TSS-Torx 6 x 60, galv.**

Item no.	Weight kg		
057095	0.902	**Plywood Insert GT 24 ACS** Of 21 mm Finply. For panel suspension. Fixed with 6x60 TSS Torx both sides on the struts of the GT 24.	**Note** Permissible load-bearing capacity see PERI Design Information (on request). At least 4 pieces per fixing point.

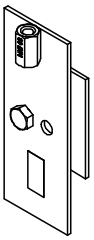


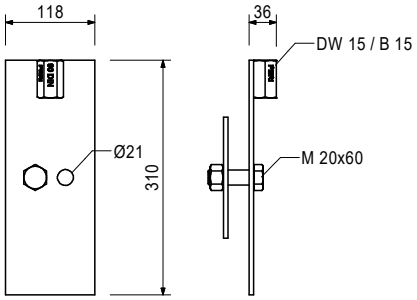


Accessories

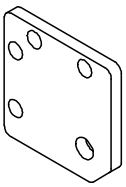
024470	0.008	**TSS-Torx 6 x 60, galv.**

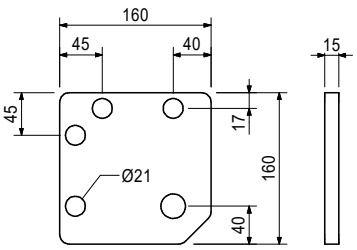
057076	3.060	**Suspension for Corner Element ACS** For the suspension of VARIO GT 24 Corner Elements.	**Complete with** 1 pc. 057139 Bolt ISO 4017 M20 x 60-8.8, galv. 1 pc. 710334 Nut ISO 4032 M20-8, galv. **Note** Permissible load-bearing capacity see PERI Design Information (on request).





125475	2.730	**Suspension Plate TRIO / ACS 16 x 16** For the suspension of TRIO Formwork Elements

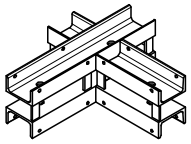


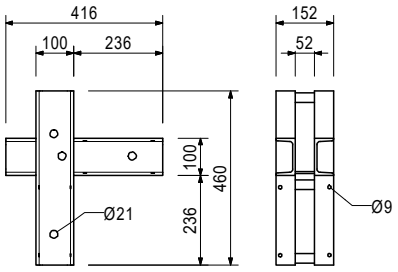


Accessories

024910	0.303	**Bolt ISO 4014 M20 x 100-8.8, galv.**
781053	0.065	**Nut ISO 7040 M20-8, galv.**
706454	0.017	**Washer ISO 7089 200 HV, A 20, galv.**

Item no.	Weight kg	
057077	16.800	**Steel Corner Waler ESRZ 46/41.6** For VARIO GT 24 Corner Elements.

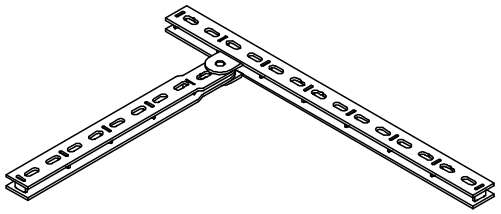


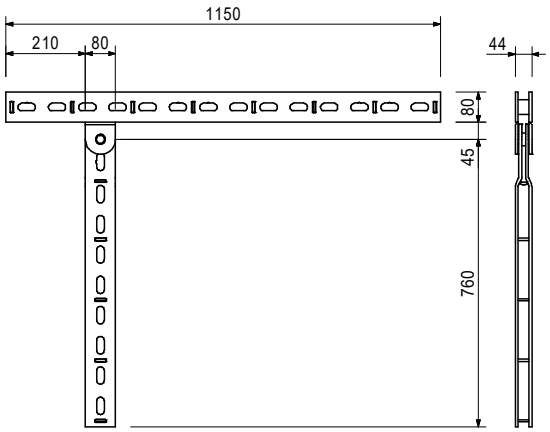


Accessories

057078	18.300	**T-Shaped Articulated Coupling 115-76**

057078	18.300	**T-Shaped Articulated Coupling 115-76** For connecting VARIO GT 24 Corner Elements.

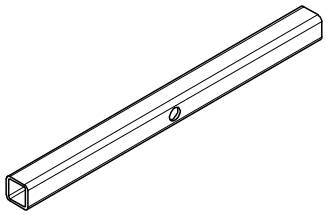


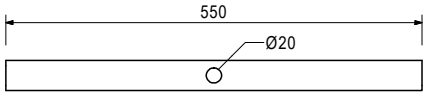


Accessories

037160	0.736	**Bolt Ø 20 x 205, galv.**
024240	0.805	**Wedge KZ, galv.**

123806	2.320	**Tube 40 x 40 x 4 l = 550** For clamping compensation plates.





Item no.	Weight kg	Steel Walers Universal STR U120	L
103868	18.100	**Steel Waler Universal SRU U120, l = 0.72 m**	722
103871	24.200	**Steel Waler Universal SRU U120, l = 0.97 m**	972
103874	30.900	**Steel Waler Universal SRU U120, l = 1.22 m**	1222
103877	38.100	**Steel Waler Universal SRU U120, l = 1.47 m**	1472
103886	44.700	**Steel Waler Universal SRU U120, l = 1.72 m**	1722
103889	52.000	**Steel Waler Universal SRU U120, l = 1.97 m**	1972
103898	58.600	**Steel Waler Universal SRU U120, l = 2.22 m**	2222
103892	65.600	**Steel Waler Universal SRU U120, l = 2.47 m**	2472
103929	72.000	**Steel Waler Universal SRU U120, l = 2.72 m**	2722
103903	81.000	**Steel Waler Universal SRU U120, l = 2.97 m**	2972
103906	92.600	**Steel Waler Universal SRU U120, l = 3.47 m**	3472
103915	106.000	**Steel Waler Universal SRU U120, l = 3.97 m**	3972
103918	119.000	**Steel Waler Universal SRU U120, l = 4.47 m**	4472
103922	135.000	**Steel Waler Universal SRU U120, l = 4.97 m**	4972
103925	146.000	**Steel Waler Universal SRU U120, l = 5.47 m**	5472
103928	159.000	**Steel Waler Universal SRU U120, l = 5.97 m**	5972

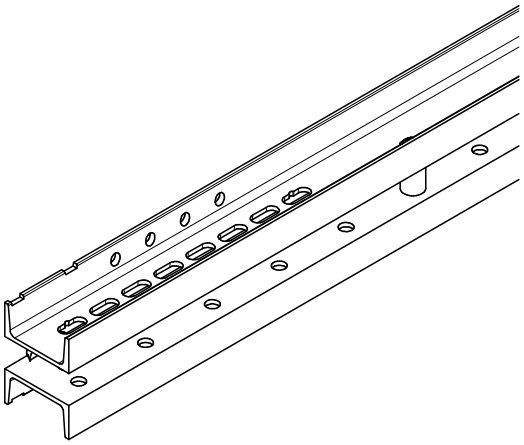
Universal Steel Waler Profile U120 used as waling for girder wall formwork and for diverse special applications. With adjustable spacers.

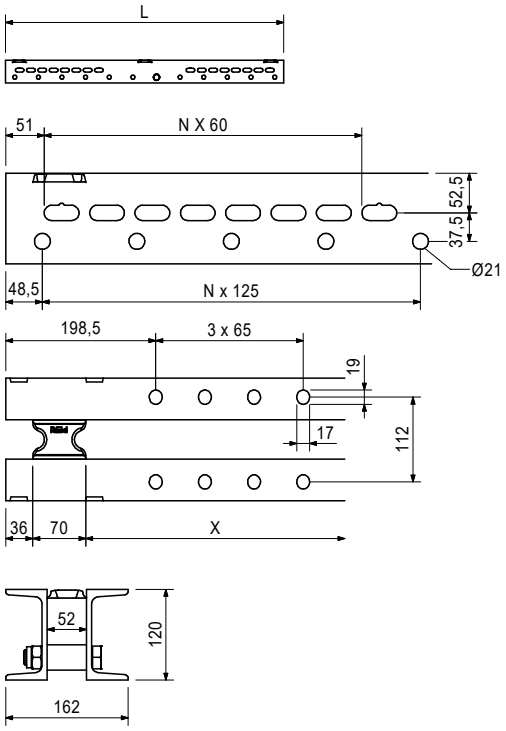
Note

Permissible load: see PERI Design Tables.

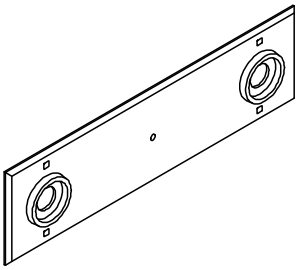
Technical Data

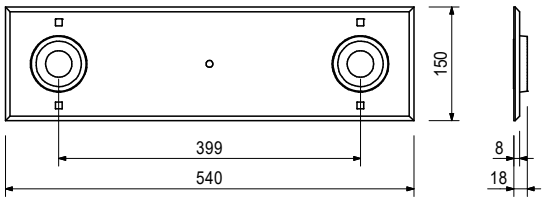
SRU 120 Wy = 121.4 cm³, Iy = 728 cm⁴.
SRU 140 Wy = 172,8 cm³, Iy = 1210 cm⁴.





Item no.	Weight kg	
057869	4.740	**Leading Anchor Plate ACS 399** For the exact installation of the climbing cones for Double Anchor Support left, right. Mounted to the formwork facing the concrete structure.

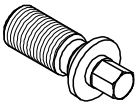


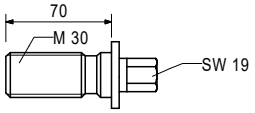


Accessories

710295	0.028	**F.H. Bolt DIN 603 M8 x 45 MU, galv.**
024470	0.008	**TSS-Torx 6 x 60, galv.**

029450	0.339	**Advancing Screw M30, galv.** For fixing the M30 Anchor System if the plywood formlining is drilled through.

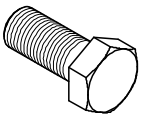


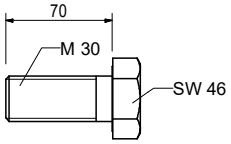


Accessories

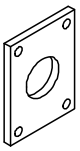
029380	0.200	**Anchor Positioning Plate M30, galv.**

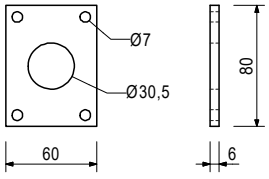
029420	0.590	**Bolt ISO 4017 M30 x 70-8.8, galv.** Alternative to leading screw M30, galvanized. Item number: 029450





029380	0.200	**Anchor Positioning Plate M30, galv.** For fixing the M30 Anchor System if the plywood formlining is drilled through.

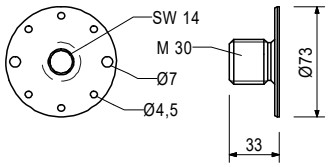




Accessories

029440	0.005	**Lag Screw DIN 571 6 x 20, galv.**

Item no.	Weight kg	
026450	0.214	**Anchor Positioning Stud M30, galv.** For fixing the M30 Anchor System if the plywood formlining is not drilled through.

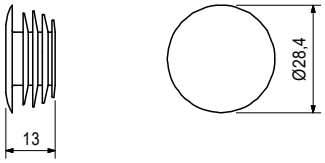


Accessories

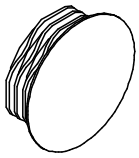
027212	0.445	**Allen Key SW 14, long**
710312	0.005	**Nail 3 x 80**

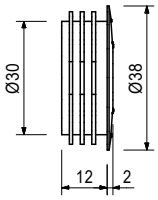
030300	0.002	**Plug Ø 20/24 mm** For sealing unused tie holes Ø 20 to Ø 24 mm.

Note
Delivery unit 250 pieces.

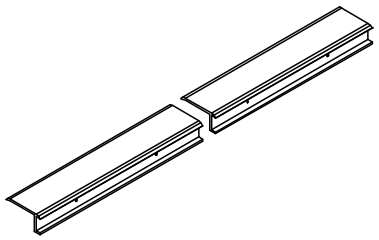


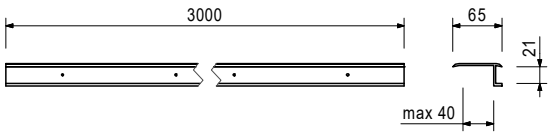
057094	0.004	**Plug SFL 38 x 1-3** For closing advancing Anchor Holes Ø 32 to Ø 36 mm



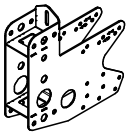


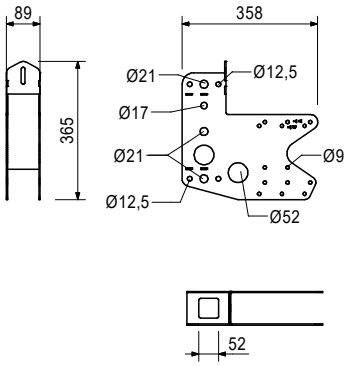
101706	1.230	**Formwork Joint 21/40, l = 3.00 m** Plastic profile strip for easier striking of shafts.





Item 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 Hex. Bolts M20.	**Note** Suitable for Guardrail Post RCS 226 item no.: 109720 Guardrail Post RCS / SRU 184 item no.: 114328 Vertical scaffold tubes Special post QR 50 x 50

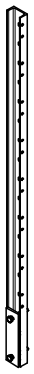


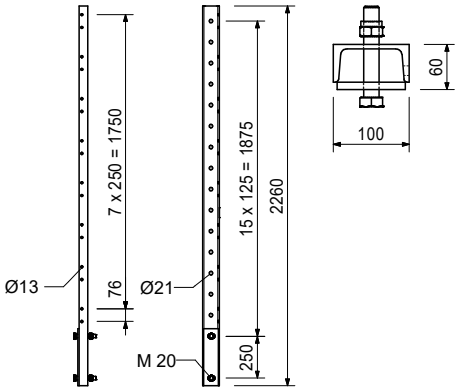


Accessories

710285	0.050	**Bolt ISO 4014 M8 x 100-8.8, galv.**
024090	0.005	**Nut ISO 4032 M8-8, galv.**
024470	0.008	**TSS-Torx 6 x 60, galv.**

109720	26.600	**Guardrail Post RCS 226** For assembly of the guardrail on the main platform with RCS Formwork Scaffolding or on Guardrail Post Holder Multi .	**Complete with** 2 pc. 104477 Bolt ISO 4014 M20 x 120-8.8, galv. 2 pc. 781053 Nut ISO 7040 M20-8, galv.

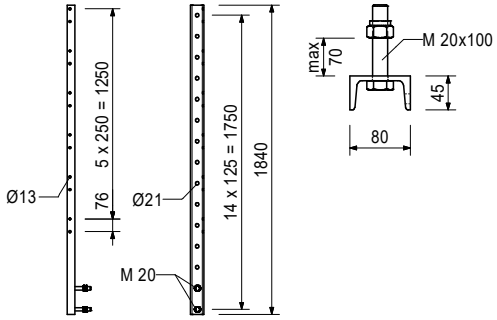




Accessories

110296	0.220	**Clamp A64 DIN 3570 M12, galv.**
710330	0.017	**Nut ISO 4032 M12-8, galv.**
710709	0.036	**F.H. Bolt DIN 603 M8 x 65 MU, galv.**
780354	0.002	**Washer ISO 7089 200 HV, A 8, galv.**
057345	0.010	**Washer DIN 434, M9, galv.**

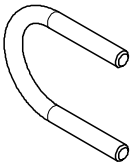
Item no.	Weight kg		
114328	16.600	**Guardrail Post RCS/SRU 184** For assembly of the guardrail on the Platform Beam RCS/SRU or Guardrail Post Holder Multi.	**Complete with** 2 pc. 114727 Bolt ISO 4017 M20 x 100-8.8, galv. 2 pc. 781053 Nut ISO 7040 M20-8, galv.

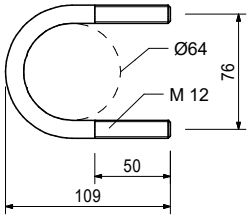


Accessories

110296	0.220	**Clamp A64 DIN 3570 M12, galv.**
710330	0.017	**Nut ISO 4032 M12-8, galv.**
710709	0.036	**F.H. Bolt DIN 603 M8 x 65 MU, galv.**
780354	0.002	**Washer ISO 7089 200 HV, A 8, galv.**
057345	0.010	**Washer DIN 434, M9, galv.**

110296	0.220	**Clamp A64 DIN 3570 M12, galv.** For assembling Scaffold Tubes on Railing Posts RCS.

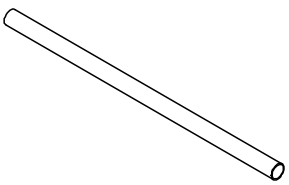


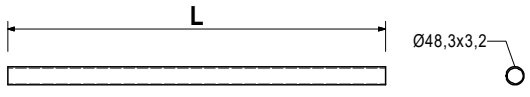


Accessories

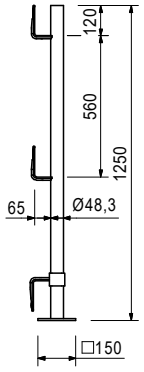
710330	0.017	**Nut ISO 4032 M12-8, galv.**

		Scaff. Tubes Steel Ø 48.3 x 3.2	**L**
026415	3.550	**Scaff. Tube Steel Ø 48.3 x 3.2, special length**	
026417	0.000	**Cutting Cost Scaffold Tube**	
026411	3.550	**Scaff. Tube Steel Ø 48.3 x 3.2, l = 1.0 m**	1000
026412	7.100	**Scaff. Tube Steel Ø 48.3 x 3.2, l = 2.0 m**	2000
026413	10.650	**Scaff. Tube Steel Ø 48.3 x 3.2, l = 3.0 m**	3000
026414	14.200	**Scaff. Tube Steel Ø 48.3 x 3.2, l = 4.0 m**	4000
026419	17.750	**Scaff. Tube Steel Ø 48.3 x 3.2, l = 5.0 m**	5000
026418	21.600	**Scaff. Tube Steel Ø 48.3 x 3.2, l = 6.0 m**	6000



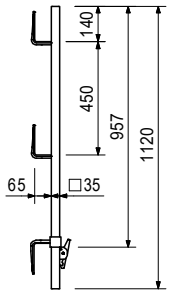


Item no.	Weight kg	
019040	6.480	**Guardrail Post PD 8** As guardrail for different systems. Screwed onto sub-structure.

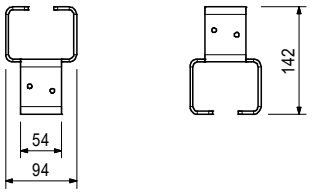


117325	4.270	**Post PP** For the fixation of the Side-Mesh-Barriers.

Technical Data
Maximum distance of posts with Side-Mesh-Barrier: PMB 260 max. 2.40 m.



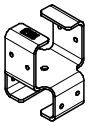
129724	0.817	**Cross Connector GT 24 / GT 24** For the connection of crossing GT 24 Formwork Girders.

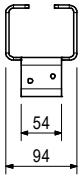


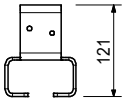
Accessories

024540	0.005	**TSS-Torx 6 x 40, galv.**
024470	0.008	**TSS-Torx 6 x 60, galv.**

Item no.	Weight kg	
129722	0.746	**Cross Connector GT 24 / VT 20** For the connection of crossing GT 24 and VT 20 Formwork Girders.



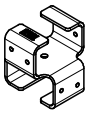


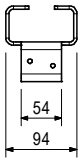


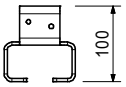
Accessories

024540	0.005	**TSS-Torx 6 x 40, galv.**
024470	0.008	**TSS-Torx 6 x 60, galv.**

129817	0.675	**Cross Connector VT 20 / VT 20** For the connection of crossing VT 20 Formwork Girders.





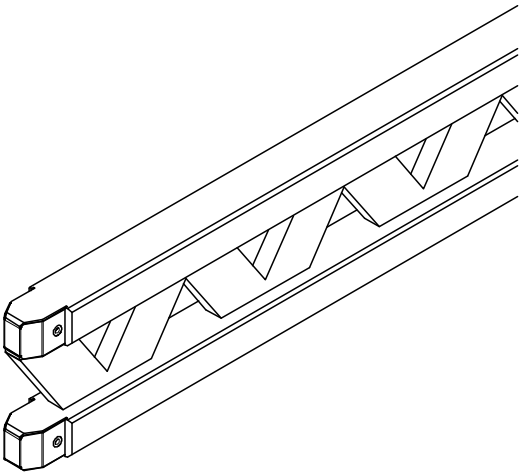


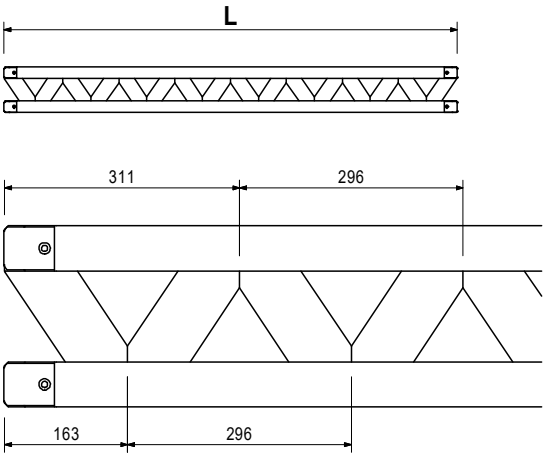
Accessories

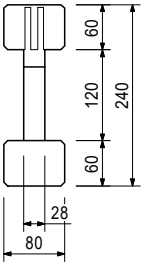
024540	0.005	**TSS-Torx 6 x 40, galv.**
024470	0.008	**TSS-Torx 6 x 60, galv.**

Item no.	Weight kg		L
		Girders GT 24	
075100	5.300	**Girder GT 24, l = 0.90 m**	918
075120	7.100	**Girder GT 24, l = 1.20 m**	1214
075150	8.900	**Girder GT 24, l = 1.50 m**	1510
075180	10.600	**Girder GT 24, l = 1.80 m**	1806
075210	12.400	**Girder GT 24, l = 2.10 m**	2102
075240	14.200	**Girder GT 24, l = 2.40 m**	2398
075270	15.900	**Girder GT 24, l = 2.70 m**	2694
075300	17.700	**Girder GT 24, l = 3.00 m**	2990
075330	19.500	**Girder GT 24, l = 3.30 m**	3286
075360	21.200	**Girder GT 24, l = 3.60 m**	3582
075390	23.000	**Girder GT 24, l = 3.90 m**	3878
075420	24.800	**Girder GT 24, l = 4.20 m**	4174
075450	26.600	**Girder GT 24, l = 4.50 m**	4470
075480	28.300	**Girder GT 24, l = 4.80 m**	4766
075510	30.100	**Girder GT 24, l = 5.10 m**	5062
075540	31.900	**Girder GT 24, l = 5.40 m**	5358
075570	33.600	**Girder GT 24, l = 5.70 m**	5654
075600	35.400	**Girder GT 24, l = 6.00 m**	5950

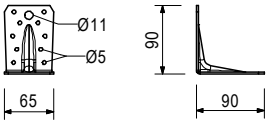
Note
Special lengths possible via 078xxx numbers.







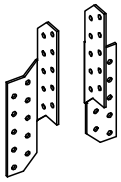
123478	0.255	**Toe Board Angle 90°** For diverse timber connections.

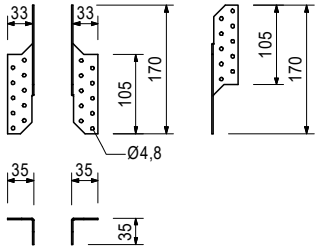


Accessories

110642	0.006	**Spax Screw TX25, 5 x 40, yellow galv.**

Item no.	Weight kg	
018290	0.098	**Framing Clip, galv.** For various wood connections.

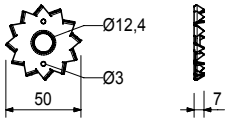




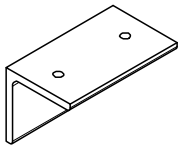
Accessories

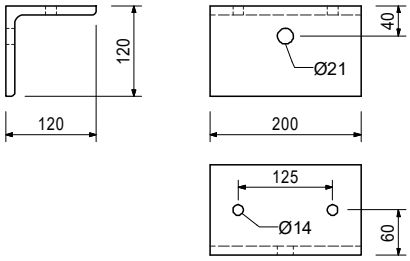
018280	1.000	**Double Head Nail, l = 65 mm**

070030	0.015	**Plate Connector Ø 48/12 mm, single** To strengthen the timber fixation and for other connections of timber with steel.



110289	4.260	**L-Angle RCS 120 x 120 x 200** For fixing end handrail posts on the decking.

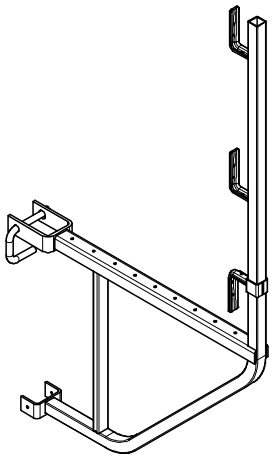


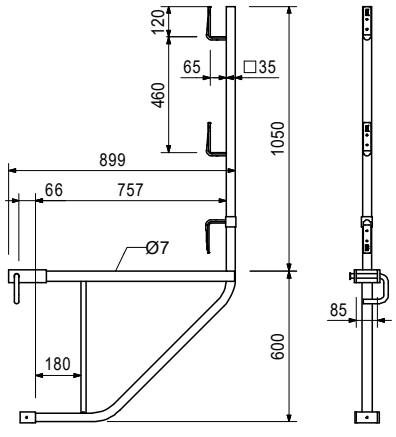


Accessories

131404	1.080	**Screw-On Coupler-2 HT B Ø 48-M20, galv.**

027110	11.000	**Scaffold Bracket GB 80** For assembly of a working and concreting scaffold with GT 24 girder.	**Technical Data** Permissible load 150 kg/m2. Maximum width of influence 1.25 m.

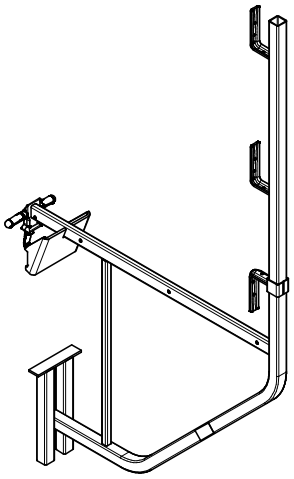


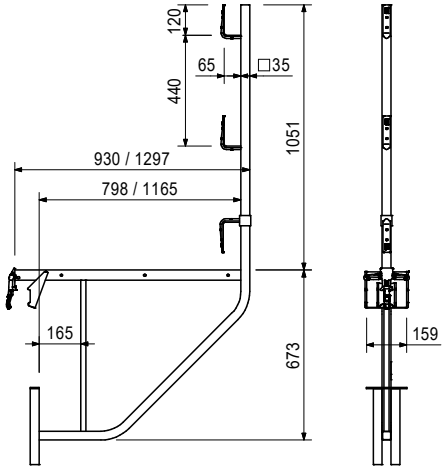


Item no.	Weight kg
023670	12.600
023680	16.700

Scaffold Brackets TRG
Scaffold Bracket TRG 80
Scaffold Bracket TRG 120
For assembly of a working and concreting scaffold with MAXIMO and TRIO. Mounted on horizontal and vertical struts.

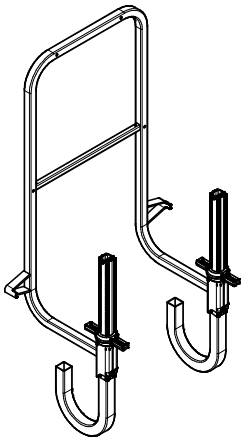
Technical Data
Permissible load 150 kg/m2
with maximum width of influence 1.35 m.

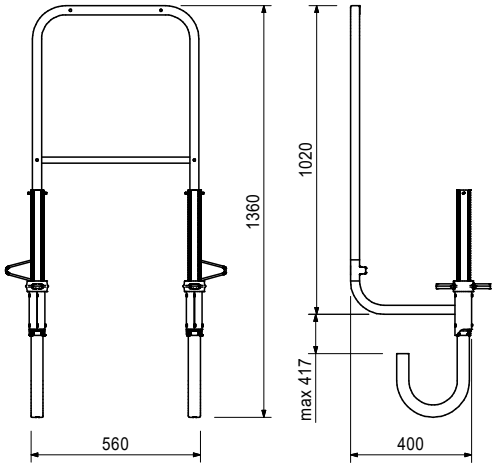




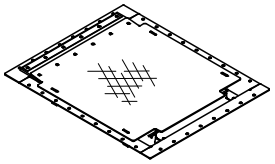
065066	14.800

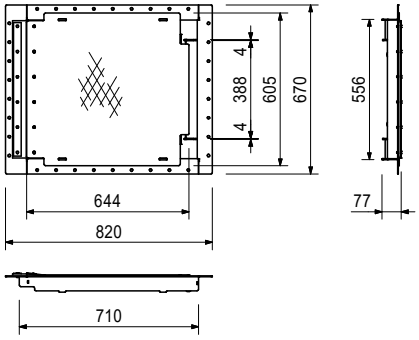
End Guardrail Frame 55
End guardrail for clamping to all PERI scaffold platforms and climbing systems.





Item no.	Weight kg		
126431	12.300	**Hatch 55 x 60-2, foldable** Self-closing hatch for ladder access. Clear opening approx. 55 x 60 cm. Ladder fixation with bolts or by hanging up.	**Complete with** 1 pc. 126785 Hatch Hinge RCS 12 pc. 108647 Rivet DIN 7337- A5 x 20 2 pc. 022230 Cotter Pin 5/1, galv.

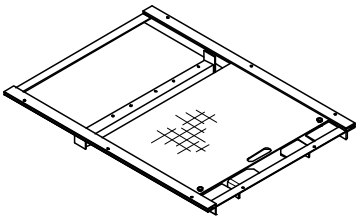


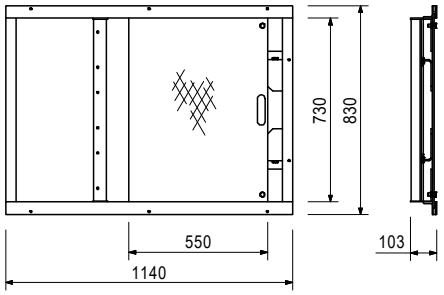


Accessories

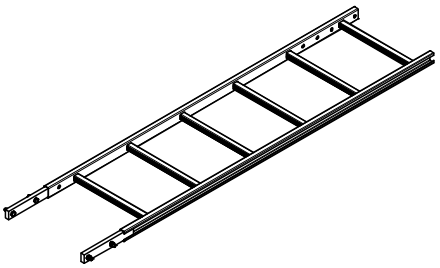
710224	0.047	**Bolt ISO 4017 M12 x 40-8.8, galv.**
710381	0.017	**Nut ISO 7042 M12-8, galv.**

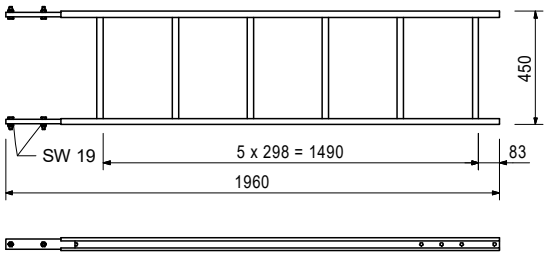
051430	37.900	**Sliding Hatch Cover** Non self-closing hatch for ladder access. Clear opening approx. 73 x 55 cm. Ladder fixation with bolts.	**Complete with** 4 pc. 710266 Bolt ISO 4017 M12 x 25-8.8, galv. 4 pc. 710381 Nut ISO 7042 M12-8, galv.



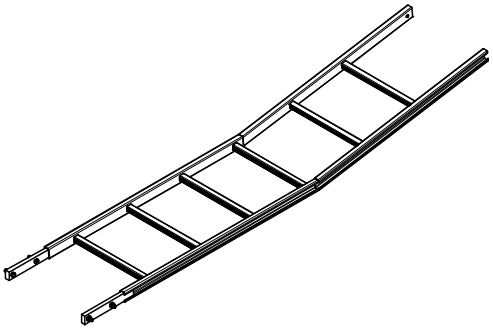


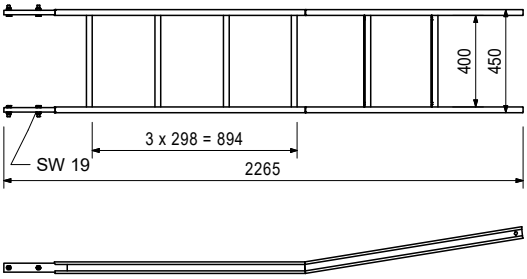
051410	11.700	**Ladder 180/6, galv.** For accessing PERI Formwork Systems.	**Complete with** 4 pc. 710224 Bolt ISO 4017 M12 x 40-8.8, galv. 4 pc. 710381 Nut ISO 7042 M12-8, galv.



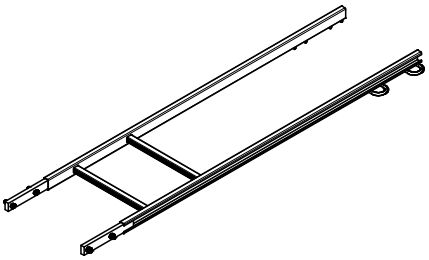


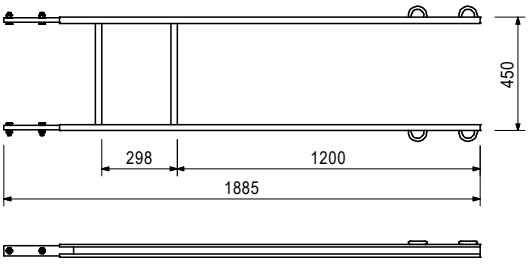
Item no.	Weight kg		
051420	12.800	**Ladder 220/6, galv.** As access for PERI Formwork Systems.	**Complete with** 4 pc. 710224 Bolt ISO 4017 M12 x 40-8.8, galv. 4 pc. 710381 Nut ISO 7042 M12-8, galv.



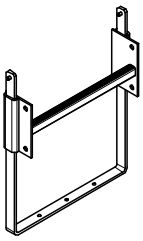


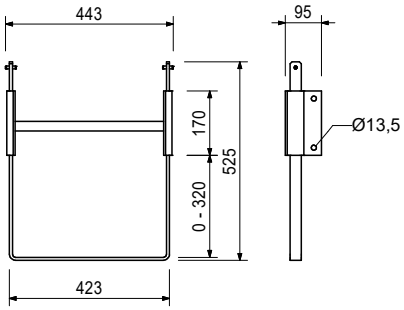
103724	10.400	**End Ladder 180/2, galv.** As access for PERI Formwork Systems.	**Complete with** 4 pc. 710224 Bolt ISO 4017 M12 x 40-8.8, galv. 4 pc. 710381 Nut ISO 7042 M12-8, galv.



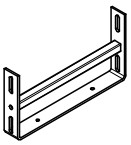


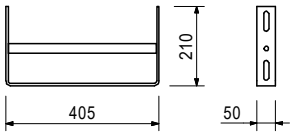
109105	5.070	**Ladder Base 30 adjustable, galv.** For horizontal fixing of ladders on the platform decking.



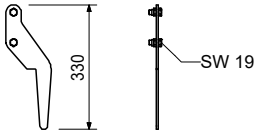


051460	2.180	**Ladder Base, galv.** As bottom ladder connection and for securing ladders against sliding on the scaffold decks.

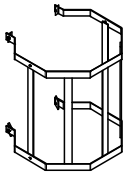


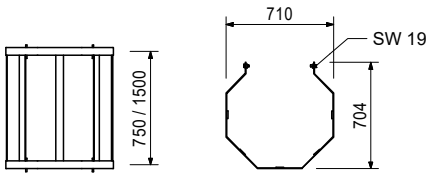


Item no.	Weight kg		
103718	0.684	**Ladder Hook, galv.** For adjusting the bottom ladder. Always use in pairs.	**Complete with** 2 pc. 710266 Bolt ISO 4017 M12 x 25-8.8, galv. 2 pc. 710381 Nut ISO 7042 M12-8, galv.

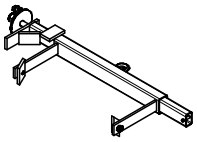


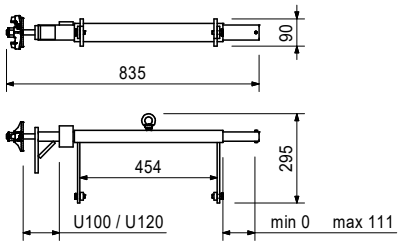
		Ladder Safety Cages, galv.	**Complete with**
104132	15.600	**Ladder Safety Cage 75, galv.**	4 pc. 710266 Bolt ISO 4017 M12 x 25-8.8, galv.
051450	25.200	**Ladder Safety Cage 150, galv.**	4 pc. 701763 Clamping Plate Fl 25 x 10 x 90
		Ladder cage for PERI ladder access.	



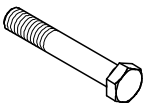


111165	6.260	**Ladder Connector VARIO, adjustable** For connecting ladders to Steel Walers SRZ and SRU, Profile U100 – U120.	**Complete with** 2 pc. 710266 Bolt ISO 4017 M12 x 25-8.8, galv. 2 pc. 701763 Clamping Plate Fl 25 x 10 x 90

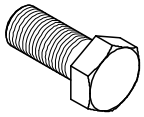


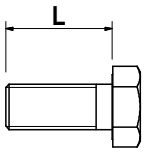


		Bolts ISO 4014-8.8, galv.	**L**
101949	0.015	**Bolt ISO 4014 M8 x 30-8,8, galv.**	30
710285	0.050	**Bolt ISO 4014 M8 x 100-8.8, galv.**	100
710220	0.087	**Bolt ISO 4014 M12 x 80-8.8, galv.**	80
711078	0.360	**Bolt ISO 4014 M20 x 130-8.8, galv.**	130
113766	0.518	**Bolt ISO 4014 M20 x 180-8,8, galv.**	180

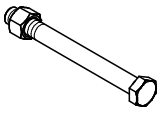


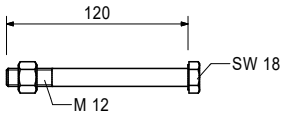
Item no.	Weight kg		L
710224	0.047	**Bolt ISO 4017 M12 x 40-8.8, galv.**	40



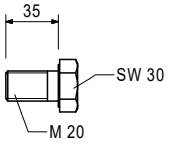


070100	0.132	**Bolt ISO 4016 M12 x 120-4.6 MU, galv.** For uses with small loads. Including nut.

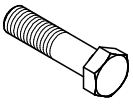


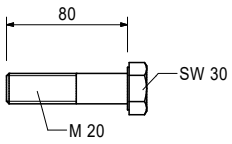


123844	0.130	**Bolt ISO4017-M20 x 35-8.8, galv.**

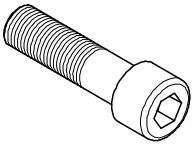


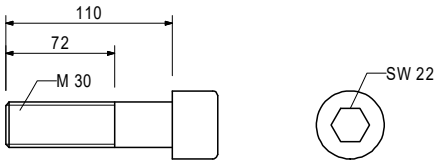
024900	0.255	**Bolt ISO 4014 M20 x 80-8.8, galv.**





051728	0.800	**Cyl. Bolt ISO 4762 M30 x 110-10.9** For attaching Climbing Shoe ACS, Climbing Shoe-2 ACS and anchor tube right or left to Climbing Cone-2 M30/DW20 or Screw-On Cone M30/DW 26



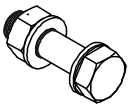


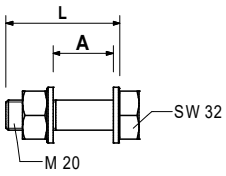
Item no.	Weight kg		L
		HV-Bolts Set M20	
057021	0.370	**HV-Bolt Set M20 x 75-10.9**	75
123839	0.440	**HV-Bolt Set M20 x 90-10.9**	90

For high-tension bolt connections.

Note
DIN EN 14 399-4.

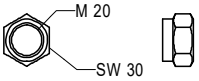
l = 75: A = 40 - 45 mm
l = 90: A = 55 - 60 mm



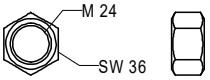


711071	0.004	**Nut ISO 7042 M8-8, galv.**

Self-locking.

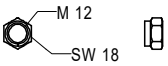


104526	0.017	**Nut ISO4032-M12-8**



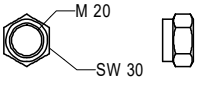
710381	0.017	**Nut ISO 7042 M12-8, galv.**

Self-locking.

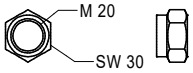


781053	0.065	**Nut ISO 7040 M20-8, galv.**

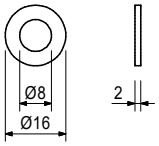
Self-locking.



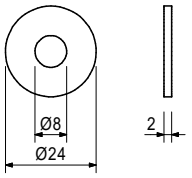
Item no.	Weight kg	
130341	0.063	**Nut ISO 7042 M20-8, galv.**



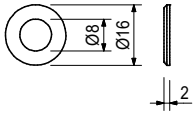
780354	0.002	**Washer ISO 7089 200 HV, A 8, galv.**



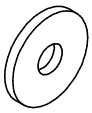
710342	0.007	**Washer ISO 7093-1-08-200 HV, galv.**

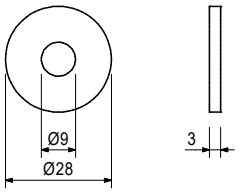


722356	0.002	**Washer ISO 7090-08-200HV**

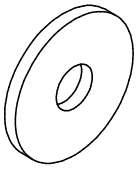


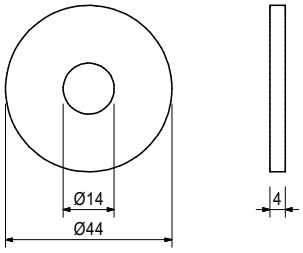
113347	0.013	**Washer ISO 7094 100 HV, A 8, galv.**



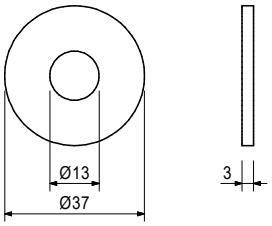


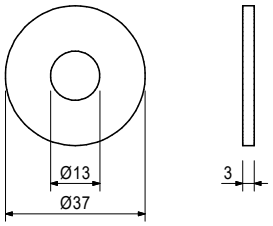
Item no.	Weight kg	
113348	0.043	**Washer ISO 7094 100 HV, A 12, galv.**



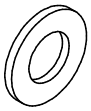


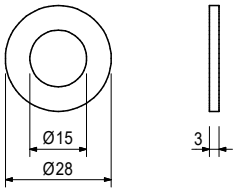
750350	0.027	**Washer ISO 7093-1 200 HV, A 12, galv.** Corresponds to old standard DIN 9021. With large supporting area.



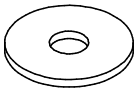


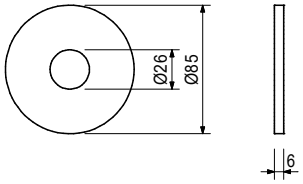
725574	0.009	**Washer ISO 7089 200 HV, A 14, galv.**



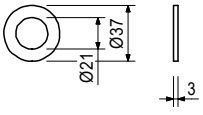


129975	0.210	**Washer ISO 7094 100 HV, A24, galv.**

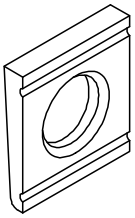


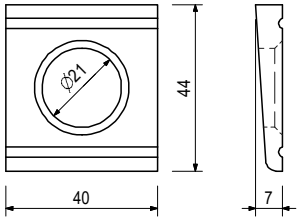


706454	0.017	**Washer ISO 7089 200 HV, A 20, galv.**

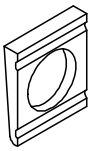


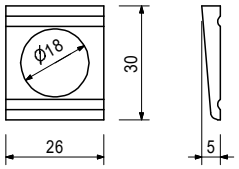
Item no.	Weight kg	
123845	0.057	**U-Washer DIN 6918-21, galv.**



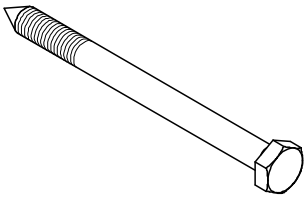


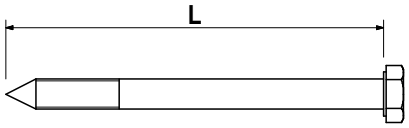
710880	0.032	**Washer DIN 434 18, galv.**





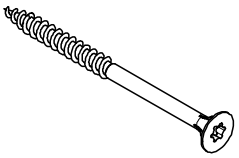
		Lag Screws DIN 571, galv.	**L**
029440	0.005	**Lag Screw DIN 571 6 x 20, galv.**	20
024270	0.023	**Lag Screw DIN 571 8 x 60, galv.**	60

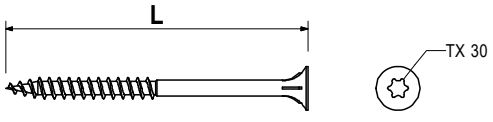




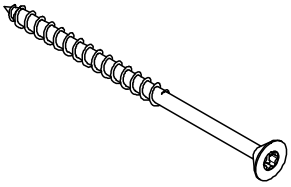
		TSS-Torx, galv.	**L**
024540	0.005	**TSS-Torx 6 x 40, galv.**	40
024470	0.008	**TSS-Torx 6 x 60, galv.**	60
024690	0.008	**TSS-Torx 6 x 80, galv.**	80

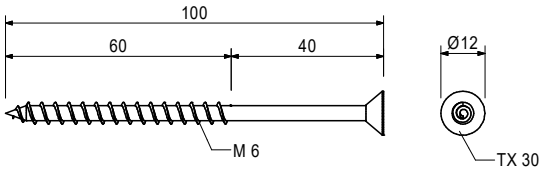
For Torx Bits TX 30. Self-drilling.



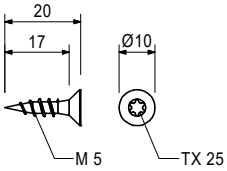


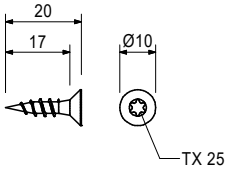
Item no.	Weight kg	
024950	0.012	**Spax Screw TX 30 6 x 100, yellow galv.** For Torx Blade TX 30. Self-drilling.



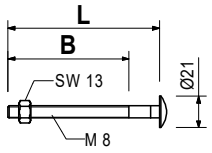


111437	0.004	**Spax Screw TX25, 5 x 20, yellow galv.**

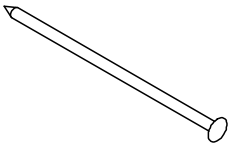


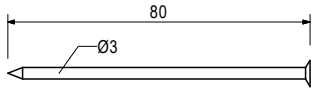


		F.H. Bolts DIN 603 M8 MU, galv.	**L**	**B**
710295	0.028	**F.H. Bolt DIN 603 M8 x 45 MU, galv.**	45	22
710326	0.030	**F.H. Bolt DIN 603 M8 x 60 MU, galv.**	22	60
710709	0.036	**F.H. Bolt DIN 603 M8 x 65 MU, galv.**	65	22
024140	0.033	**F.H. Bolt DIN 603 M8 x 70 MU, galv.**	70	58
710240	0.050	**F.H. Bolt DIN 603 M8 x 100 MU, galv.**	100	80
024390	0.090	**F.H. Bolt DIN 603 M8 x 200 MU, galv.**	200	150



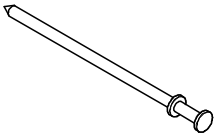
710312	0.005	**Nail 3 x 80**

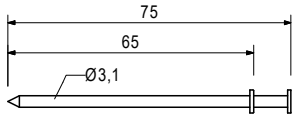




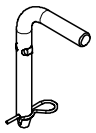
018280	1.000	**Double Head Nail, l = 65 mm**

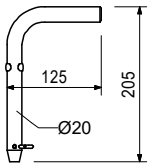
Note
Delivery unit: carton with 1000 pieces.



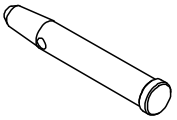


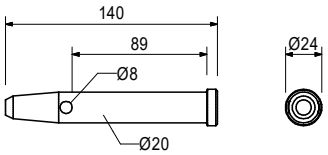
Item no.	Weight kg		
037160	0.736	**Bolt Ø 20 x 205, galv.** For various and other connections.	**Complete with** 1 pc. 018060 Cotter Pin 4/1, galv.





105400	0.330	**Pin Ø 20 x 140, galv.** For different connections.



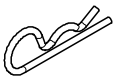


Accessories

018060	0.014	**Cotter Pin 4/1, galv.**

018060	0.014	**Cotter Pin 4/1, galv.**

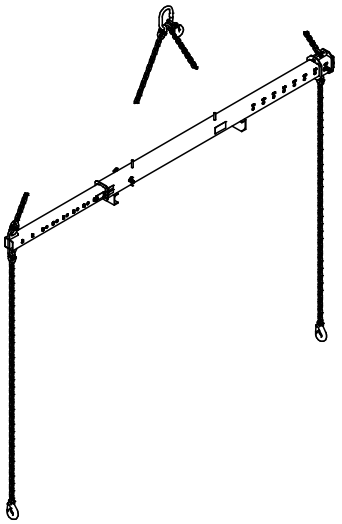
022230	0.033	**Cotter Pin 5/1, galv.**

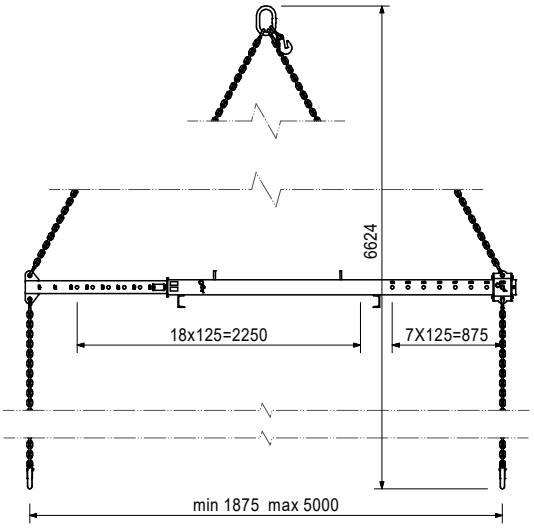


Item no.	Weight kg
127320	158.000

Lifting Beam 9 t
For moving climbing units.

Complete with
1 pc. 112865 Bolt 25 x 180
1 pc. 022230 Cotter Pin 5/1, galv.
1 pc. 107297 Bolt ISO4014-M12 x 140-8.8, galv.
1 pc. 710330 Nut ISO 4032 M12-8, galv.
Note
Follow Instructions for Use.
Technical Data
Permissible load-bearing capacity 9 t.

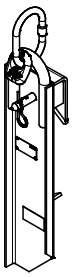


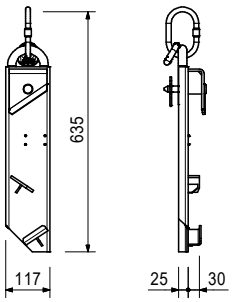


070760	4.650

Crane Splice GT 24
For transporting elements by crane with the GT 24 Girder.

Complete with
1 pc. 018050 Pin Ø 16 x 65/86, galv.
1 pc. 018060 Cotter Pin 4/1, galv.
Note
Follow Instructions for Use!
Technical Data
Permissible load-bearing capacity 700 kg with crane sling angle ≤ 15°.

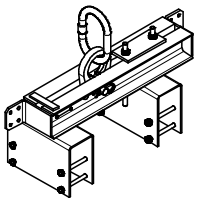


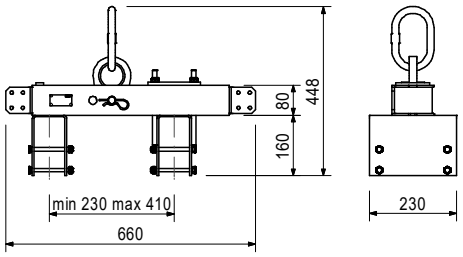


Item no.	Weight kg
111238	19.800

Crane Hook 2 t / GT 24
For transporting elements by crane with the GT 24 Girder. Adjustable from 230 to 410 mm.

Complete with
1 pc. 018060 Cotter Pin 4/1, galv.
8 pc. 710138 Bolt ISO 4014 M10 x 110-8.8, galv.
8 pc. 780356 Nut ISO 7040 M10-8, galv.
Note
Follow Instructions for Use!
Technical Data
Permissible load-bearing capacity 2.0 t with crane sling angle ≤ 30°.

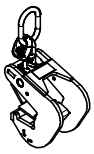


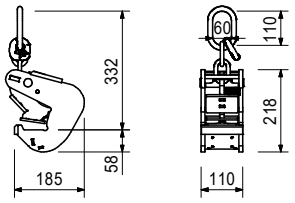


115168	6.950

Lifting Hook MAXIMO 1.5 t
For transporting MAXIMO and TRIO Panels.

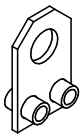
Note
Follow Instructions for Use!
Technical Data
Permissible load-bearing capacity:
Steel elements 1.5 t
Alu elements 750 kg

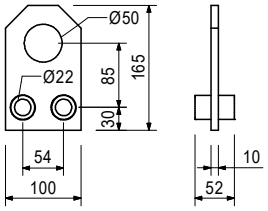




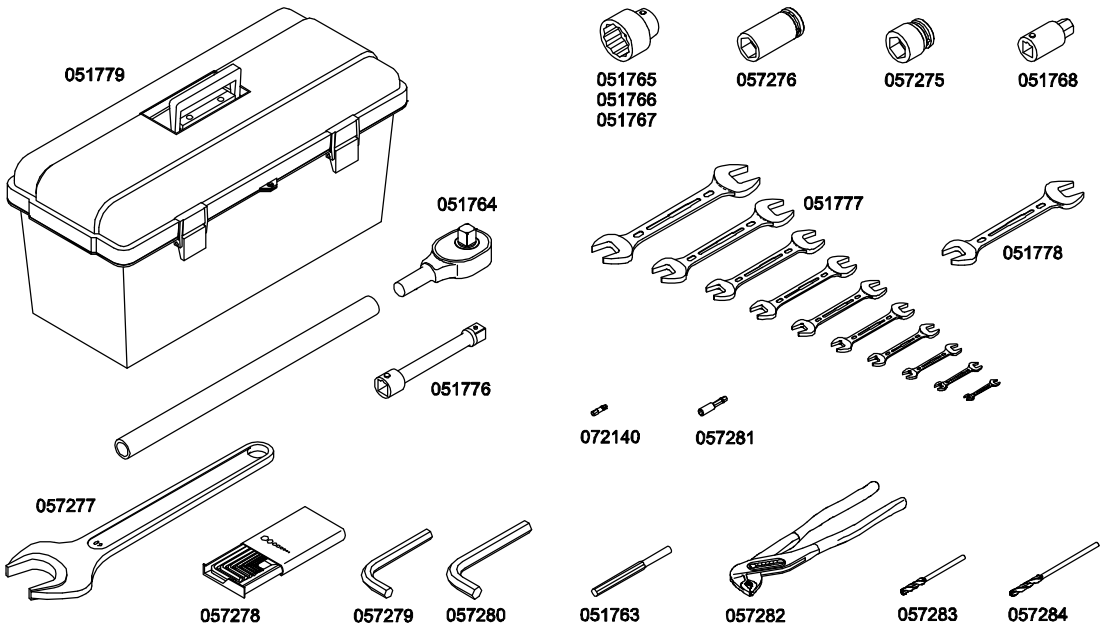
715631	0.000

Lifting Eye BR



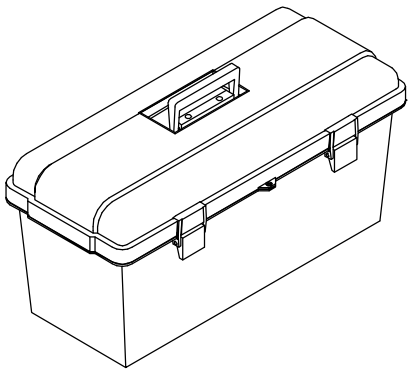


Item no.	Weight kg	
		Tool Set ACS
051761	13.700	**Tool Set ACS**
051779	3.500	**Tool Box 580 x 260 x 285 mm**
051764	2.650	**Ratchet Wrench 3/4"**
051776	0.520	**Extension 3/4" L = 200 mm**
051765	0.235	**Socket SW 19-3/4"**
051766	0.215	**Socket SW 24-3/4"**
057276	0.625	**Socket SW 30-3/4"**
051767	0.660	**Socket SW 46-3/4"**
051768	0.500	**Socket SW 22-3/4"**
051777	1.650	**Double Spanner Set 10-pcs.**
051778	0.350	**Double Spanner SW 24 x 27 mm**
057277	1.510	**Single Spanner SW 60**
057278	0.405	**Allen Key Set, 8 pcs.**
057279	0.260	**Allen Key SW 14**
057280	0.430	**Allen Key SW 17**
072140	0.005	**Bit Point TX 30**
057281	0.042	**Bit Clip TX 30**
051763	0.125	**Driftpin 10 mm**
057282	0.500	**Pipe Wrench l = 300 mm, e = 48 mm**
057283	0.042	**Drill Bit HSS 9 mm, short**
057284	0.065	**Drill Bit HSS 9 mm, long**



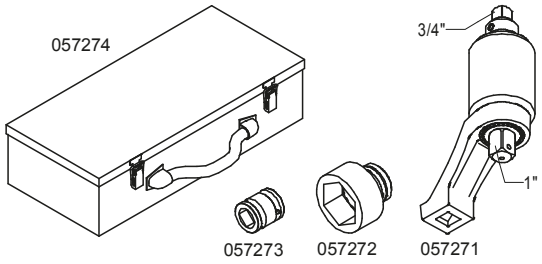
027212	0,445	**Allen Key SW 14, long** Fits to PERI Anchor Positioning Studs and Allen Key Bolts M16.

Item no.	Weight kg	
115581	10.280	**Hydraulic Service Case** Consisting of: 1 pc. 115590 Tool Box 580 x 260 x 285 mm 6 pc. 115583 Pressure Gauge Typ 570 VA-Geh. 6 pc. 115584 Hose MKT 6-02 DN 02 12 pc. 115582 Measuring Coupl. SMK 20-G 1/4-PC 2 pc. 115591 Double Spanner SW 10 x 13 1 pc. 115592 Double Spanner SW 13 x 17 1 pc. 115588 Double Spanner SW 19 x 24 1 pc. 051778 Double Spanner SW 24 x 27 1 pc. 115589 Double Spanner SW 27 x 32 1 pc. 057278 Allen Key Set, 8 pcs. 1 pc. 115585 Allen Key SW 12 1 pc. 057279 Allen Key SW 14 1 pc. 057282 Pipe Wrench 1 pc. 115147 Angle Fitting Set PS 2 pc. 115396 Fitting Set PS 1 pc. 072180 Ratchet Wrench 1/2" 20 pc. 123881 Tube Screw Plug ROV12SX 20 pc. 123880 Threaded Plug VKAN 12S VIT 100 pc. 051760 Cable Binder NT-240H 2 pc. 126425 Distance Piece Ø 120 1 pc. 126440 Socket SW 17 - 1/2" 1 pc. 135172 Double Spanner SW 19 x 22 1 pc. 135173 Allen Key SHR-Bit SW 05 1 pc. 135174 Allen Key SHR-Bit SW 06 1 pc. 135175 Allen Key SHR-Bit SW 08 1 pc. 135176 Allen Key SHR-Bit SW 10 1 pc. 135177 SHR Screwdriver Bit 6 Tl. Slot/PH 2 pc. 711035 Adhesive Label 128 x 65 mm 1 pc. 126434 List of contents Hydraulic Service Case

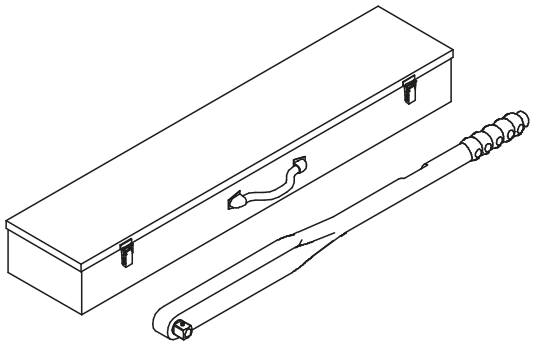


133372	6.800	**Cordless Screwdriver-Set ACS**	**Complete with** 1 pc. 133356 Screwers ACS 18V 1 pc. 111435 Socket SW 17-1/2" 1 pc. 133369 Extension 1/2" 125 mm 1 pc. 133370 Adapter 1/4" hexagonal shaft 4/4 1 pc. 133371 Adapter 1/4" to 1/2"

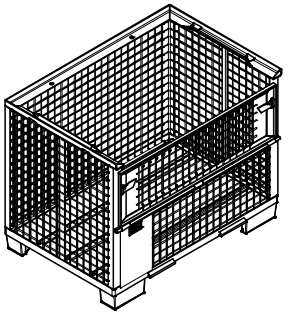
Item no.	Weight kg		
057089	11.050	**Power Wrench Set 4000 Nm**	**Complete with** 1 pc. 057274 Tool Box KS2N 1 pc. 057271 Power Wrench Type KS2N 4000 Nm 1 pc. 057272 Socket SW 60 - 1" 1 pc. 057273 Adaptor 3/4" - 3/4"

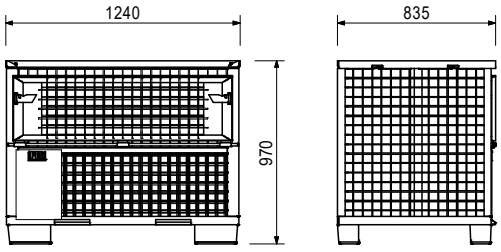


057090	6.700	**Torque Wrench 140-760 Nm**	**Note** Outer square 3/4" Length: 812 mm incl. sheet metal case

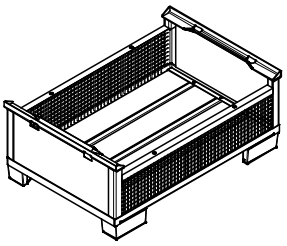


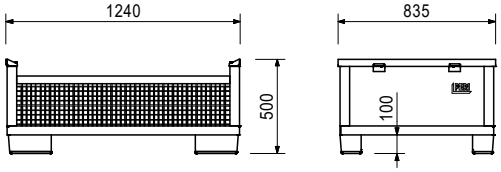
065068	88.300	**Crate Pallet 80 x 120-K, galv.** For stacking and transportation of formwork and scaffold components.	**Note** Follow Instructions for Use! **Technical Data** Capacity approx. 0.75 m³. Permissible load-bearing capacity 1.5 t.



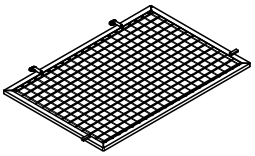


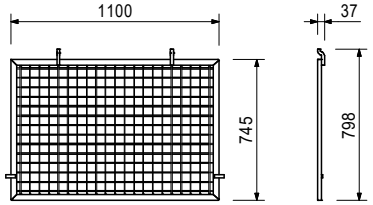
Item no.	Weight kg	
025660	66.500	**Hardware Box 80 x 120, galv.** For stacking and transportation of formwork and scaffold components. **Note** Follow Instructions for Use! **Technical Data** Capacity approx. 0.28 m³ Permissible load-bearing capacity 1.5 t.





065067	9.410	**Lid for Wire Crate Pallet 80 x 120, painted** For closing Crate Pallets 80 x 120 or Hardware Boxes 80 x 120.

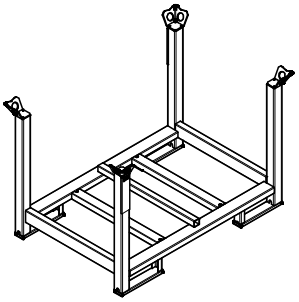


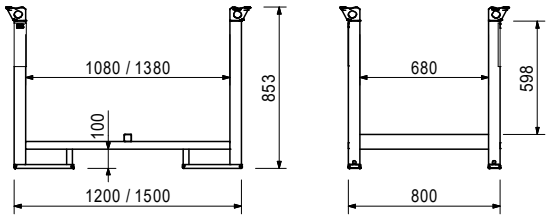


		Pallets RP-2, galv.
103434	38.500	**Pallet RP-2 80 x 120, galv.**
103429	45.300	**Pallet RP-2 80 x 150, galv.**

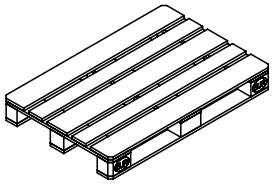
Note
Follow Instructions for Use!
Technical Data
Permissible load-bearing capacity 1.5 t.

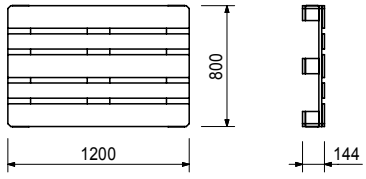
For stacking and transportation of formwork and scaffolding components.





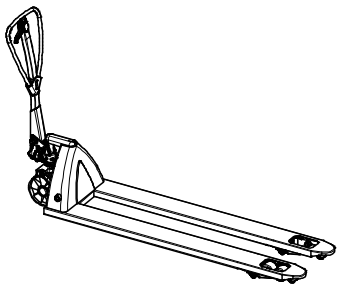
065015	28.000	**Euro Flat Bed Pallet 80 x 120**





Item no.	Weight kg
061510	105.000

Pallet Lifting Trolley 1800 mm
For moving pallets and crate pallets.



Note
Follow Instructions for Use!
Technical Data
Forklift arm length 1800 mm, forklift arm width 550 mm, stroke range 115 mm.
Permissible load-bearing capacity 2.0 t.

The optimal system for all projects and every requirement

Wall formwork

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Slab formwork

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