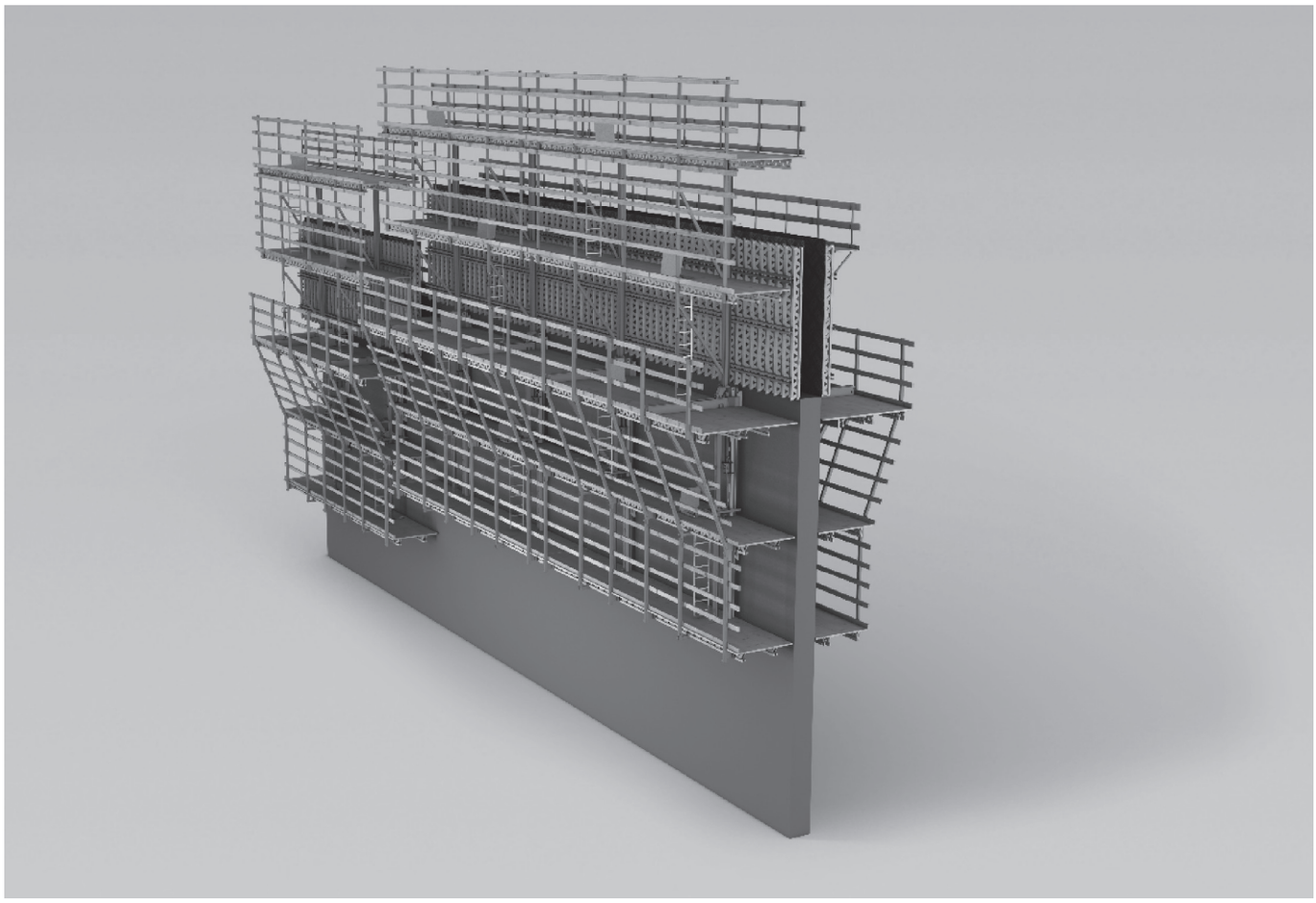
PERI

ACS R
Self-Climbing System

Instructions for Assembly and Use – standard configuration – Version 1.1

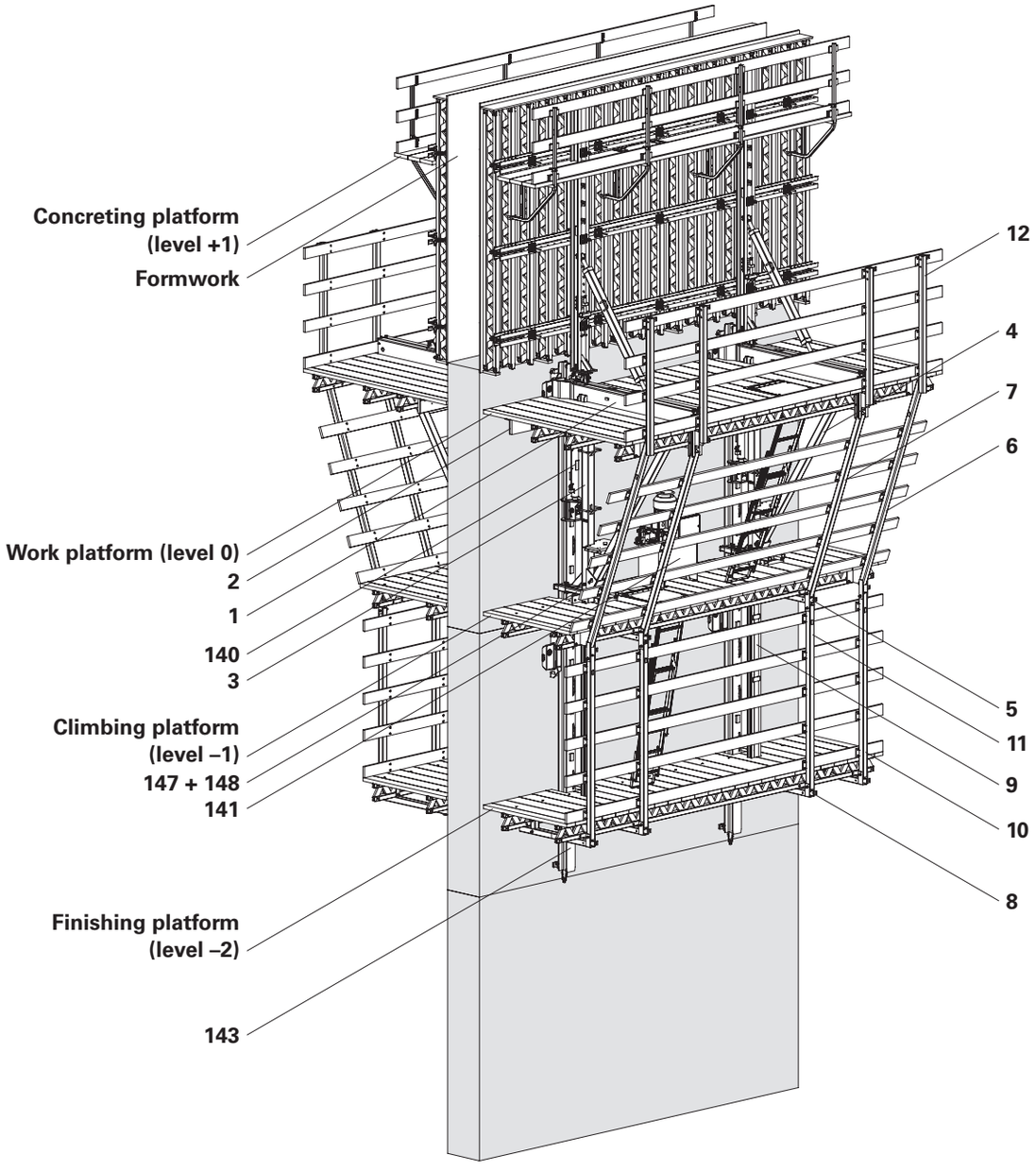


Content

Content

Overview

Main components



1 Crossbeam ACS with Carriage
2 Angle for ACS 2-console
3 Vertical Strut ACS
4 Diagonal Strut ACS
5 Climbing Platform Beam ACS
6 Cantilever Arm Post Climbing Platform ACS
7 Guardrail Post Climbing Platform ACS l = 2.83 m
8 Finishing Platform Beam ACS
9 Finishing Platform Vertical 500 ACS
10 Cantilever Arm Post Finishing Platform ACS l = 2.61 m
11 Guardrail Post Finishing Platform ACS l = 2.51 m
12 Guardrail Post Main Platform ACS
140 Climbing Device ACS 100
141 Hydraulic Unit ACS 100
143 Climbing Rail ACS
147 Slide ACS
148 Pressure Point Spindle ACS

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)

 Observe additional documentation

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, if not avoided, will result in death or serious, irreversible injury.

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

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

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

Format of the safety instructions

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

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

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

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

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

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

Introduction

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

Qualified personnel
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.
- Designation 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.

- **Ensure that the relevant national guidelines and regulations in the respective current version are complied with!**
- **If no country-specific regulations are available, PERI recommends that you 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
  – Lifting 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
- Program overview ACS
- 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 assembly of the Self-Climbing System ACS R as a self-climbing formwork system. The climbing unit shown is an example and consists of
Work platform including carriage, strongback and formwork,
- 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-like truss construction and is designed as shoring in accordance with DIN EN 12812: 2008-12 to support wall formwork.
A climbing unit consists of 2 bracket units with platform beams and struts that are connected to the platforms (work platform, climbing platform and finishing platform).
The platforms consist of a deck on platform beams. The platforms are pre-assembled on crossbeams (work platform), climbing platform beams or finishing platform beams.
By connecting the formwork and the climbing scaffold by means of strongbacks, the climbing formwork is created, which is implemented as a self-climbing unit with the hydraulic climbing devices.

Features
- Self-Climbing System ACS R with carriage and open formwork at the top for easy installation of the reinforcement.
- Stable work platforms carry heavy loads, e.g. for material storage.
- The climbing units of formwork and platforms are moved with the integrated hydraulic system.
- Simultaneous climbing of several climbing units ensures fewer open edges thus resulting in increased workplace safety.
- Crane-independent, fast working operations.
- Large console bracket distances reduce the need for climbing ties and thus reduce the number of obstructions in the wall.
- Finishing platforms allow easy dismantling of recoverable tie parts.
- Safe load transfer into the structure via climbing rail, climbing shoe and climbing tie.
- Weather-independent working. Platforms with optional enclosures protect staff from the effects of the wind and weather.
- Economical use generally from 25 concreting sections upwards.

Technical data
- Formwork height up to 5.4 m.
- Up to four climbing units can be coupled per 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.
- Construction of 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 for exclusive use in the 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 supported formwork elements, suitable support, e.g. squared 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 internal 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.

RFID transponder

Individual components are equipped with an RFID transponder. RFID transponders combine hardware with additional software to create a smart product.
Depending on the component and digital solution, this makes it possible to:
- Open technical documents.
- View maintenance plans.
- Track information on transport and logistics.

For more information, see "RFID LA Tag Mounting Kit User Information".

Cross-system

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

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

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

Observe and comply with the safety instructions and permissible loads.

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

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

Damaged components must be exchanged immediately on site and no longer 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 DIN EN 338:2016-07.
- Scaffolding tubes:
  Galvanised steel tubes with minimum dimension Ø 48.3 x 3.2 mm according to DIN EN 12811-1:2004-03 4.2.1.2.
- Scaffolding tube couplings:
  according to DIN EN 74-1:2022-09 and DIN EN 74-2:2022-09.
- Wood screws:
  The wood screws are selected on a project-specific basis. Observe project-specific requirements for the fasteners.

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.

Safety instructions

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 to be used to prevent falling is determined by the contractor.

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

Use
Every contractor who uses or allows the 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 loiter 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.
Before accessing the climbing system, check that the platform decking is complete and check for any danger zones.

Strike 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 relocation operation. Exceptions to this can be determined through the operational working and assembly instructions.

The transport of persons during the relocation process is strictly prohibited. This does not apply to the operating personnel required for relocation 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 guardrails cannot be used or have to be removed due to operational reasons, safety equipment must be installed in their 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.

Safety instructions

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 passages and openings in accessible areas must be secured.

In case of danger, it must be ensured that working areas can be vacated via emergency escape routes or rescue equipment.
It must also be ensured that at least one emergency escape route or piece of rescue equipment can still be used if the power supply fails.
Determine and apply all appropriate measures.

Throughout the entire 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.

Safety instructions

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 relocation 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. When working in this area, personnel must be secured against falling, e.g. by temporary guardrails or wearing 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 and power cables so that they cannot be disconnected, sheared off or tripped over.

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.

Note
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 load-lifting accessories and lifting gear from the lowered components only if they are in a stable position and no unintentional change is possible.

Do not drop the components.

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

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

Pre-assembled 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.

Note
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	Art. no.
	System components	
1	Crossbeam ACS with Carriage, mechanical	051701
2	Angle for ACS 2-console	051708
3	Vertical Strut ACS	051710
4	Diagonal Strut ACS	051714
5	Climbing Platform Beam ACS	051716
6	Cantilever Arm Post Climbing Platform ACS	051722
7	Guardrail Post Climbing Platform ACS l = 2.83 m	051715
8	Finishing Platform Beam ACS	051720
9	Finishing Platform Vertical 500 ACS	051717
10	Cantilever Arm Post Finishing Platform ACS l = 2.61 m	051723
11	Guardrail Post Finishing Platform ACS l = 2.51 m	051718
12	Guardrail Post Main Platform ACS	051707
13	Guardrail Connection Plate ACS/SCS	113762
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	
19	Connector IPE ACS	057096
21	Formwork Girder GT 24	
22	Landing Platform ACS	051713
23	Thrust Spindle 177-233 ACS	057427
24	Strongback 365 ACS	057098
25	Screw Adapter 50	057327
26	Screw Adapter 200	057332
27	Tie Yoke 465 ACS	057336
28	Scaffold Bracket GB 80	027110
29	End Guardrail 55	065066
30	Push-pull prop	
	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
147	Slide ACS	051711
148	Pressure Point Spindle ACS	051712
149	Expander ACS	051737

Pos. no.	Component name	Art. no.
159	Plain bearing grease	
	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. Screw 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 connector 90°	123478
204	Torx 5 x 20	111437
206	Cotter pin 4/1	018060
207	Cotter pin 5/1	022230
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
223	F.H. bolt DIN 603 M8 x 50	
224	Nut ISO 7040 M8-8	711071
225	Washer ISO 7089 200 HV, A8	780354
226	Washer ISO 7093 200 HV, A8	710342
227	Torx 6 x 100	024950
228	Clamp A64 DIN 3570 M12	110296

Component overview and tool list

Pos. no.	Component name	Art. no.
229	Hex-Nut ISO 4032 M12-8	710330
230	Washer ISO 7090-08 200 HV	722356
231	Screw ISO 4017 M8 x 30-8.8	101949
232	F.H. bolt DIN 603 M8 x 60 MU	710326
234	Locking Pin Ø 20 x 205	037160
235	Tie Yoke DW 15	037150
236	Cross Strap-2	722137
237	Wing Nut DW 15	030100
238	F.H. bolt DIN 603 M8 x 45 MU	710295
239	F.H. bolt DIN 603 M8 x 65 MU	710709
240	Screw 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	Screw ISO 4014 M20 x 180-8.8	113766
244	Nut ISO 7042 M8-8	
245	Hex. wood screw DIN 571 8 x 60	024270
247	Washer ISO 7094-08-100 HV	113347
248	Plain washer 9 DIN 434	057345
249	Bolt ISO 4014 M8 x 130-8.8	
250	Bolt ISO 4014 M8 x 170-8.8	
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	
265	Steel Scaffolding Tube Ø 48.3 x 3.2, special length	026415
266	Safety net	
270	Formlining	
271	Squared timber	
272	Wooden wedge	
273	Formwork unit	
274	Squared timber 6/6	
275	Squared timber 8/8	
276	Board 4 x 10 cm	
277	Board 4 x 20 cm	
	Ladder access	
280	Hatch 55 x 60-2, foldable	126431
281	Bolt ISO 4017 M12 x 40-8.8	710224
282	Nut ISO 7040 M12-8	710381
283	Ladder 180/6	051410

Pos. no.	Component name	Art. no.
284	Ladder 220/6	051420
285	End Ladder 180/2	103724
286	Ladder Base 30, adjustable	109105
287	Ladder base	051460
288	Ladder hook	103718
289	Ladder Safety Cage 75	104132
290	Ladder Safety Cage 150	051450
291	L-Angle 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	Hex-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	Service Box Hydraulics	115581
303	Crane Splice 24	070760
304	Lifting Beam 9 t	127320
	Transport container	
	Crate Pallets 80 x 120	065068
	Pallets RP-2	103434
	Pallets RP-2	103429
	Hardware Boxes 80 x 120	025660

Component overview and tool list

Tool name	Article no.
Hammer 500 g	
Open-End Wrench AF 27	
Cordless Screwdriver-Set ACS	133372
Tool Set ACS	051761
Service Box Hydraulics	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 DIN EN 15048-1:2016-09 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

A1 System overview

Climbing unit

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

Climbing unit and climbing rails (**143**) are supported by climbing shoes (**161**), mounted on already completed sections of the structure.
The work platform (level 0) with carriage and strongback for the formwork system is mounted on the crossbeams (**1**).

Climbing and finishing platforms are mounted on additional platform beams.
The hydraulic unit is positioned on the climbing platform.
The hydraulic unit and climbing device are operated from the climbing platform.

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

The following variants are execution examples.

Variant 1
With climbing and finishing platform
- VARIO GT 24 Girder Wall Formwork.
- Guardrail boards as guardrail.
- Concreting height (h_B) = 4.2 m.

(Fig. A1.01)

Main components

1 Crossbeam ACS with Carriage
3 Vertical Strut ACS
4 Diagonal Strut ACS
5 Climbing Platform Beam ACS
7 Guardrail Post Climbing Platform ACS l = 2.83 m
8 Finishing Platform Beam ACS
9 Finishing Platform Vertical 500 ACS
11 Guardrail Post Finishing Platform ACS l = 2.51 m
12 Guardrail Post Main Platform ACS
22 Landing Platform ACS
23 Thrust Spindle 177-233 ACS
24 Strongback 365 ACS
140 Climbing Device ACS 100
141 Hydraulic Unit ACS 100
143 Climbing Rail ACS
144 Spacer, cpl.
147 Slide ACS
148 Pressure Point Spindle ACS
161 Climbing Shoe II ACS
164 Tie Tube ACS
167 Climbing tie
264 Guardrail board
283 Ladder 180/6

A1 System overview

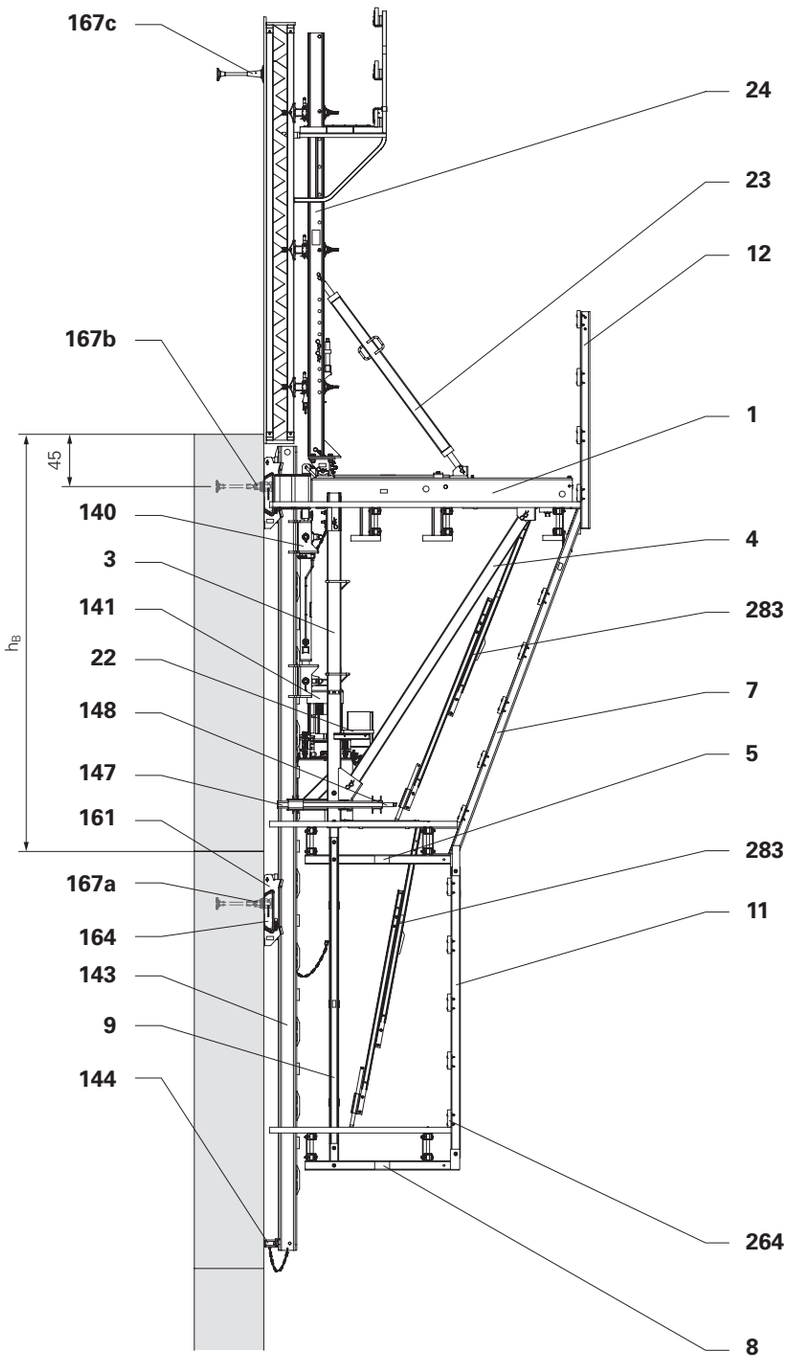


Fig. A1.01

Variant 2
With finishing platform

- VARIO GT 24 Girder Wall Formwork.
- Guardrail boards as guardrail.
- Concreting height (h_B) = 3.6 m.

The climbing platform is omitted and the finishing platform is used at the same time to operate the climbing technology.
This is possible with concreting heights up to 3.6 m.
(Fig. A1.02)

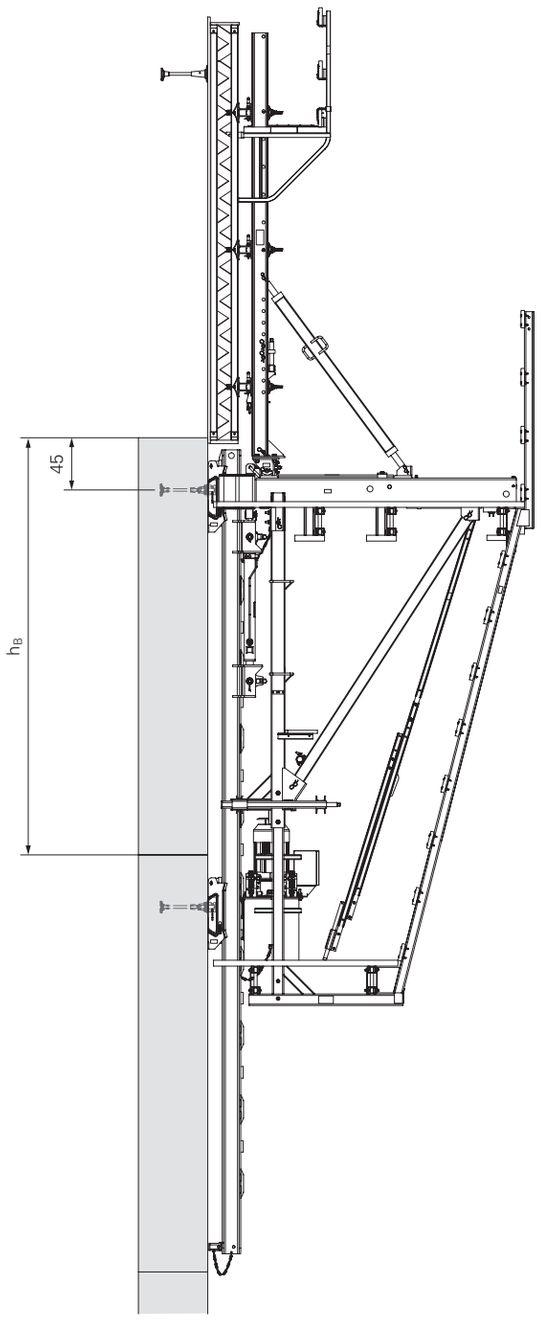


Fig. A1.02

Variant 3
With intermediate concreting and formwork platform

- MAXIMO formwork.
- Guardrail boards as guardrail.
- Concreting height (h_B) = 5.4 m.

Because of the greater formwork height, an intermediate formwork platform is required.
(Fig. A1.03)

From a concreting height of 5.12 m, a climbing rail of a special length is required.

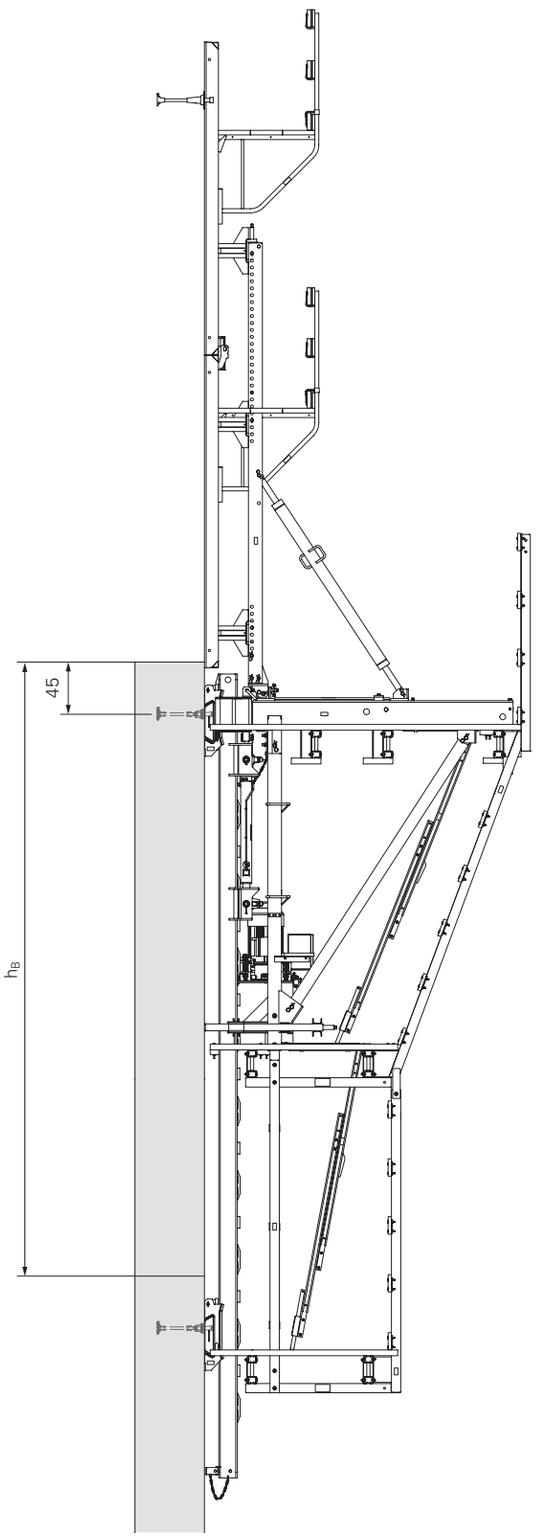


Fig. A1.03

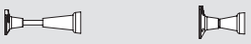
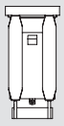
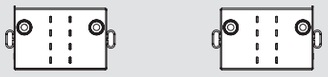
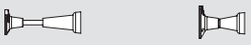
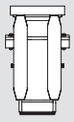
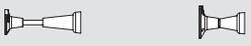
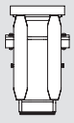
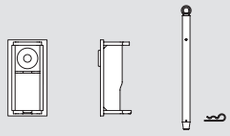
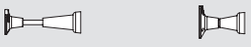
A2 Climbing shoes and climbing mechanism

Climbing shoes

Functions of the climbing shoe

- Guides and supports the Climbing Rail ACS.
- The climbing unit is attached to the climbing shoes.
- Takes vertical loads and transfers them into the structure via 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)] Screws for fastening the components to the climbing tie, see Table A3.03.

Tab. A2.01

A2 Climbing shoes and climbing mechanism

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

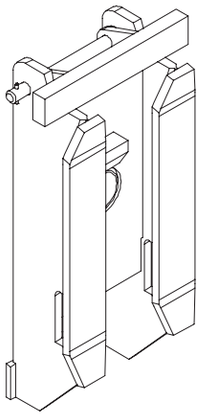


Fig. A2.01

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

! Note
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)

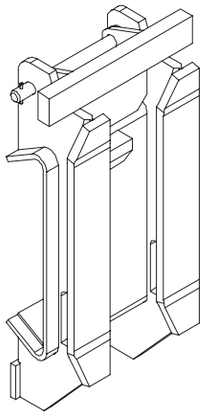


Fig. A2.02

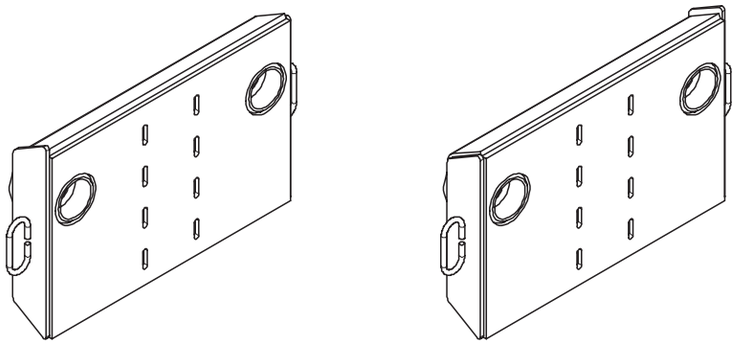


Fig. A2.03

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 allows climbing over a wall offset in structures with wall offsets.
(Fig. A2.04)

For further information, see section "Climbing with wall offsets" on page 122.

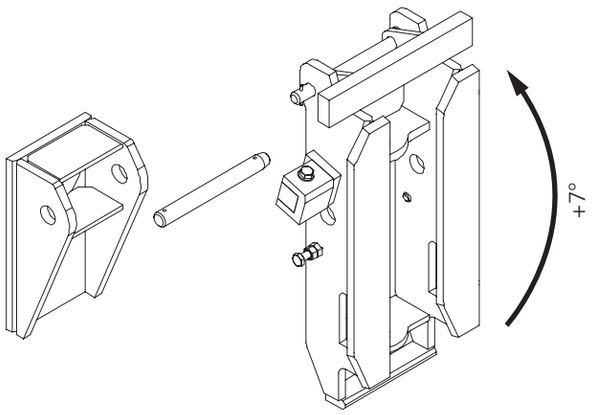


Fig. A2.04

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 structure" on page 129.

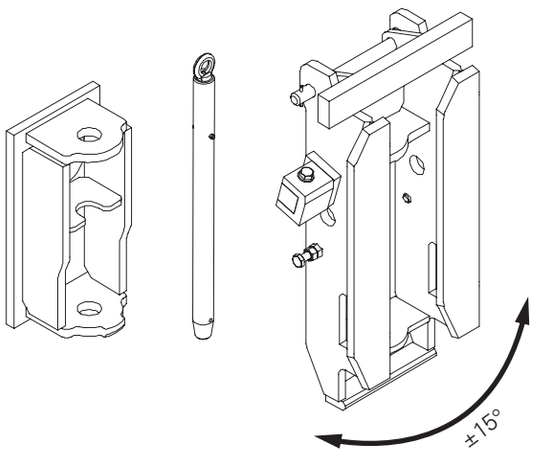


Fig. A2.05

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 height

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 for fixing the climbing shoe. Different tie systems are used, depending on the climbing shoe used, the forces that occur and the wall thickness.

Climbing tie

The climbing tie transfers horizontal and vertical forces into the structure. Climbing ties are available in two variants.
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)

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

The climbing tie is referred to as the leading tie during installation for the next concreting section.

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

Climbing tie variants

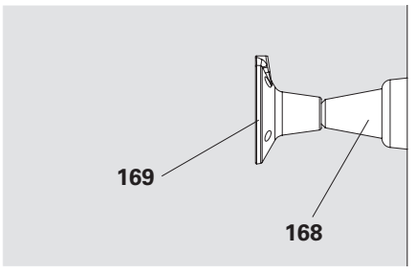


Fig. A3.01

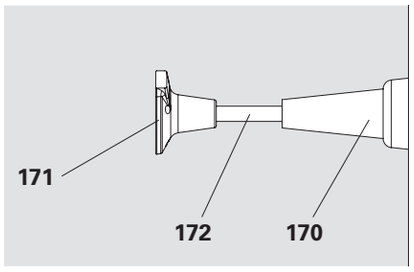


Fig. A3.02

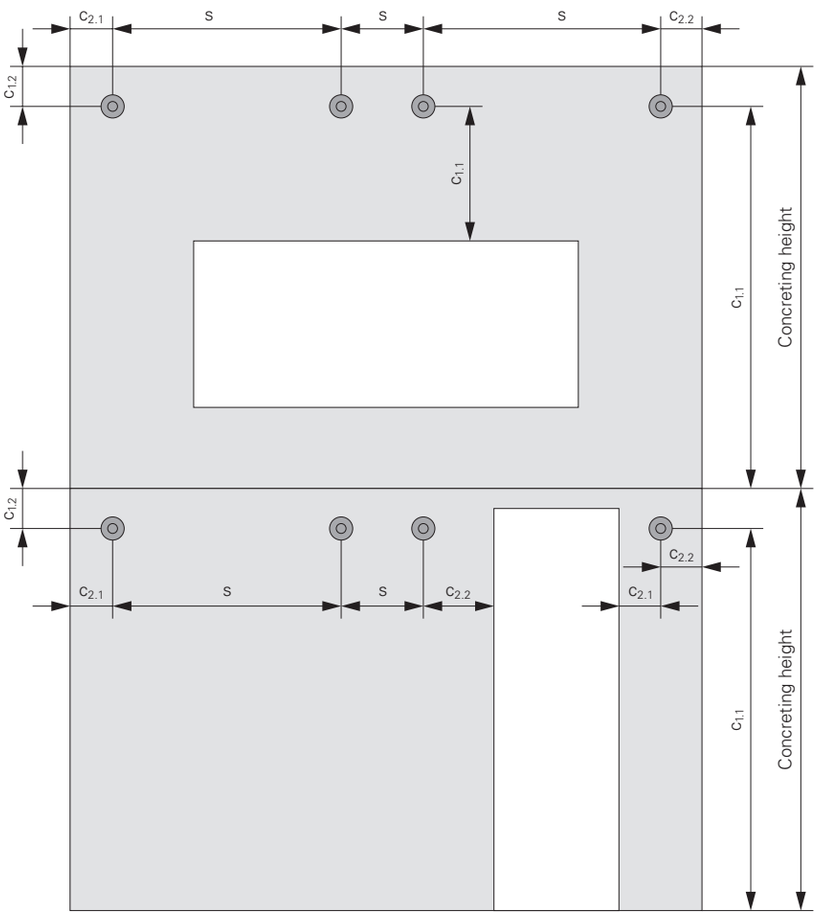


Fig. A3.03

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

A3 Anchoring

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 constructional requirements, refer to the separate PERI product information and the project-specific planning and do not fall short of these. (Fig. A3.06)
⇒ Do not load the anchoring until the anchor base has sufficient load-bearing capacity.

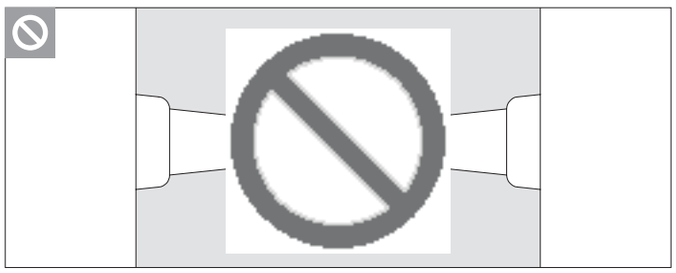


Fig. A3.04

Note

- If $h_1 + h_2 > D$:
  Arrange anchoring in a staggered manner. (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

Top view

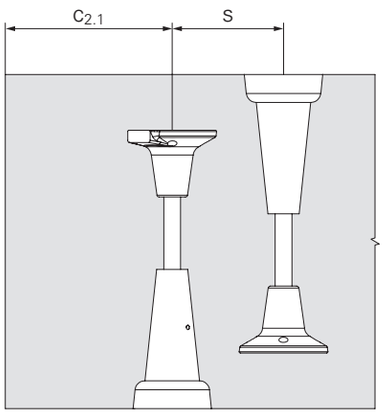


Fig. A3.05

Lateral view

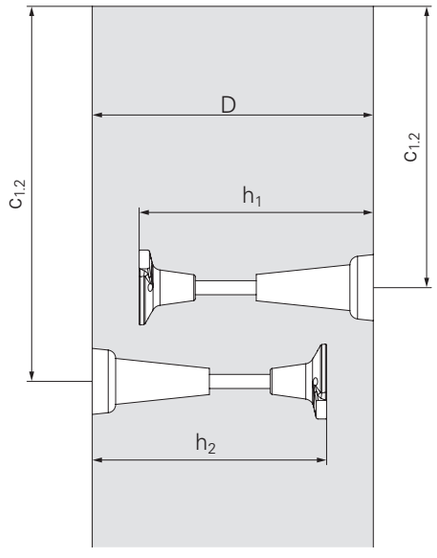


Fig. A3.06

A3 Anchoring

Assembly information

The tie systems are mounted on the front side of the formlining.
Tables A3.02 and A3.03 show the permissible combinations of tie systems and their fixing.

Note

- 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 areas of the climbing cone that come into contact with concrete and the internal thread of the tie rod with suitable grease. This facilitates the dismantling of the climbing cones.

Inspecting the anchoring

Checking the tie components

- Tie rod:
  - Length
  - Welding spatter
  - Bending
- Climbing cone/screw-on cone:
  - Stiff threads
  - Deformed cone cup
  - Rough or scratched cone surfaces

Checking the assembly work

- Height
- Distance s to each other
- Anchoring depth h
- Alignment according to specifications

Verification of the tie forces

The verification of the transfer of the horizontal and vertical reaction forces into the structure down to the ground must be carried out by the client.

Acceptance protocol

Note

- Check and record the correct installation of the anchoring (position and anchoring depth according to planning details) before concreting.
- If different tie rod lengths are used for one type of cone, each anchoring must be checked and recorded before concreting.
- Keep records for the verification of the concrete strength.
- The acceptance protocol must be available on the construction site during the construction period 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

Standard: x

Optional: (x)

[1)] Always use tie tubes in pairs.

Tab. A3.02

Permissible fixing combination of leading tie to formwork			
Climbing shoe	**Fixing the leading tie**		
	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)]

Standard: x

Optional: (x)

[2)] Attach climbing cone preferably with Anchor Positioning Plate M30.

Tab. A3.03

Fixing the tie components to climbing ties		
Component	**Permitted bolt type**	**Tightening torque**
Climbing Shoe-2 I ACS	Cyl. Screw ISO 4762 M30 x 110-10.9	Screw the component to the climbing tie without play.
Tie Tube ACS	Cyl. Screw 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 comes to the construction site together with the threaded anchor plates.

The length L of the tie rod is calculated for Climbing Shoe-2 I or Climbing Shoe IV 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 and Climbing Shoe IV

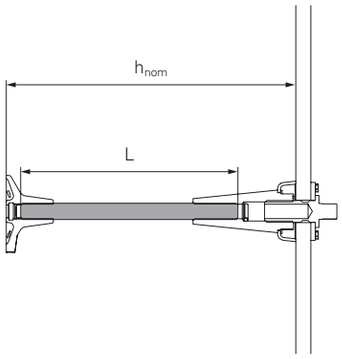


Fig. A3.07

Leading tie for climbing shoe II

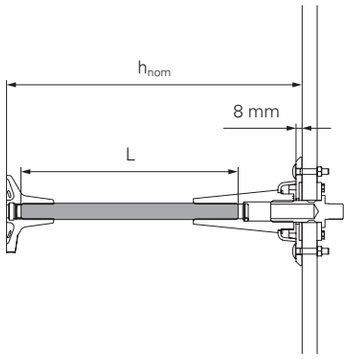


Fig. A3.08

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. Screw ISO 4762 M30 x 110-10.9
270 Formlining

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

Installing the climbing tie

1. Align the Anchor Positioning Plate M30 (**173**) on the formlining (**270**) and secure it 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 to the formlining with positioning screw M30 (**175**).

(Fig. A3.09)

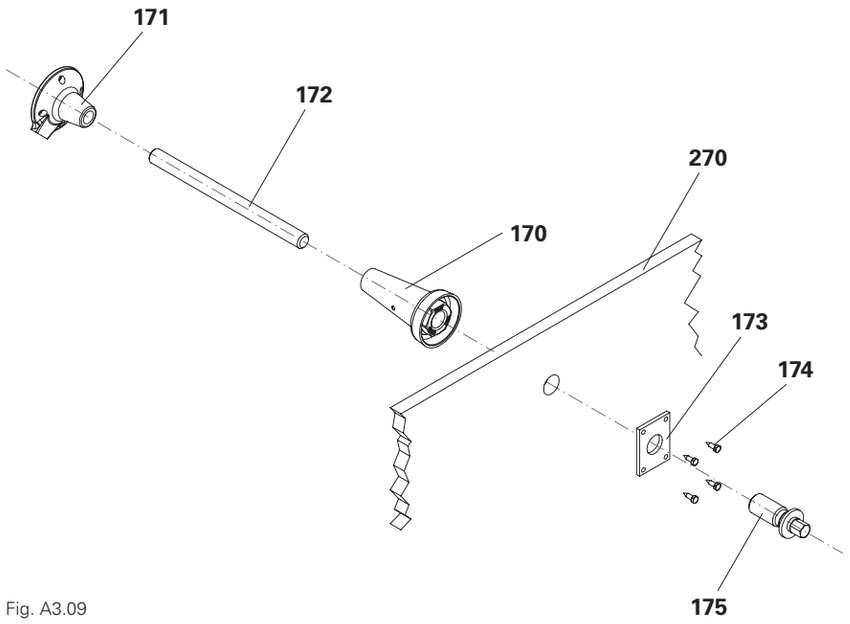


Fig. A3.09

Checking the assembly work

- Height
- Distance to each other
- Anchoring depth h
- Alignment according to specifications
- Climbing cone greased

Installing the climbing shoe

1. Screw Climbing Shoe-2 I ACS (**160**) with Cyl. Screw ISO 4762 M30 x 110-10.9 (**180**) to climbing tie (**167**).

(Fig. A3.10)

Note

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

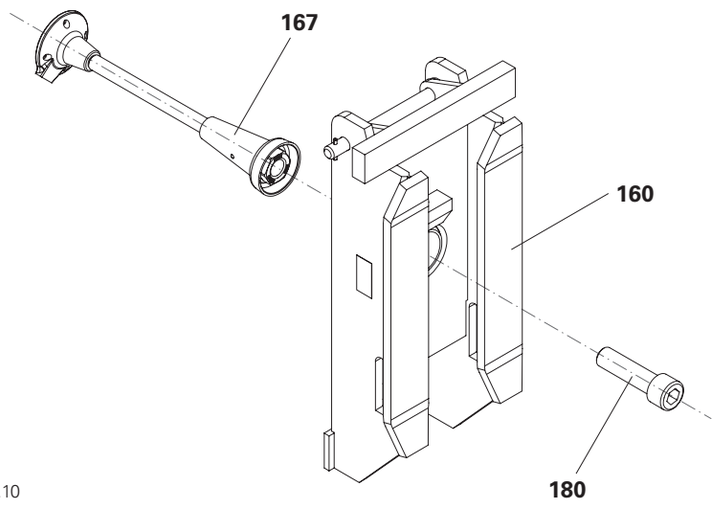


Fig. A3.10

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

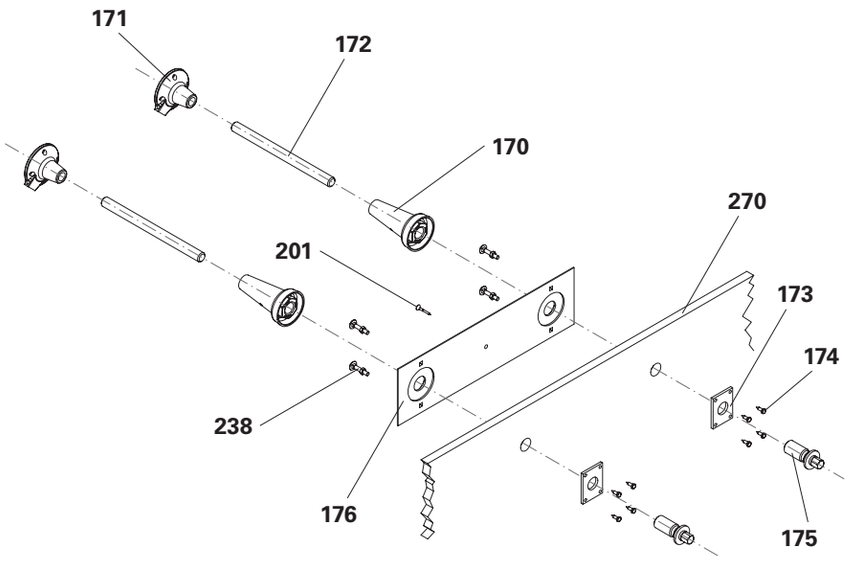


Fig. A3.11

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 76.

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

Installing 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 to the formlining with positioning screw M30 (**175**).

(Fig. A3.11)

Checking the assembly work

- Height
- Distance to each other
- Anchoring depth h
- Alignment according to specifications
- Climbing cone greased

Installing the climbing shoe

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

(Fig. A3.12 + A3.13)

Note

- 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)

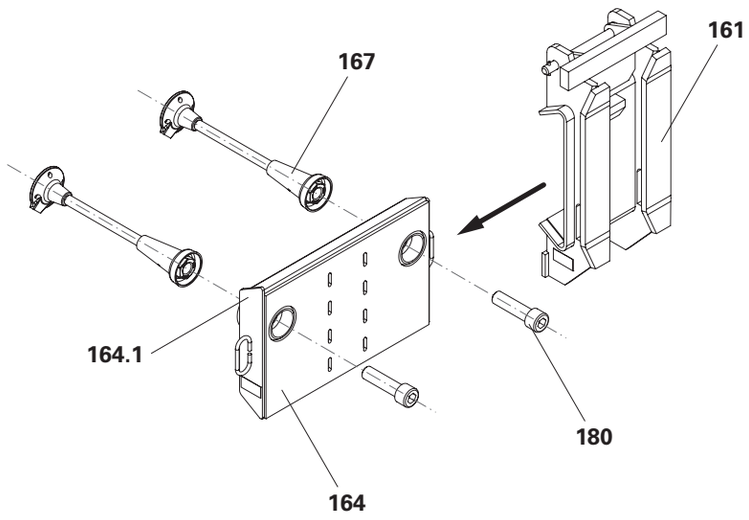


Fig. A3.12

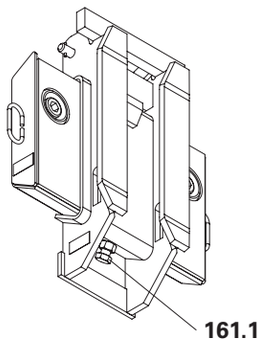


Fig. A3.13

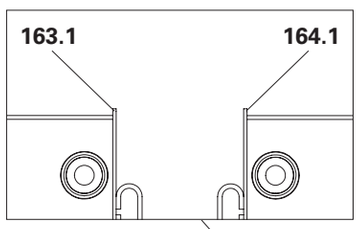


Fig. A3.14a

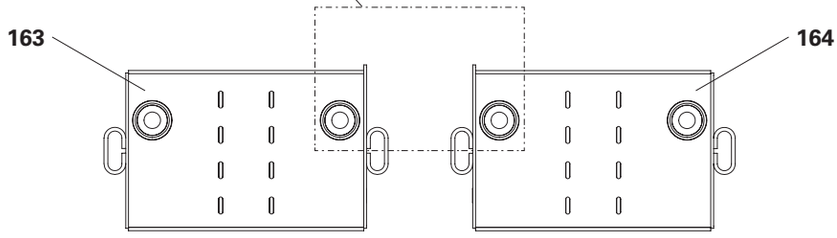


Fig. A3.14

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

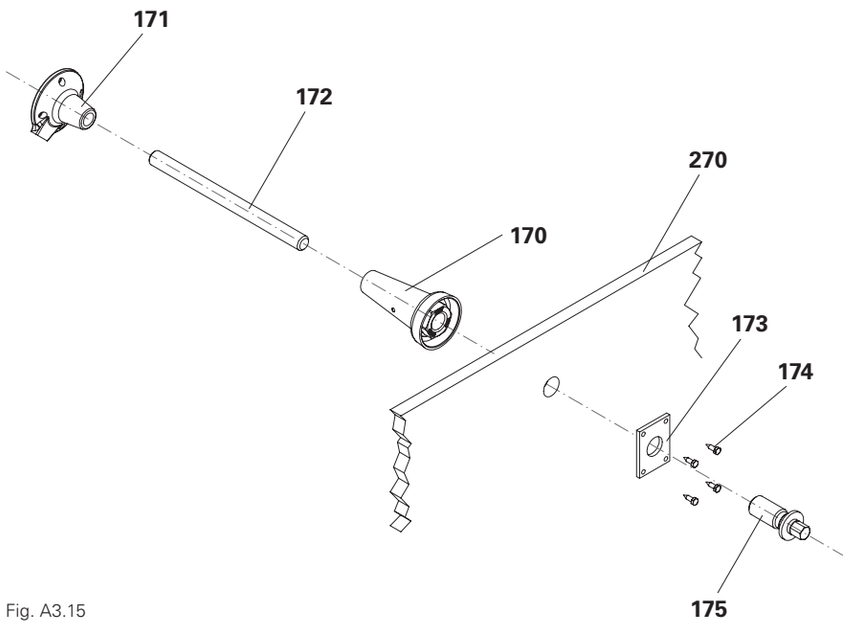


Fig. A3.15

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

Installing the climbing tie

1. Align the Anchor Positioning Plate M30 (**173**) on the formlining (**270**) and secure it 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 to the formlining with positioning screw M30 (**175**).

(Fig. A3.15)

Checking the assembly work

- Height
- Distance to each other
- Anchoring depth h
- Alignment according to specifications
- Climbing cone greased

Installing the climbing shoe

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

(Fig. A3.16)

Note

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

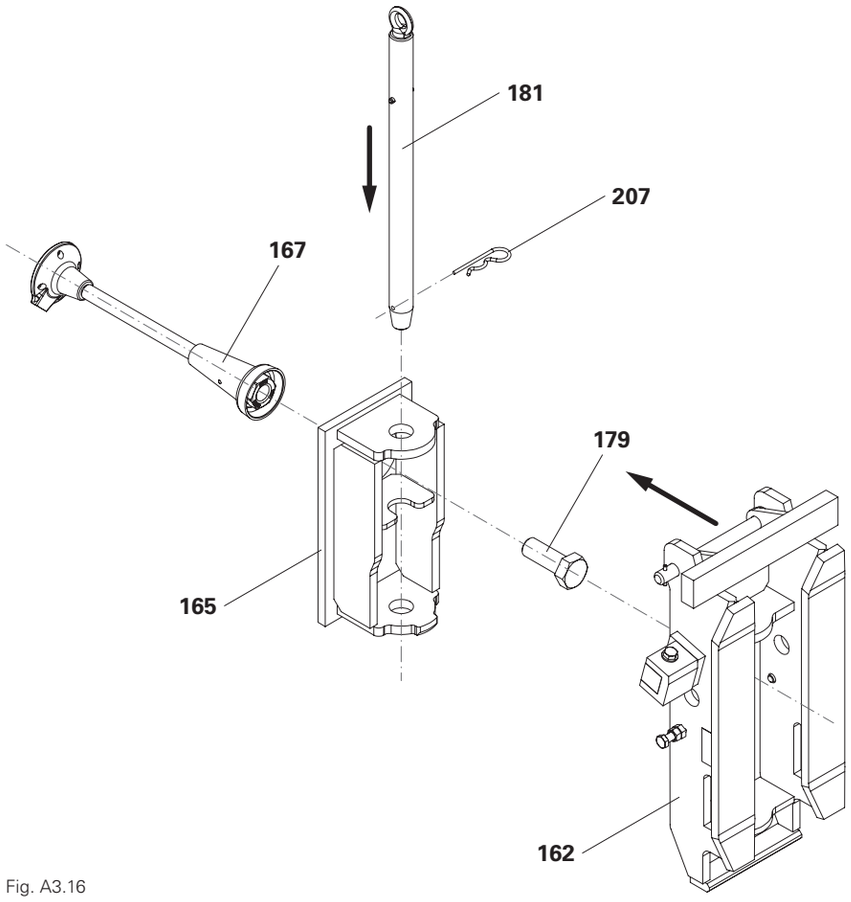


Fig. A3.16

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

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

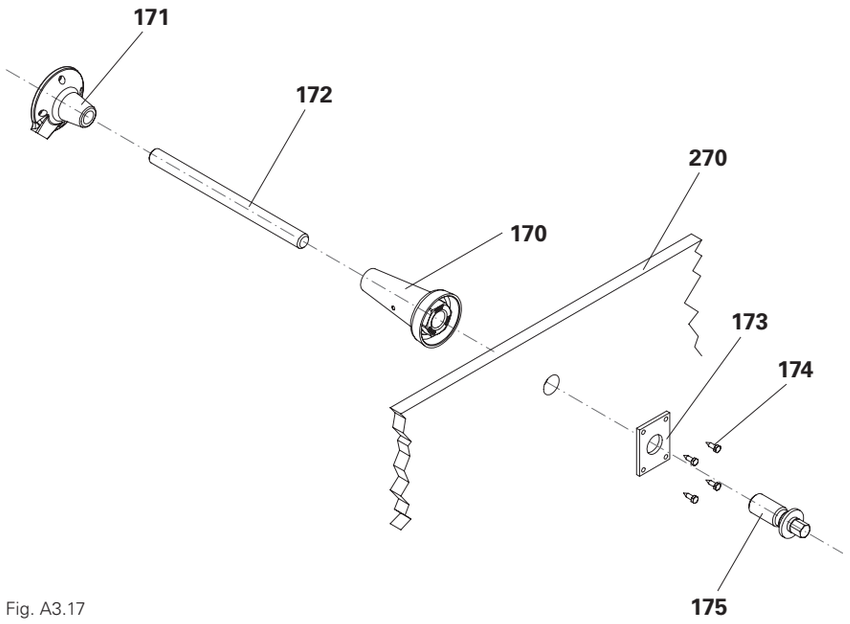


Fig. A3.17

Installing the climbing tie

1. Align the Anchor Positioning Plate M30 (**173**) on the formlining (**270**) and secure it 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 to the formlining with positioning screw M30 (**175**).

(Fig. A3.17)

Checking the assembly work

- Height
- Distance to each other
- Anchoring depth h
- Alignment according to specifications
- Climbing cone greased

Installing the climbing shoe

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

(Fig. A3.18)

Note

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

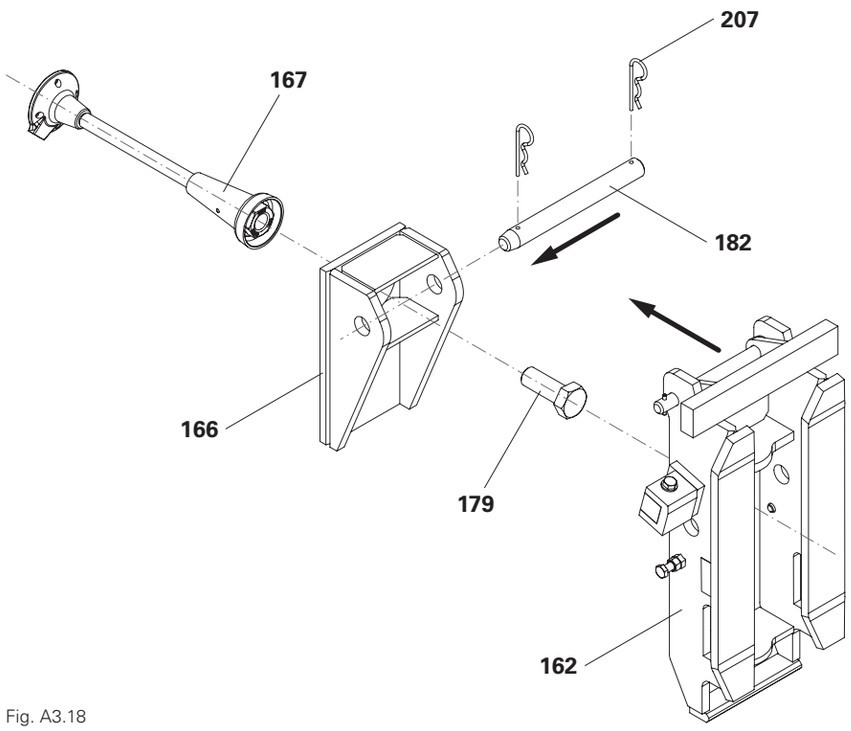


Fig. A3.18

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)

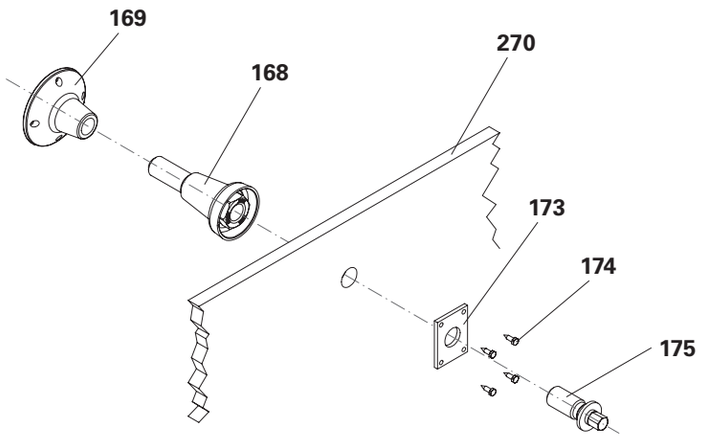


Fig. A3.19

Additional assembly positions

Formwork elements 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

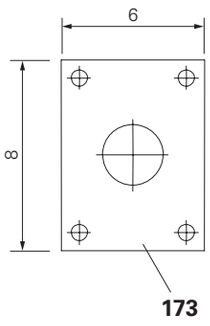


Fig. A3.20

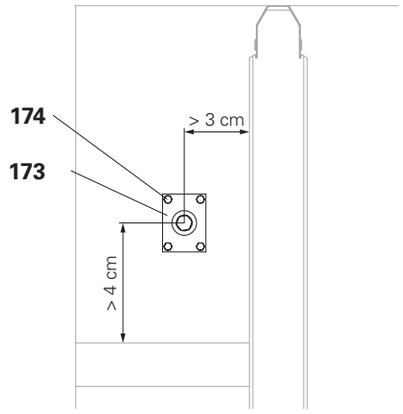


Fig. A3.21

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 a Ø 32 mm hole from the front of the formwork.
3. Install Anchor Positioning Plate M30 (**173**) on the rear side of the formlining with hex. wood screw 6 x 20, AF 10 (**174**).

Assembly of the climbing tie with Anchor Positioning Stud M30

If space is limited, install the climbing tie with 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. Bend the wire nails over on the back of the formlining.
3. Tightly screw pre-assembled climbing ties (**167**) onto the Anchor Positioning Stud M30 (**177**) and tighten. (Fig. A3.23 + A3.24)

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

Checking the assembly work

- Height
- Distance to each other
- Anchoring depth h
- Alignment according to specifications
- Screw-on cone greased

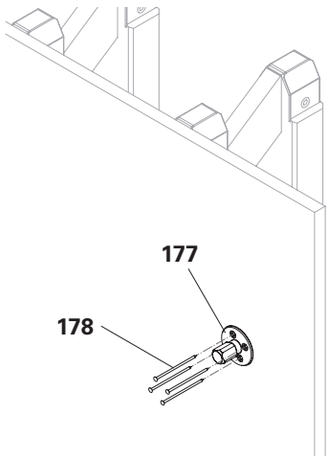


Fig. A3.22

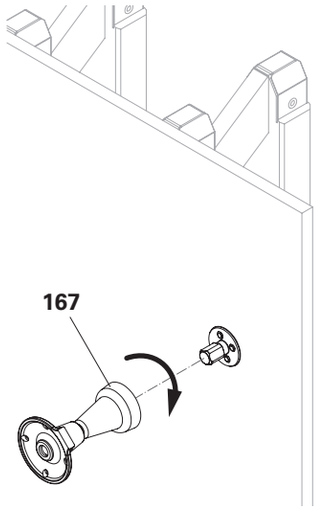


Fig. A3.23

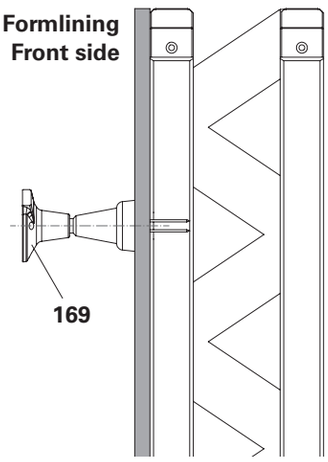


Fig. A3.24

Dismantling with Anchor Positioning Plate M30

Detaching the formwork

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

(Fig. A3.25)

Removing the climbing cone

After climbing into 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)

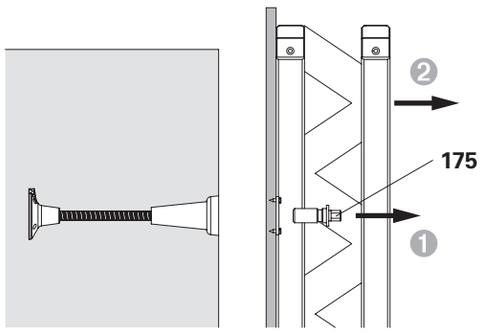


Fig. A3.25

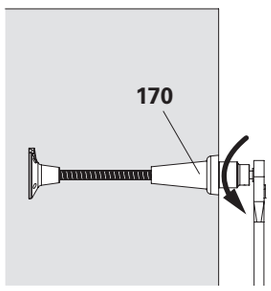


Fig. A3.26

Removal 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. Retract the formwork.

(Fig. A3.27)

4. Bend wire nails Ø 3 x 80 (**178**) over 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 into 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)

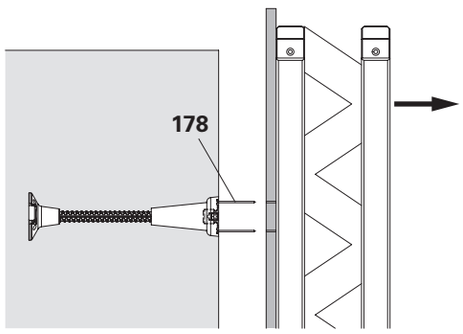


Fig. A3.27

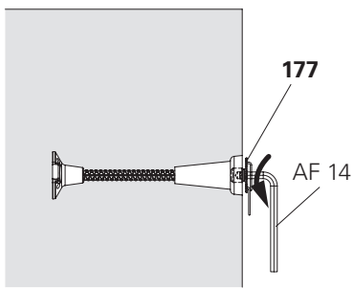


Fig. A3.28

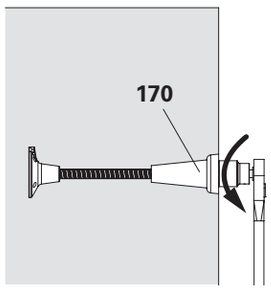


Fig. A3.29

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. A3.30)
- Tie tube: ±2 cm (Fig. A3.31)
- Climbing shoe II: ±2 mm (Fig. A3.32)
- Climbing shoe IV: ±2 mm (Fig. A3.33)

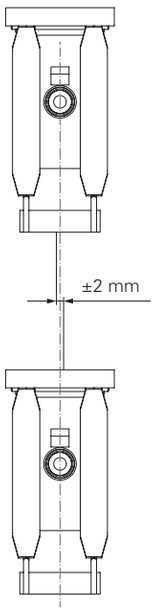


Fig. A3.30

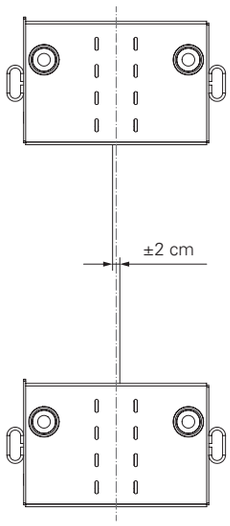


Fig. A3.31

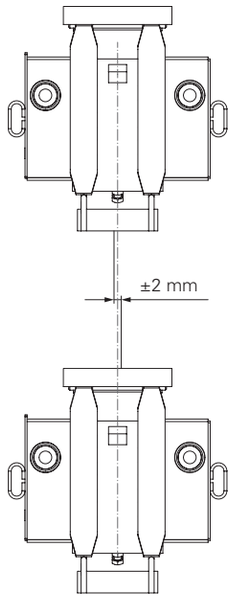


Fig. A3.32

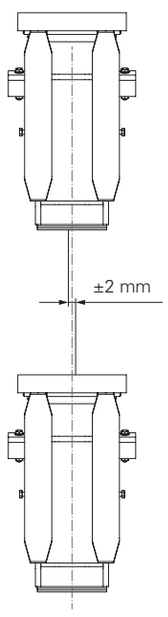


Fig. A3.33

A4 Operating states and loads

Operating status: Working
All work on the climbing unit:
- Cleaning formwork, carrying out reinforcement work, closing formwork, concreting and striking, inspection and maintenance.
  → Platforms must be freely accessible for the required work to be carried out.
- Move the formwork forwards and backwards.
- Wind pressure: q ≤ 0.25 kN/m².

Note
Loads are evenly distributed.

Operating status: Climbing
Move the climbing unit with the hydraulic climbing device.
- Retract the formwork.
- Remove non-planned loads from the platforms.
- Operating personnel required for climbing are usually located on the climbing platforms.
- Wind pressure: q ≤ 0.12 kN/m².

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

Non-operational
During longer work breaks, overnight.
- Wind pressure: q ≤ 0.5 kN/m².
- 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.
- Wind pressure: q > 0.5 kN/m².
- Entering 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 utilisation height, 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 the previous storey. For this, additional instructions are required. Remove materials and equipment from the platforms.
- After the storm, carry out a visual inspection of all parts and a functional test of all safety-relevant parts.

A4 Operating states and loads

Overview of live loads

Combination of 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				≤ 0.25 kN/m²	≤ 0.5 kN/m²	> 0.5 kN/m²
Carriage 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

Installing the climbing unit

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

In the following illustrations, the climbing ties of the inside and outside are at the same height, but laterally offset.

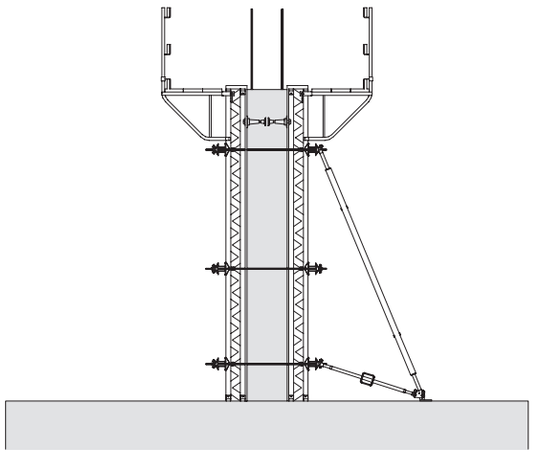


Fig. A5.01

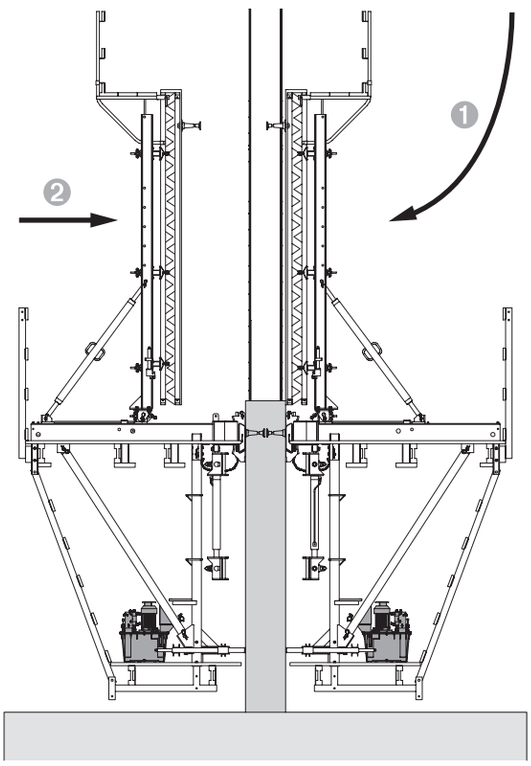


Fig. A5.02

1. Work cycle
Mount climbing unit without finishing platform onto 1st concreting section and support it with a slide. Assemble the formwork. Set and reinforce climbing ties. Close the formwork and concrete the 2nd section.

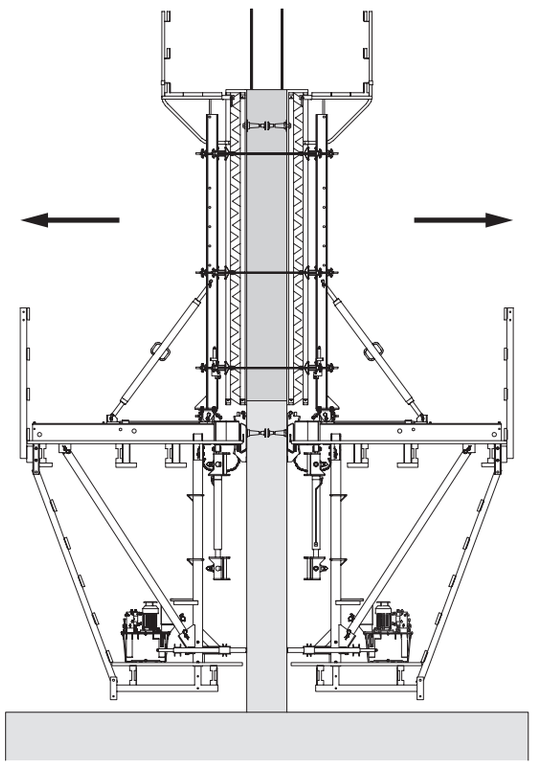


Fig. A5.03

2. Work cycle
Retract the formwork. Install the hydraulic system and put it into operation.

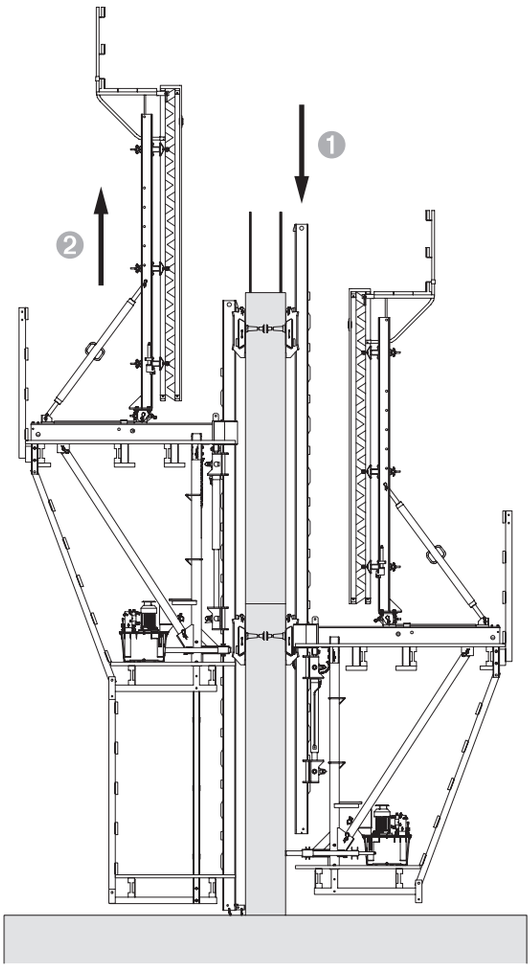


Fig. A5.04

3. Work cycle
Attach climbing shoe to climbing tie and insert climbing rail. Move the slide back and climb the climbing unit into the 2nd concreting section. Support with slide and attach finishing platform.

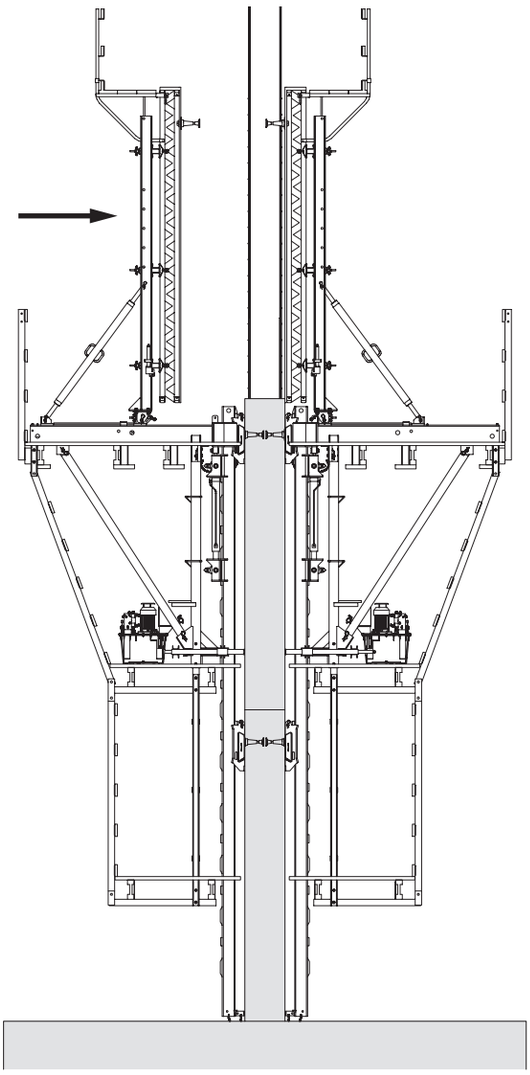


Fig. A5.05

4. Work cycle
Set and reinforce climbing ties. Close the formwork and concrete the 3rd section.

Concreting the standard section

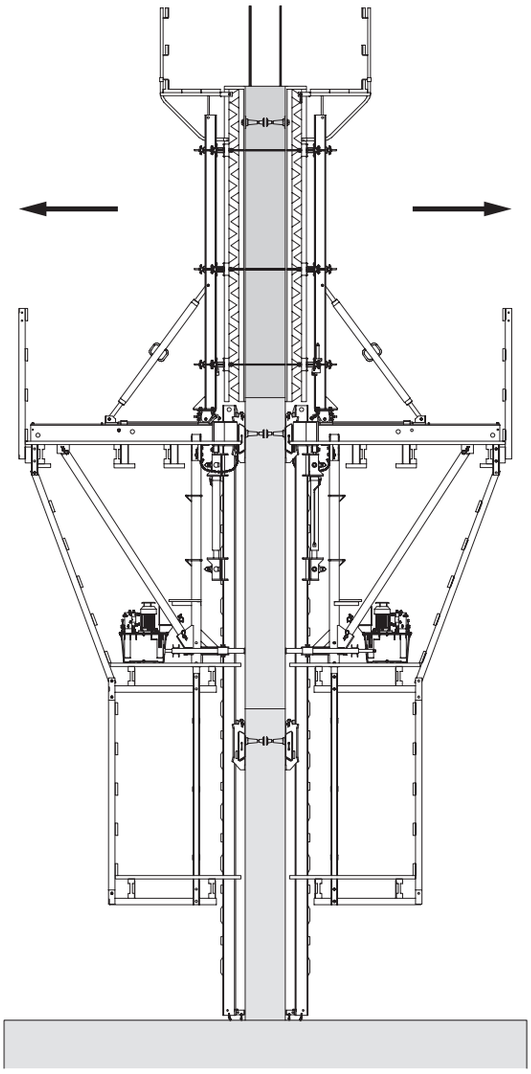


Fig. A5.06

5. Work cycle
Retract the formwork.

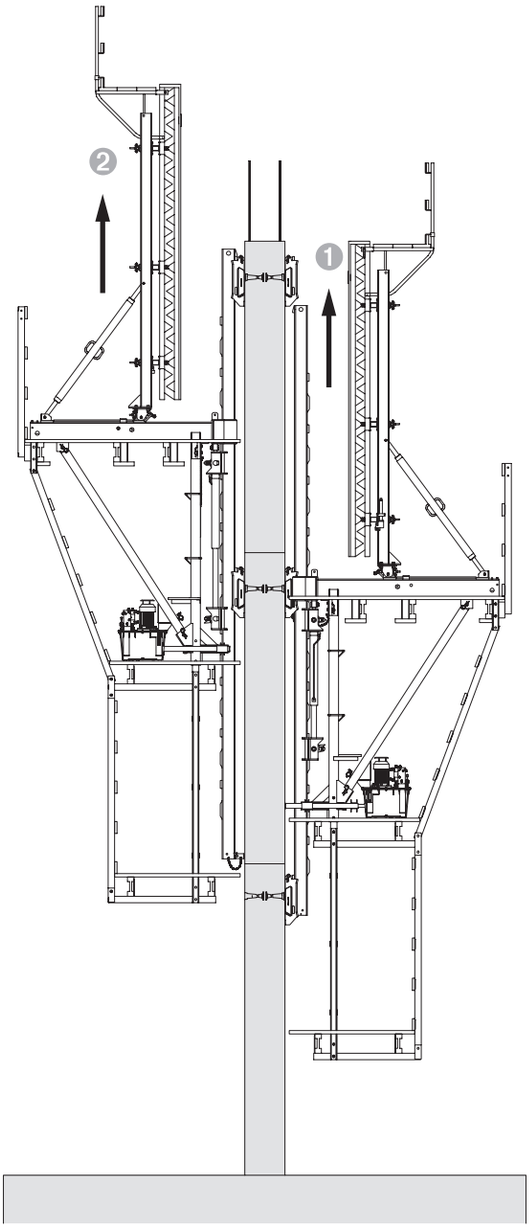


Fig. A5.07

6. Work cycle
Attach climbing shoe to climbing tie. Climb climbing rail into the 3rd concreting section. Remove the trailing climbing shoe and climbing cone, close with concrete cones. Climb climbing unit into the 3rd concreting section.

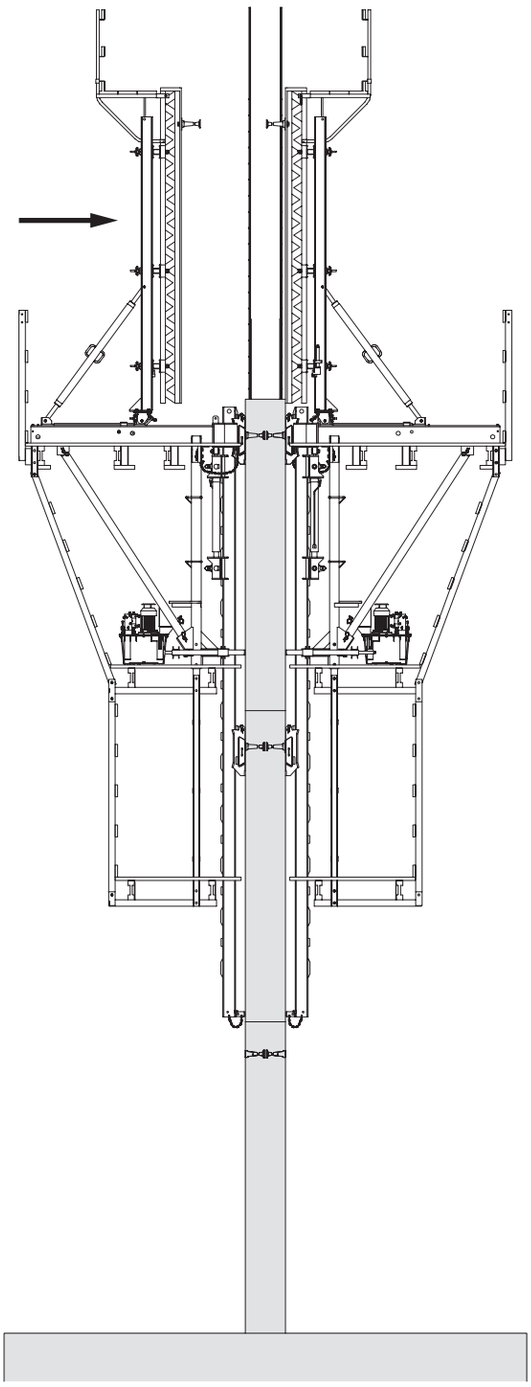


Fig. A5.08

7. Work cycle
Set and reinforce climbing ties. Close the formwork and concrete the 4th section.

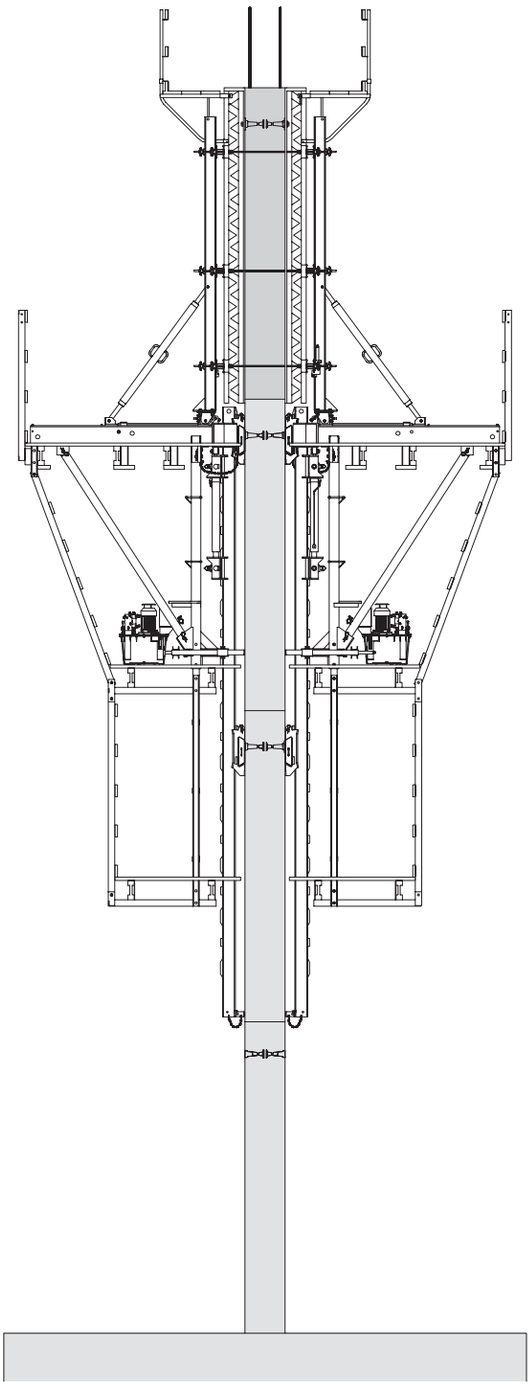


Fig. A5.09

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

B1 Assembly instructions

Preparing for assembly

Measures before assembly

- Check the completeness of the technical documentation:
  - Assembly plans
    - Formwork
    - Climbing systems (all levels and 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 at specified attachment points, fitting pins or with lifting straps.

Note

- Observe the project-specific weight of the assemblies.
- Use round slings with the appropriate load capacity.
- Always attach components and assemblies to the crane in a positive-locking manner.
- PERI recommends using the Lifting 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, determine the attachment points for the correct position by trial and error.
- For supplied parts, use the attachment points specified by the manufacturer.
- Observe the load-bearing capacity of the attachment points.
- Use climbing beam or compression brace.

B2 Platform decking and guardrail

General information

- Platform decks and guardrails must be professionally designed and structurally verified in accordance with the applicable safety regulations.
- 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 4420-1:2004-03 and DIN EN 12811-1:2004-03.
- The material quality must comply with the applicable standards.
- Avoid – or at least cover – tripping hazards, unnecessary recesses and gaps in the deck.
- Close openings for assembly, transport, etc. after completing the work.
- 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 use safety nets with a mesh size of max. 2 cm.
- Cover any openings in the decking that are required for normal working procedures with suitable immovable materials.
- For safe operation of tie points, mount intermediate platforms if necessary.

- 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 12811-1:2004-03, Table 3.
Solid wood strength class C24 or softwood grade S10 according to DIN EN 338:2016-07.
Minimum dimensions of the planking:
t × w = 4 × 24 cm or 4.5 x 20 cm.

PERI recommends bolting the individual planks 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 × w = 4 x 12 cm.

Alternatively:
Solid wood strength class C16 according to DIN EN 338:2016-07.
Minimum dimensions of the planks:
t x w = 5 x 24 cm.

Platform deck of the climbing platform, finishing platform, concreting platform
Working scaffold of Load Class 2.
Max. load 150 kg/m² according to DIN EN 12811-1:2004-03, Table 3.
Solid wood strength class C24 or softwood grade S10 according to DIN EN 338:2016-07.
Minimum dimensions of the planking:
t x w = 4 x 20 cm.

PERI recommends bolting the individual planks 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 × w = 4 x 12 cm.

Alternatively:
Solid wood strength class C16 according to DIN EN 338:2016-07.
Minimum dimensions of the planks:
t x w = 5 x 24 cm.

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

B2 Platform decking and guardrail

Depending on the static requirements, Formwork Girders GT 24 or Profile Girders 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.

(Fig. B2.01 + B2.02 und B2.03 + B2.04)

The platform decking is placed directly on the Formwork Girders GT 24 (**21**) and bolted to each formwork girder. (Fig. B2.03)

Attaching the platform beam
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
Attach with 2x F.H. bolt DIN 603 M8 x 100 MU (**222**) + washer (**225**).
(Fig. B2.02)
Double girder position
Attach with 2x F.H. bolt DIN 603 M8 x 200 MU (**221**) + washer (**225**).
(Fig. B2.04)

Platform bracing
Screw down the plank diagonals underneath the platforms. Minimum dimensions of the planks: t x w = 4 x 20 cm. Fixing per planking with 2x Torx 6 x 80.

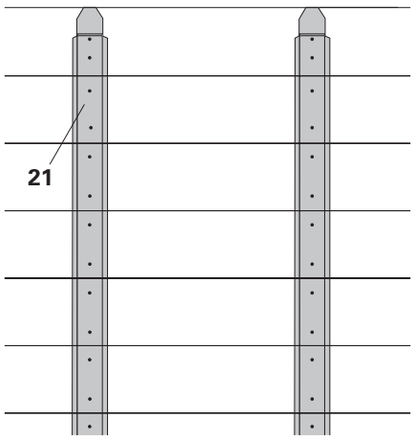


Fig. B2.01 Top view

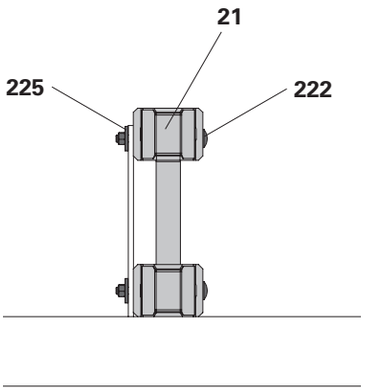


Fig. B2.02 Lateral view

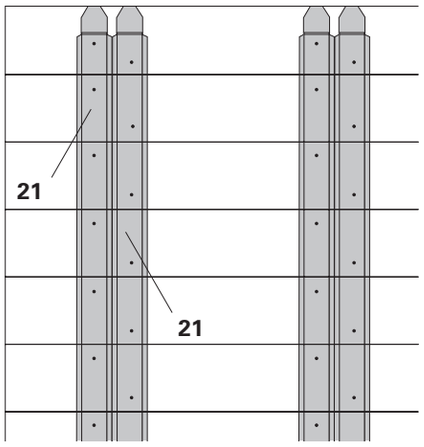


Fig. B2.03 Top view

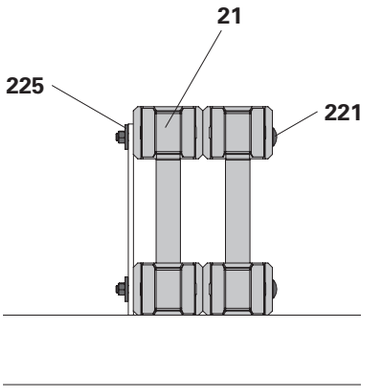


Fig. B2.04 Lateral view

Beam IPE as a platform beam

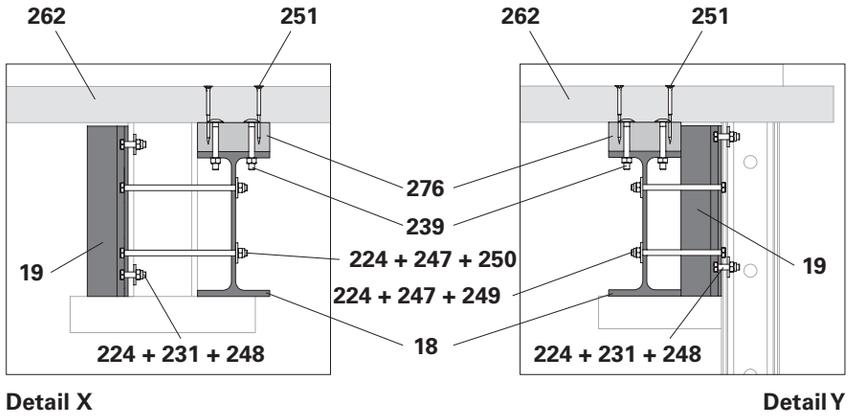
The Beams IPE are manufactured in a project-specific manner and are furnished with all the necessary holes for assembly.
To assemble the platform decking, an intermediate layer of timber is screwed onto the Beam IPE. The platform decking is placed on the intermediate layer and screwed down.
(Fig. B2.05)

Components

18 IPE 200, special length
19 Connector IPE ACS
224 Nut ISO 7040 M8-8
231 Screw ISO 4017 M8 x 30-8.8
239 F.H. bolt DIN 603 M8 x 65 MU
247 Washer ISO 7094-08-100 HV
248 Plain Washer 9 DIN 434
249 Bolt ISO 4014 M8 x 130-8.8
250 Bolt ISO 4014 M8 x 170-8.8
251 Spax 6 x 70-SK-TX30
262 Planking
276 Board 4 x 10 cm

Assembly

Carry out the assembly according to the detailed drawings in the assembly plan.



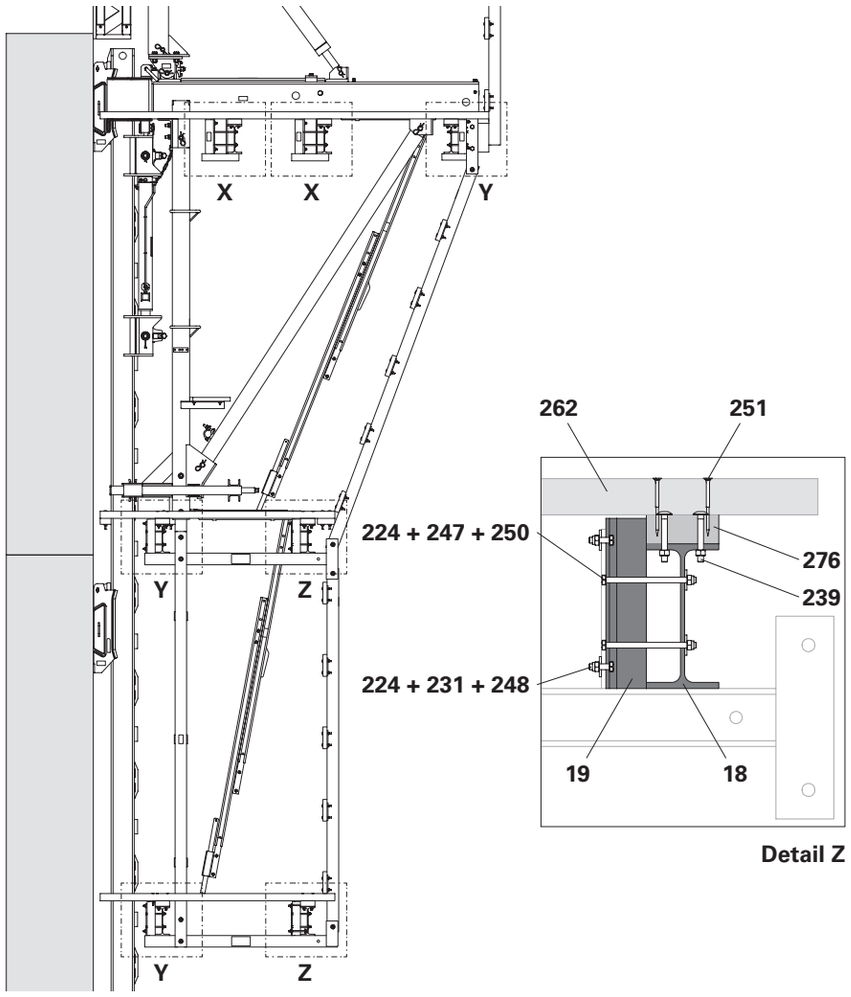


Fig. B2.05

Platform decking

Assembly
Screw each individual planking section (**262**) at each intersection with platform beams (**260**) using 2x Torx 6 x 80 (**202**). e = 120 mm.
(Fig. B2.06 + B2.07)

- Prevent cantilevered planking and platform beams from lifting off using suitable fasteners.
- Install multi-layer plywood sheets in the cantilever 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)

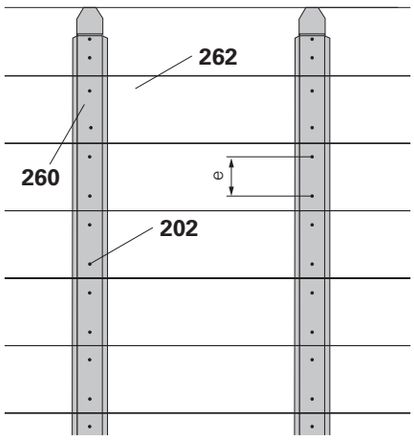


Fig. B2.06 Top view

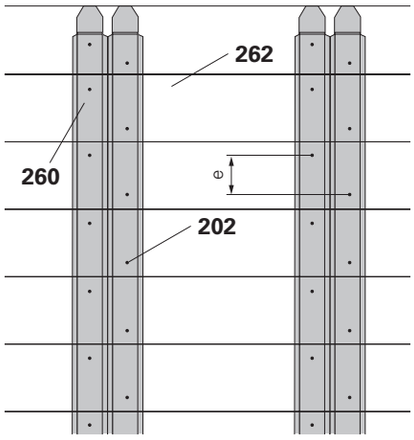


Fig. B2.07 Top view

Toe boards

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

Components

6	Cantilever Arm Post Climbing Platform ACS
7	Guardrail Post Climbing Platform ACS l = 2.83 m
10	Cantilever Arm Post Finishing Platform ACS l = 2.61 m
11	Guardrail Post Finishing Platform ACS l = 2.51 m
12	Guardrail Post Main Platform ACS
223	F.H. bolt DIN 603 M8 x 50
224	Nut ISO 7040 M8-8
263	Toe board

Assembly
1. Align toe board (**263**) on inside of guardrail post (**12**).
2. Drill a Ø 9 mm hole where the tabs are positioned.
3. Screw tight with F.H. bolt DIN 603 M8 x 50 (**223**) and nut M8 (**224**).

(Fig. B2.08)

The toe boards are attached to the components (**6**), (**7**), (**10**) and (**11**) in the same way.

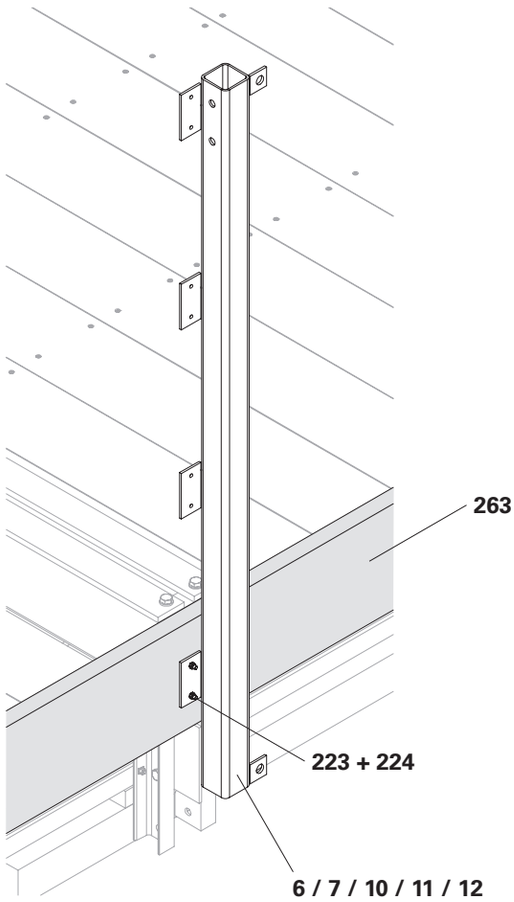


Fig. B2.08

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. B2.09)

Alternative 2

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

(Fig. B2.10 + B2.11)

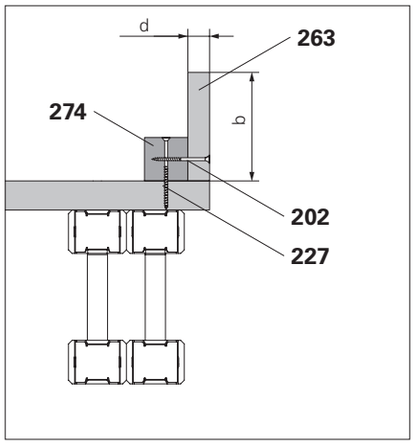


Fig. B2.09

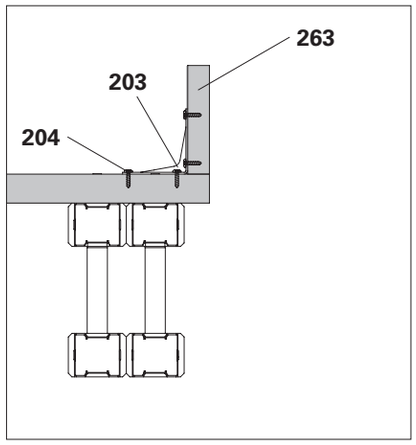


Fig. B2.10

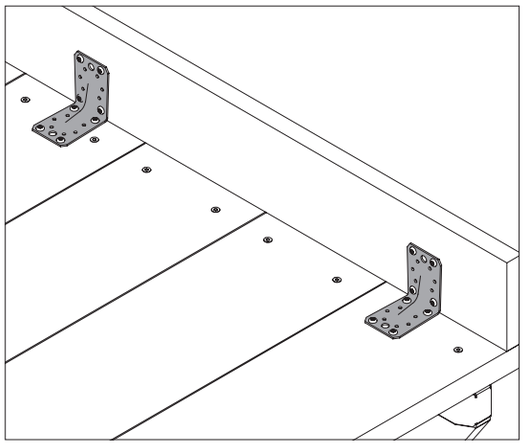


Fig. B2.11

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,
- Galvanised steel scaffolding tubes Ø 48.3 or Ø 60.3,
- Squared timber with enclosure made of netting, tarpaulin, plywood or trapezoidal metal sheeting.

(Fig. B2.12)

Note
Never climb on the guardrail, always use a ladder.

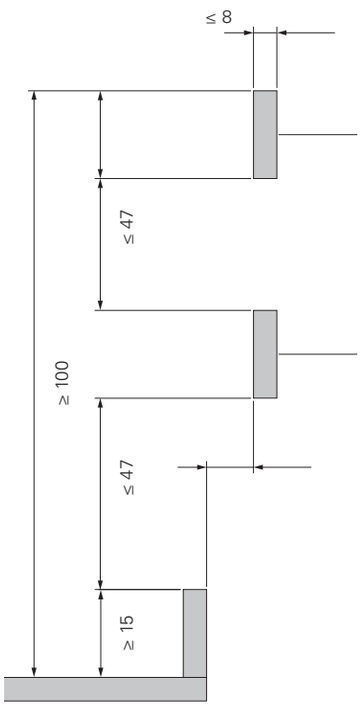


Fig. B2.12

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.

Components

6	Cantilever Arm Post Climbing Platform ACS
7	Guardrail Post Climbing Platform ACS l = 2.83 m
10	Cantilever Arm Post Finishing Platform ACS l = 2.61 m
11	Guardrail Post Finishing Platform ACS l = 2.51 m
12	Guardrail Post Main Platform ACS
223	F.H. bolt DIN 603 M8 x 50
224	Nut ISO 7040 M8-8
264	Guardrail board

Assembly
1. Align guardrail boards (**264**) on the inside of the guardrail posts (**12**).
2. Drill a Ø 9 mm hole where the tabs are positioned.
3. Screw tight with F.H. bolt DIN 603 M8 x 50 (**223**) and nut M8 (**224**).

(Fig. B2.13)

The toe boards are attached to the components (**6**), (**7**), (**10**) and (**11**) in the same way.

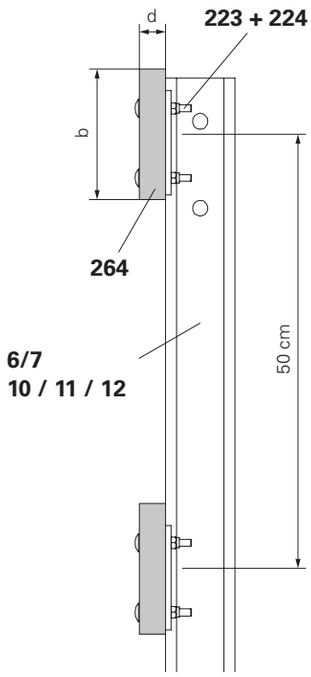


Fig. B2.13

Ladder cage with scaffolding tubes

Requirements:
Steel scaffolding tubes (**265**), minimum quality S235.
Dimensions Ø × t = 48.3 mm × 3.2 mm or 60.3 mm × 4.5 mm.

Components

- **6** Cantilever Arm Post Climbing Platform ACS
- **7** Guardrail Post Climbing Platform ACS l = 2.83 m
- **10** Cantilever Arm Post Finishing Platform ACS l = 2.61 m
- **11** Guardrail Post Finishing Platform ACS l = 2.51 m
- **12** Guardrail Post Main Platform ACS
- **13** Guardrail Connection Plate ACS/SCS
- **224** Nut ISO 7040 M8-8
- **228** Clamp A64 DIN 3570
- **230** Washer ISO 7090-08 200 HV
- **231** Screw ISO 4017 M8 x 30-8.8
- **265** Steel scaffolding tube Ø 48.3 x 3.2
- **266** Safety net
- **282** Nut ISO 7040 M12-8

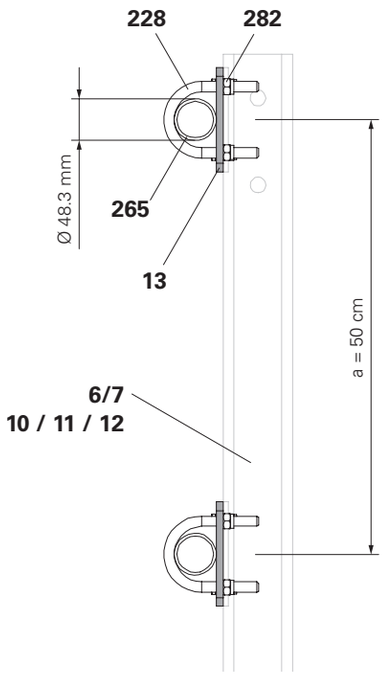


Fig. B2.14

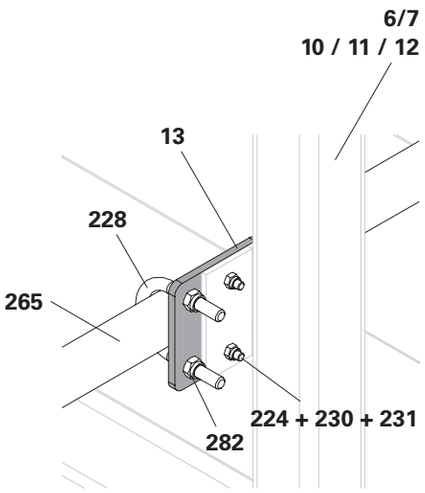


Fig. B2.15

Assembly

1. Screw the Guardrail Connection Plate (**13**) with bolt M8 x 30 (**231**), washer M8 (**230**) and nut M8 (**224**) to the lugs on the inside of the guardrail post (**12**).
2. Insert the scaffold tube (**265**) into clamp A64 (**228**) and screw it together with nut M12 (**282**) to the Guardrail Connection Plate (**13**).

(Fig. B2.14 + B2.15)

Connect or support scaffold tubes at the ends and in the centre of the bay using vertical scaffold tubes with couplings.
This prevents overloading.

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. B2.16)

- Mesh size for enclosure nets ≤ 20 mm.
- Scaffolding tube spacing a = 50 cm.

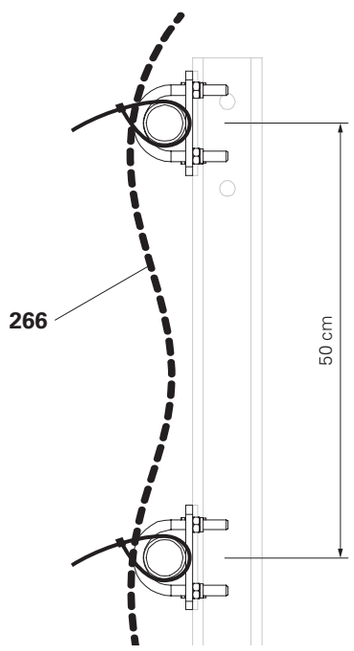


Fig. B2.16

Lateral protection
Lateral protection is always necessary where leading edges occur.

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

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 Wooden wedge

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

(Fig. B2.17)

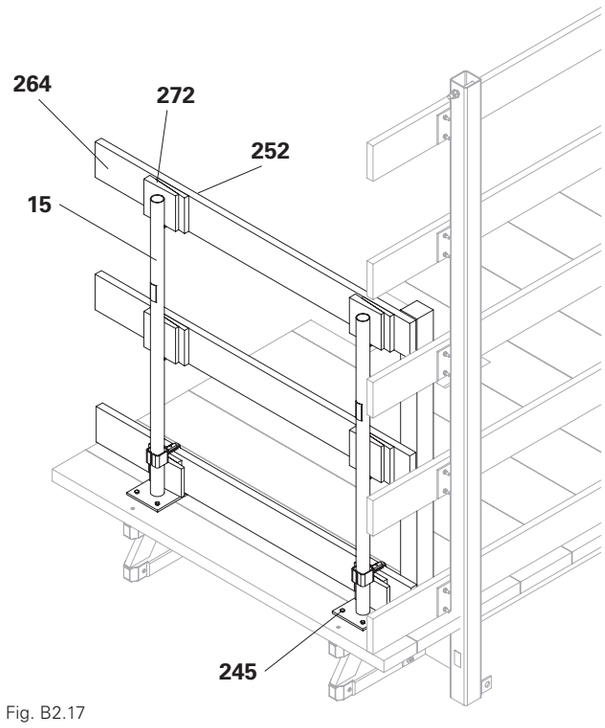


Fig. B2.17

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 to the platform decking with Torx 6 x 40 (**200**) screws.

(Fig. B3.02)

- Minimum plank width: b_{min} > 10 cm. If the minimum plank width is not reached, move the descent hatch to the side.
- If the plank can only be fastened 1x to the platform beam, install a trimmer for fixing the planking. (Fig. B3.03)

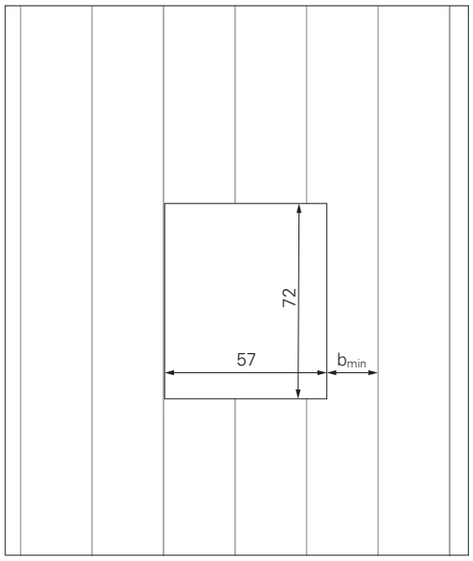


Fig. B3.01

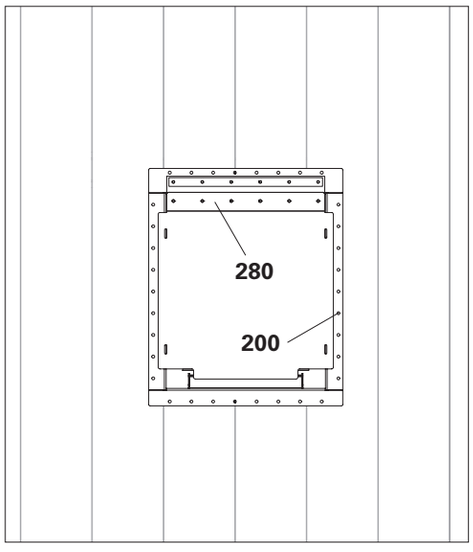


Fig. B3.02

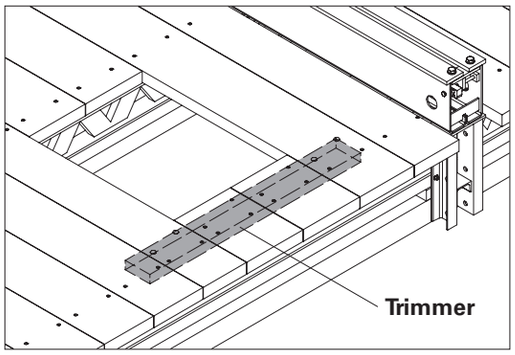


Fig. B3.03

B3 Assembling the ladder access

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 End 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 lower 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 connector (**283.1**) of the lower ladder. (Fig. B3.04)

- Lower 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)

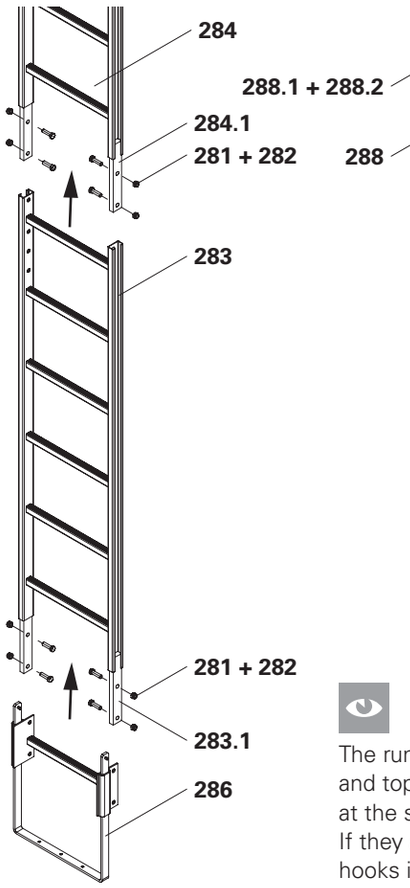


Fig. B3.04

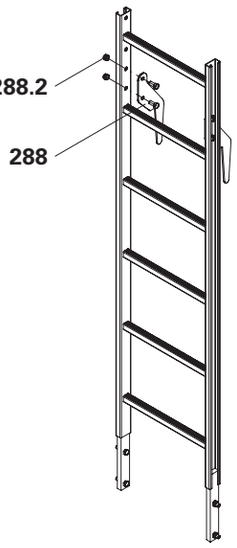


Fig. B3.05

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

B3 Assembling the ladder access

Fitting the ladder on the hatch

1. Open hatch cover (**280.1**) and lift in ladder with 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)

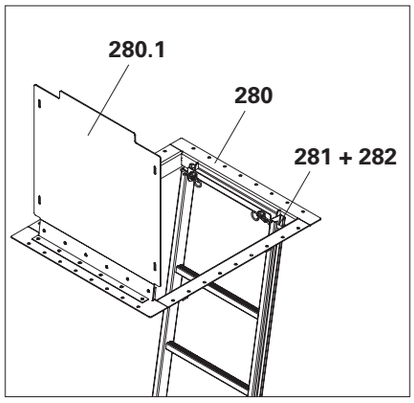


Fig. B3.07

Alternatively:

Attaching the End 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)

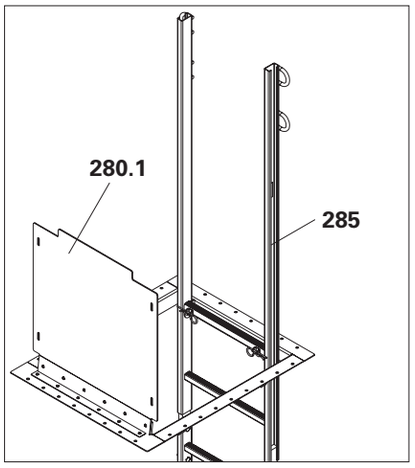


Fig. B3.08

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**). (Fig. B3.06)

Mounting 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 must 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)

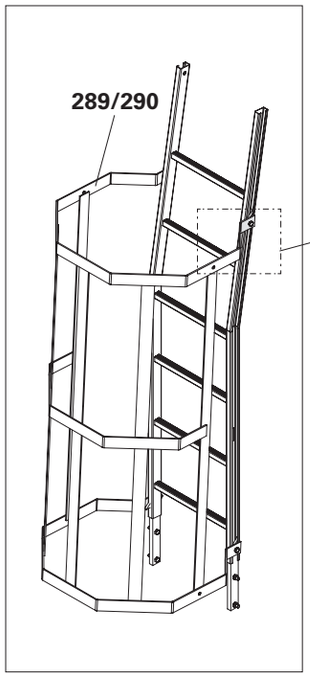
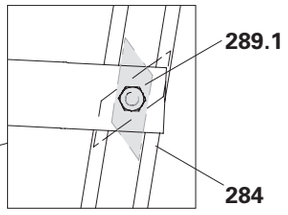
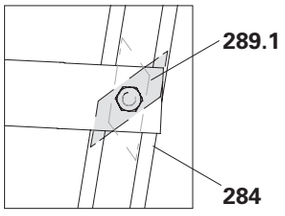


Fig. B3.09



Insertion position



Clamping length

- Fit the ladder in accordance with local standards and regulations.
- Maximum inclination $\alpha < 15°$.

B4 Work platform (level 0)

General information

The work platform is the main platform of the climbing unit. The carriage is mounted on the work platform and supports the formwork.
The work platform is mostly circumferential. From the work platform, one has access to the concreting platform above and the climbing platform below.

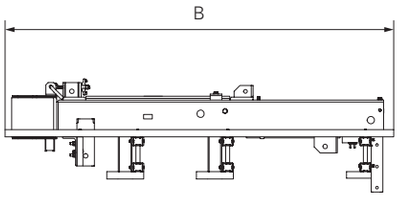


Fig. B4.01

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**).

Fit compensation planks in the centre of the platform. (Planking w < 24 cm)

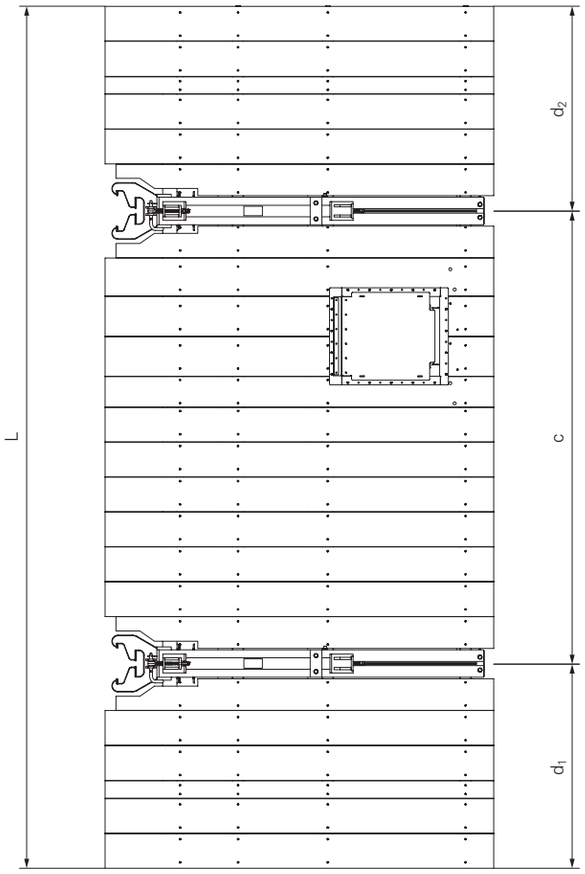


Fig. B4.02

Platform parameters	
L	Climbing unit length
B	Work platform width
c	Console bracket spacing
d	Cantilever

Mounting the work platform

Components

1 Crossbeam ACS with Carriage
2 Angle for ACS 2-console
21 Formwork Girder GT 24
202 Torx 6 x 80
222 F.H. bolt DIN 603 M8 x 100 MU
239 F.H. bolt DIN 603 M8 x 65 MU
262 Planking
277 Board 4 x 20 cm
280 Hinged Hatch 55 x 60-2

- Prepare three squared timbers with a sling as an assembly aid. The dimension c corresponds to the bracket spacing. Lay out the squared timbers at the specified distances on the assembly area and align them parallel to each other. (Fig. B4.03)
- Height of the stops ≤ 4.5 cm.

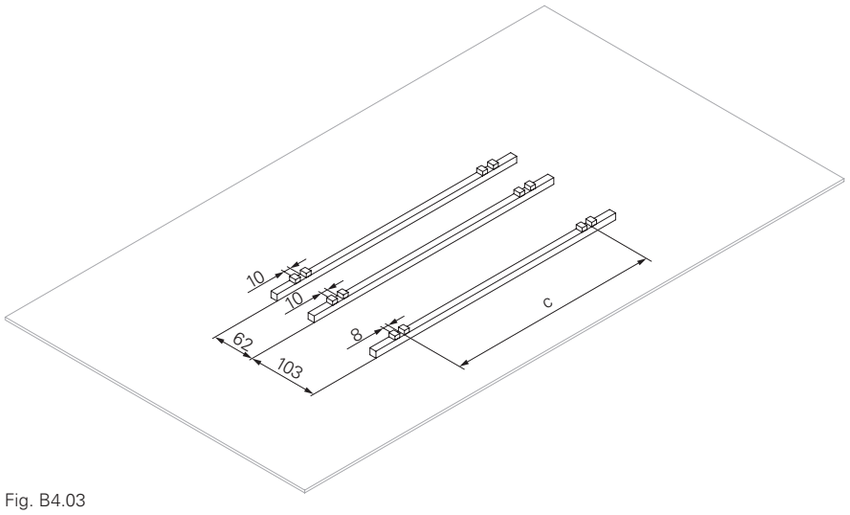


Fig. B4.03

Assembly

1. Lay out Angle for ACS 2-console (**2**) and Formwork Girder GT 24 (**21**) on the assembly area and roughly align with the installation position. (Fig. B4.04)
2. Attach the Crossbeam ACS (**1**) to the crane and lower it to the assembly position using the angle (**2**). (Fig. B4.05)

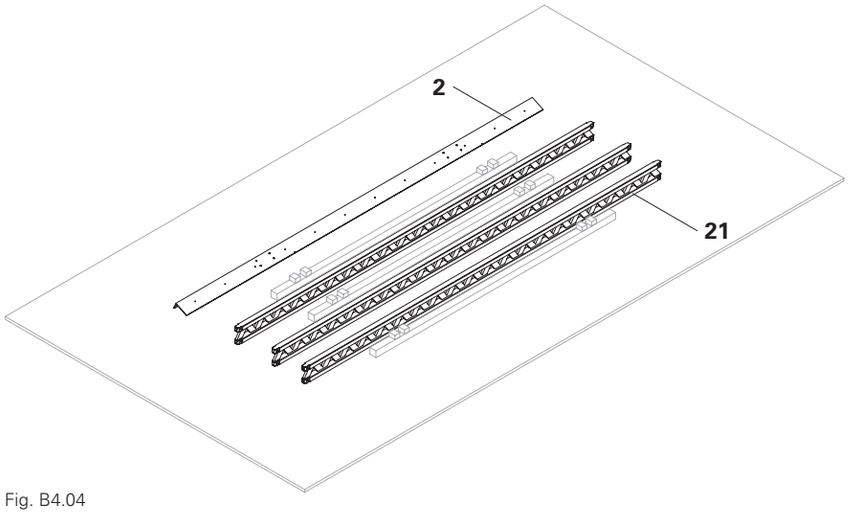


Fig. B4.04

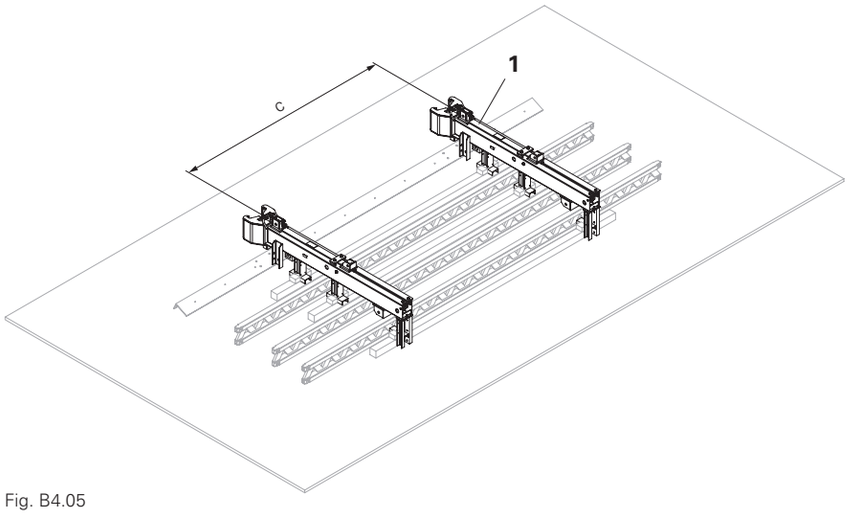


Fig. B4.05

Caution

Heavy components can tip over!
Bruising on arms and legs.

⇒ Do not detach the Crossbeam ACS (**1**) from the crane until the Crossbeam ACS (**1**) is bolted to the Angle ACS (**2**).

3. Screw the crossbeam (**1**) and angle (**2**) together using the attached assembly materials.
   Make sure that the plain washer (**2.4**) is installed in the correct position (inclined).

(Fig. B4.06 + Fig. B4.06a)

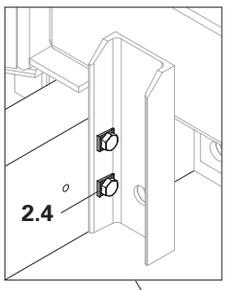


Fig. B4.06a

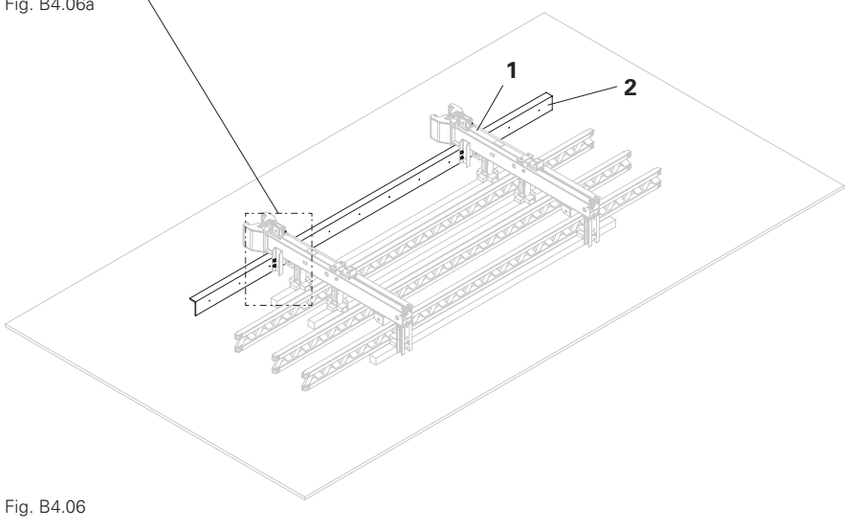


Fig. B4.06

Note

- The plain washer must lie flat and full-face with the profile.
- The screw head must lie flat and full-face with the plain washer.

4. Cut 3x board 4 x 20 (**277**) to length to fit angle ACS (**2**).
5. Pre-drill boards (**277**) with Ø 9 mm.
6. Screw to the angle (**2**) with F.H. bolts DIN 603 M8 x 65 MU (**239**).

(Fig. B4.07 + B4.07a)

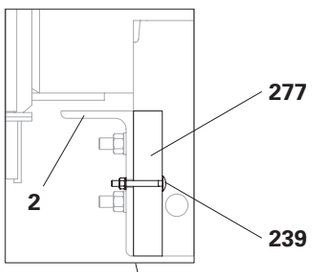


Fig. B4.07a

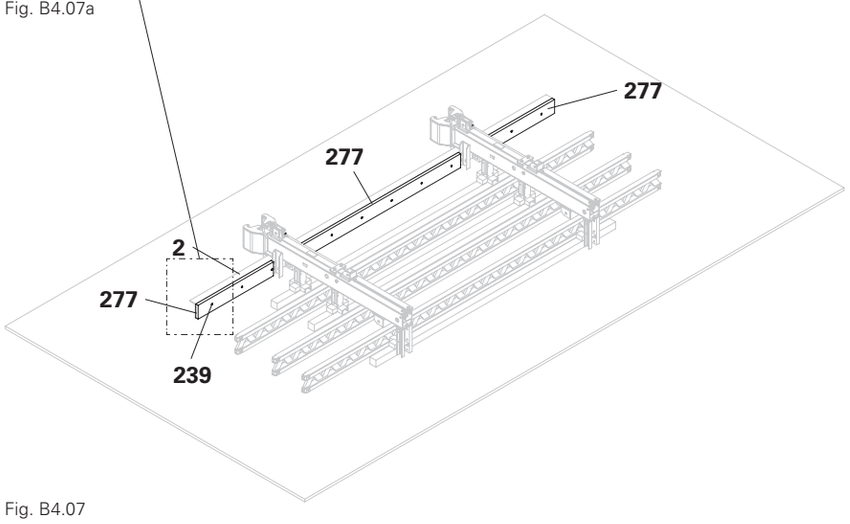


Fig. B4.07

B4 Work platform (level 0)

7. Place Formwork Girder GT 24 (**21**) as platform beam in the platform beam support (**1.1**) of crossbeam (**1**) and align.
   Check diagonal dimensions. Align the crossbeams (**1**) parallel and the formwork girders (**21**) perpendicular to the crossbeam (**1**).
   (Fig. B4.08 + B4.09)
8. Pre-drill Formwork Girder GT 24 (**21**) with Ø 9 mm and screw on with F.H. Bolts DIN 603 M8 x 100 MU (**222**) onto the platform beam support (**1.1**). (Fig. B4.09)

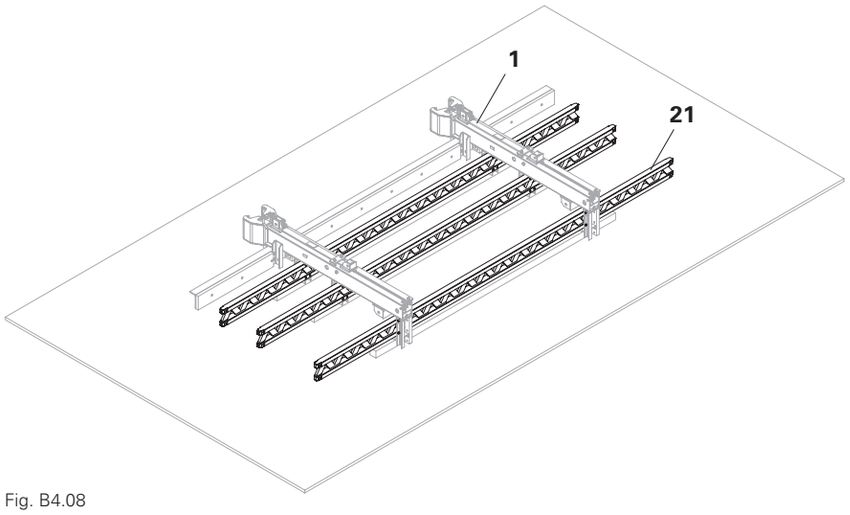


Fig. B4.08

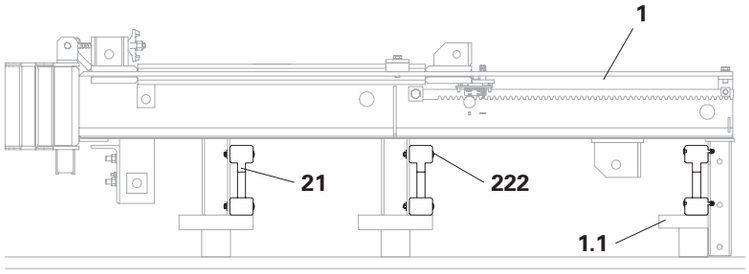


Fig. B4.09

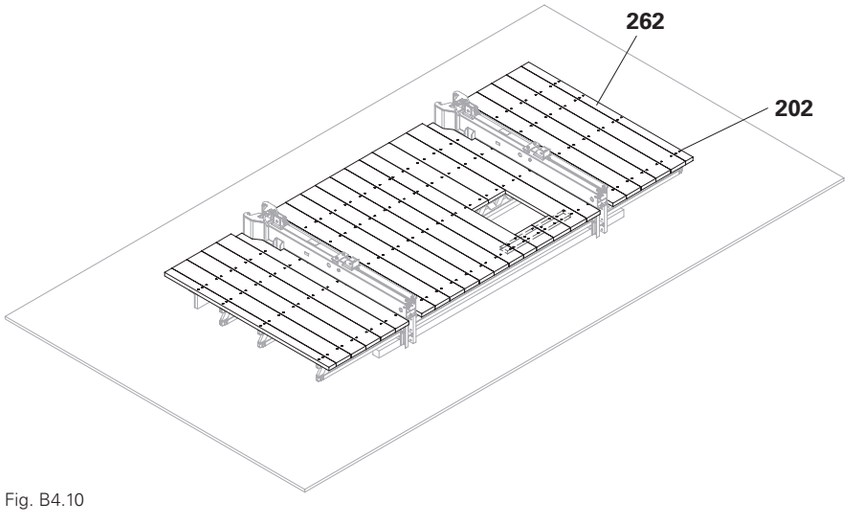


Fig. B4.10

9. Saw the planking (**262**) to length.
10. Saw cut-outs in the platform decking.
    For Climbing Shoe II ACS according to Fig. B4.11 + B4.12.
    For Climbing Shoe-2 I ACS according to Fig. B4.11 + B4.13.
11. Place the planking (**262**) on the Formwork Girder GT 24 (**21**), align and screw tight with 2x Torx 6 x 80 (**202**) per formwork girder.
    (Fig. B4.10)
12. Fit the hatch (**280**), see "Fitting the descent hatch" on page 60.
    (Fig. B4.11)

- The dimensions x_1 – x_5 are project-specific.
- If necessary, the planking to the descent hatch can also be attached to a transition piece.

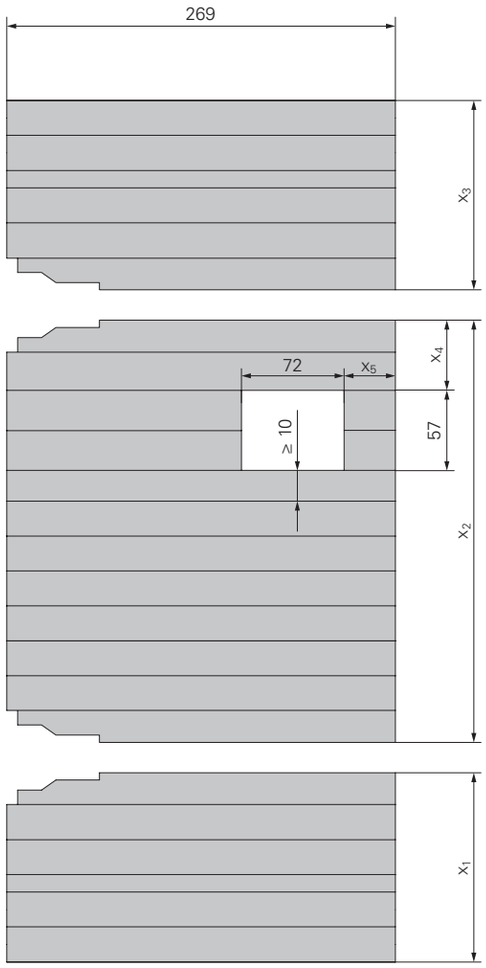


Fig. B4.11

Climbing Shoe II ACS

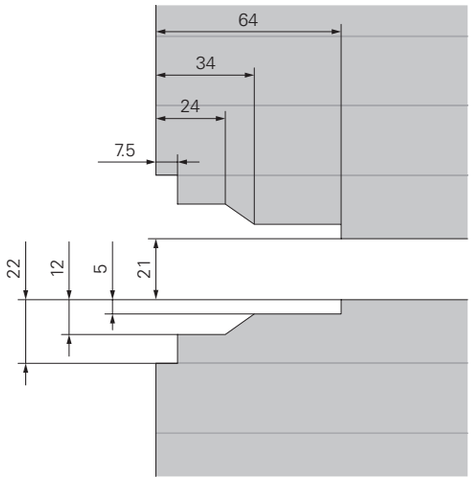


Fig. B4.12

Climbing Shoe-2 I ACS

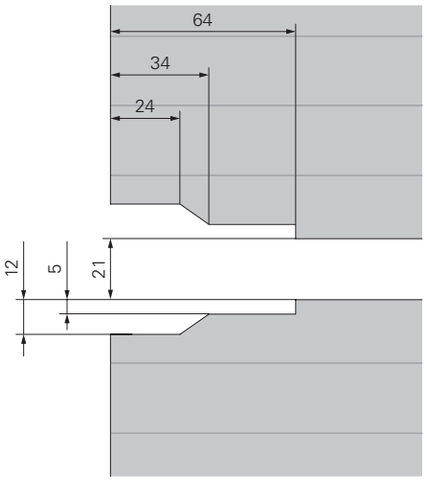


Fig. B4.13

B5 Climbing platform (level -1)

General information

The climbing platform is under the work platform. The hydraulic system is installed on the climbing platform. The climbing devices and the hydraulic unit are operated from there.
The climbing platform is mostly circumferential. From here, one has access to the work platform above and the finishing platform below.

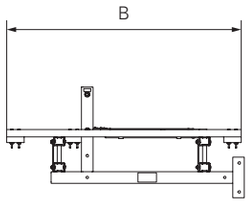


Fig. B5.01

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).

Platform parameters	
L	Climbing unit length
B	Wide climbing platform
c	Console bracket spacing
d	Cantilever

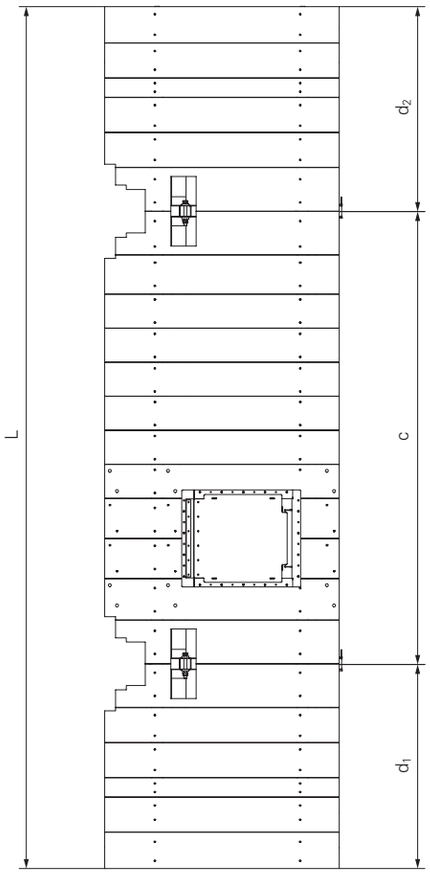


Fig. B5.02

Installing the Climbing Platform

Components

5 Climbing Platform Beam ACS
21 Formwork Girder GT 24
202 Torx 6 x 80
222 F.H. bolt DIN 603 M8 x 100 MU
262 Planking
280 Hinged Hatch 55 x 60-2

- 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 specified distances on the assembly area and align them parallel to each other. (Fig. B5.03)
- Height of the stops ≤ 4.5 cm.

Assembly

1. Lay out the Climbing Platform Beams ACS (**5**) in the bracket spacing.

(Fig. B5.04)

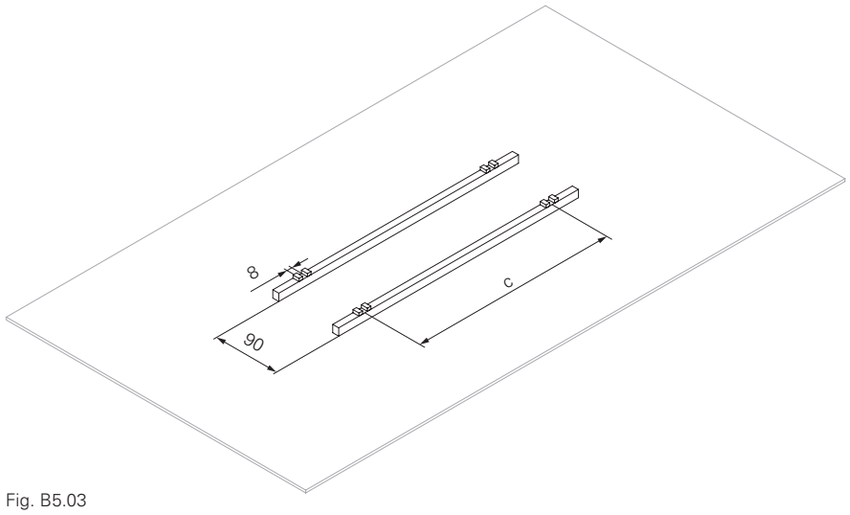


Fig. B5.03

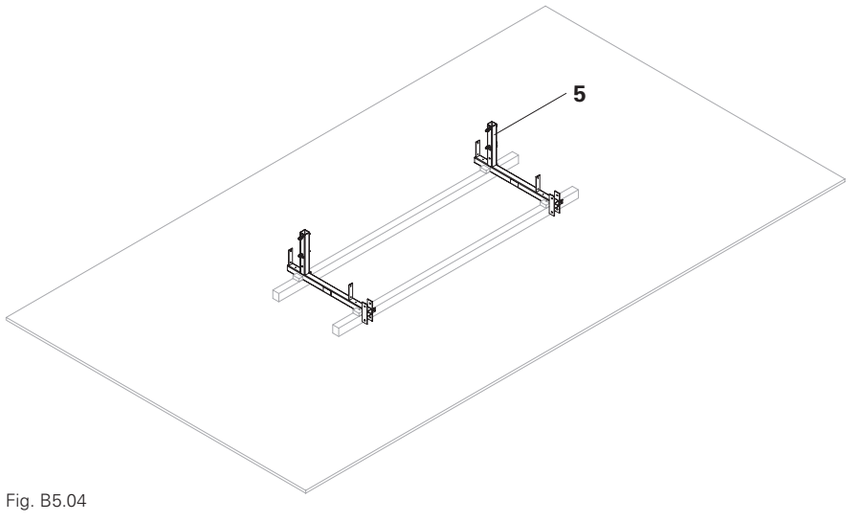


Fig. B5.04

B5 Climbing platform (level -1)

2. Place the GT 24 Formwork Girders (**21**) on the Climbing Platform Beams ACS (**5**) and align them. (Fig. B5.05)
3. Pre-drill Formwork Girder GT 24 (**21**) with Ø 9 mm and screw on with F.H. bolts DIN 603 M8 x 100 MU (**222**) to the Climbing Platform Beam ACS (**5**). (Fig. B5.06)

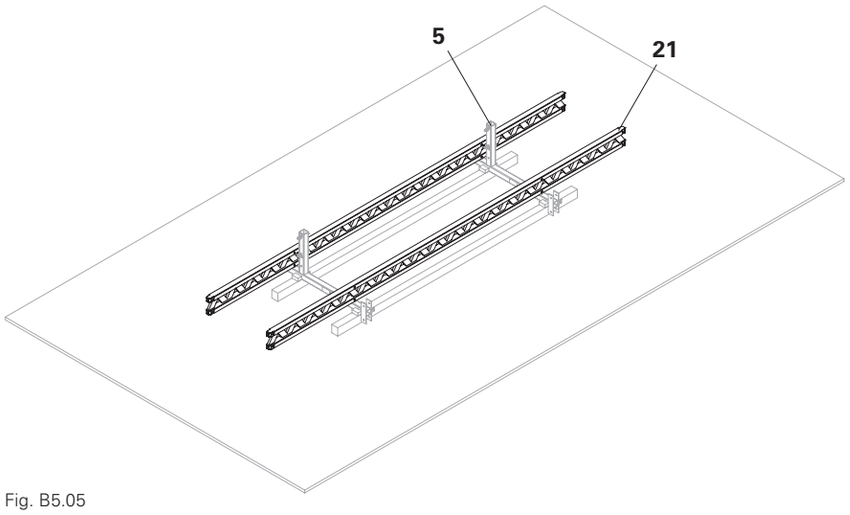


Fig. B5.05

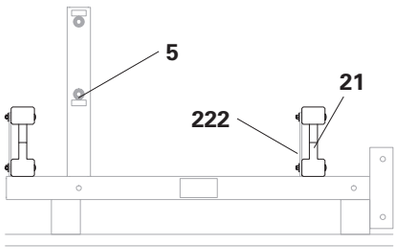


Fig. B5.06

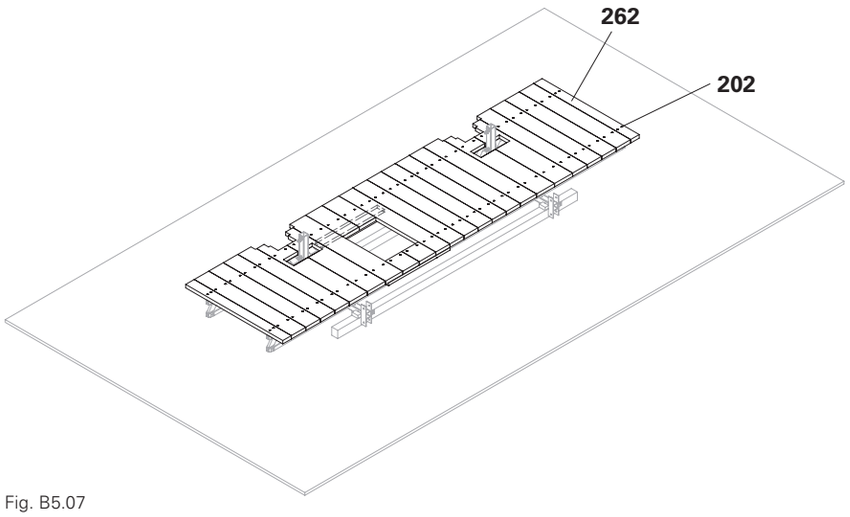


Fig. B5.07

4. Saw the planking (**262**) to length.
5. Saw cut-outs in the platform decking.
   For Climbing Shoe II ACS according to Fig. B5.09 + B5.10.
   For Climbing Shoe-2 I ACS according to Fig. B5.09 + B5.11.
6. Place the planking (**262**) on the Formwork Girder GT 24 (**21**), align and screw tight with 2x Torx 6 x 80 (**202**) per formwork girder. (Fig. B5.07).
7. Fit the hatch (**280**), see "Fitting the descent hatch" on page 60.

(Fig. B5.09)

- The dimensions $x_1 - x_2$ are project-specific.
- If necessary, also attach the planking at the descent hatch to three trimmers. (Fig. B5.08)
- After coupling the work and climbing platform, close the recesses in the platform decking.

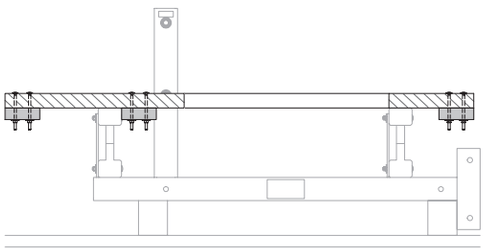


Fig. B5.08

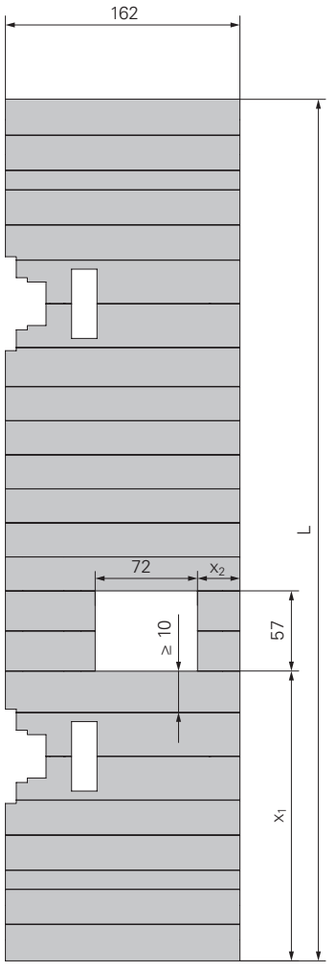


Fig. B5.09

Climbing Shoe II ACS

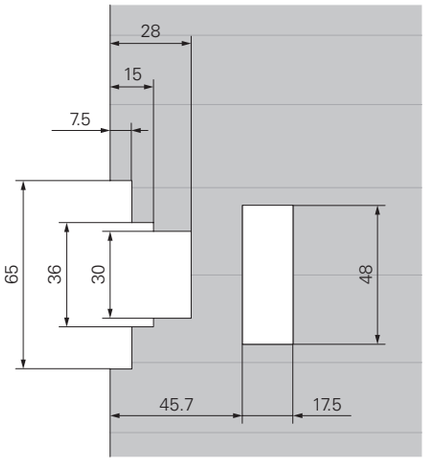


Fig. B5.10

Climbing Shoe-2 I ACS

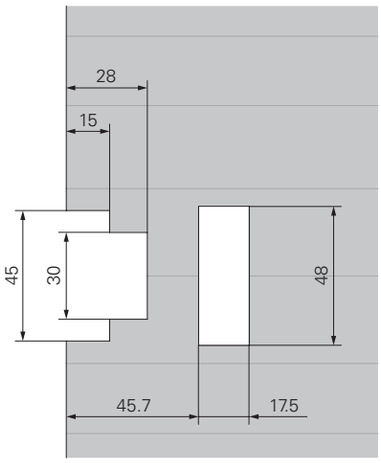


Fig. B5.11

B6 Finishing platform (level -2)

General information

The finishing platform is under 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. From here, you have access to the climbing platform above.

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).

Platform parameters	
L	Climbing unit length
B	Finishing platform width
c	Console bracket spacing
d	Cantilever

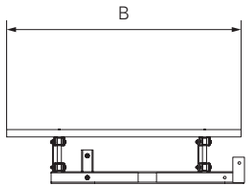


Fig. B6.01

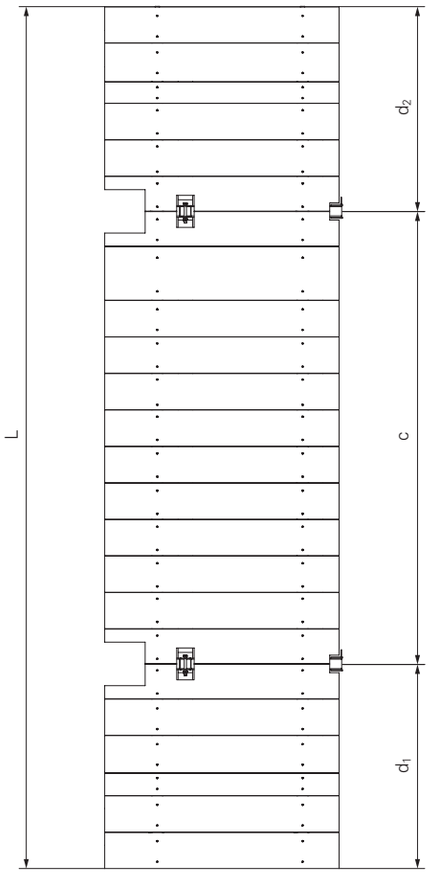


Fig. B6.02

Assembling the finishing platform

Components

8 Finishing Platform Beam ACS
21 Formwork Girder GT 24
202 Torx 6 x 80
222 F.H. bolt DIN 603 M8 x 100 MU
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 specified distances on the assembly area and align them parallel to each other. (Fig. B6.03)
- Height of the stops ≤ 4.5 cm.

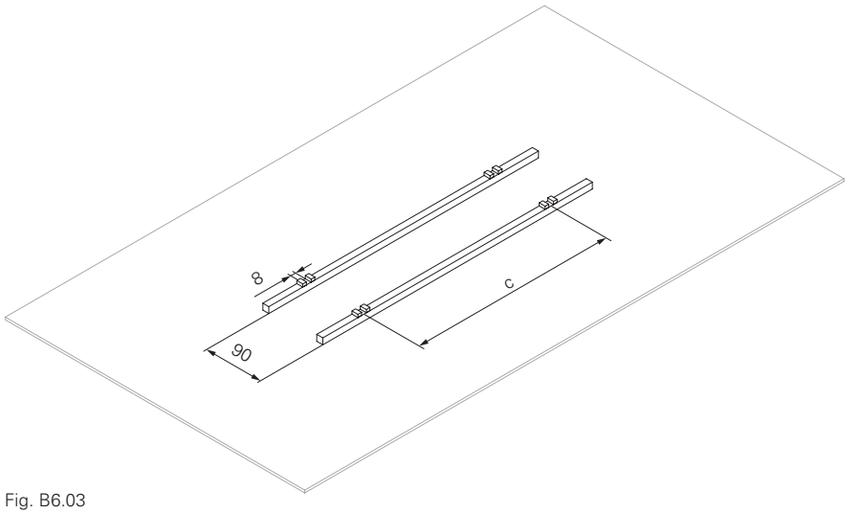


Fig. B6.03

Assembly

1. Lay out the Finishing Platform Girders ACS (**8**) in the bracket spacing.

(Fig. B6.04)

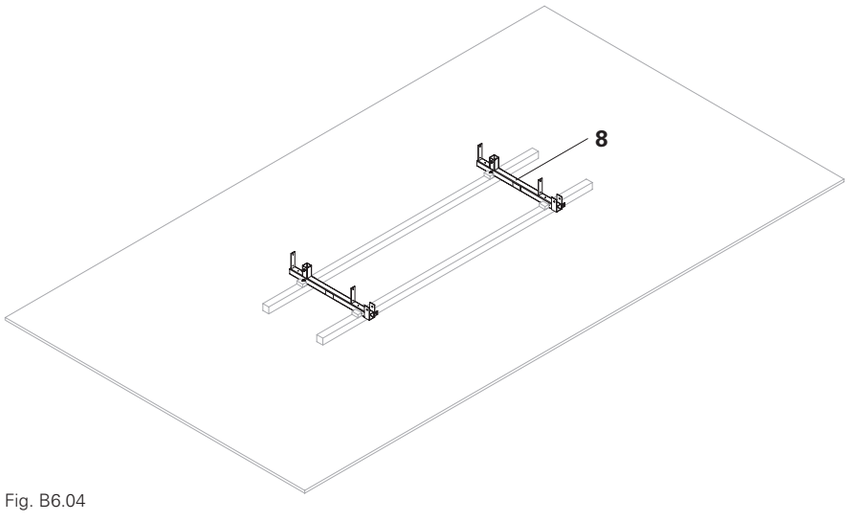


Fig. B6.04

B6 Finishing platform (level -2)

2. Place the Formwork Girders GT 24 (**21**) on the Finishing Platform Beams ACS (**8**) as platform beams and align them. (Fig. B6.05)
3. Pre-drill Formwork Girder GT 24 (**21**) with Ø 9 mm and screw on with F.H. bolts DIN 603 M8 x 100 MU (**222**) to the Finishing Platform Girder ACS (**8**). (Fig. B6.06)

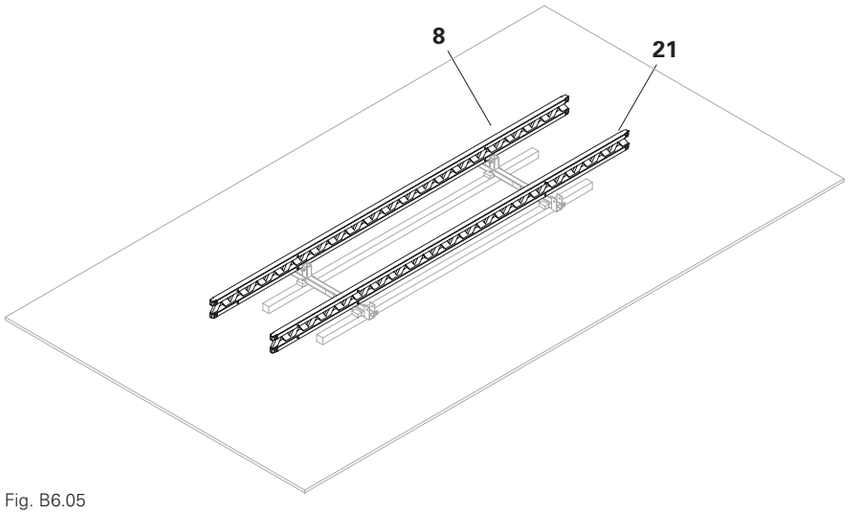


Fig. B6.05

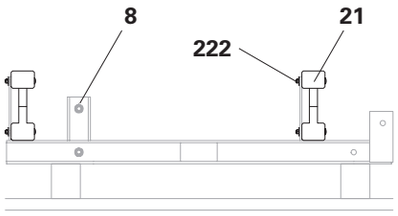


Fig. B6.06

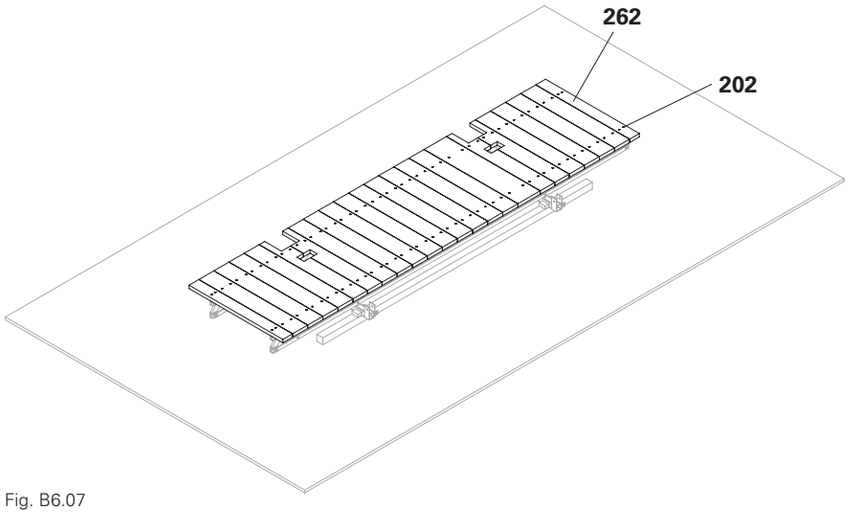


Fig. B6.07

4. Saw the planking (**262**) to length.
5. Saw the cut-outs in the platform planking according to Fig. B6.08 + B6.09.
6. Place the planking (**262**) on the Formwork Girder GT 24 (**21**), align and screw tight with 2x Torx 6 x 80 (**202**) per formwork girder. (Fig. B6.07).

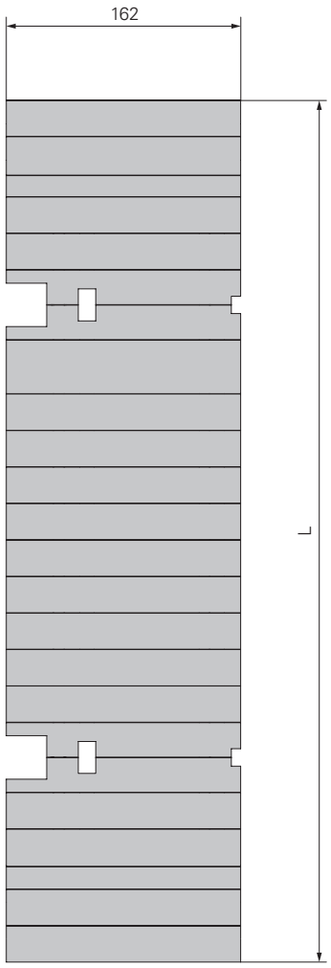


Fig. B6.08

Climbing Shoe-2 I ACS and Climbing Shoe II ACS

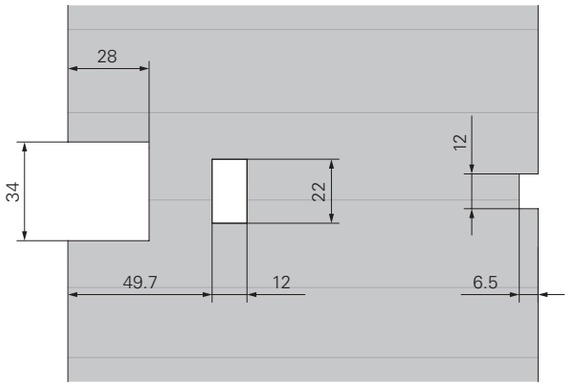


Fig. B6.09

B7 Concreting platform (level +1)

Preparing the formwork

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

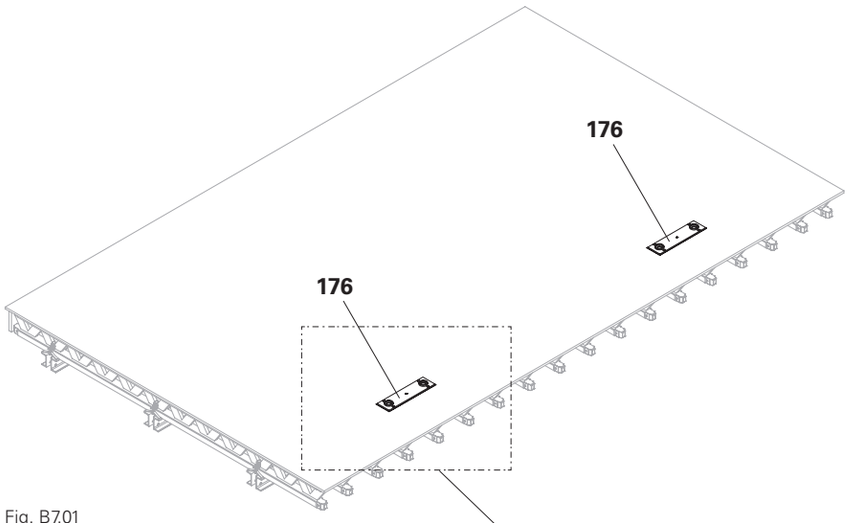


Fig. B7.01

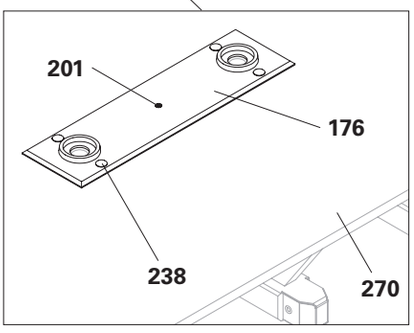


Fig. B7.01a

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 down the Leading Tie Plate ACS 399 (**176**) with F.H. bolt DIN 603 M8 x 45 MU (**238**).

(Fig. B7.01 + B7.01a)

7. Turn the formwork unit and place it on the formlining. Support the formwork unit so that the Leading Tie Plates (**176**) are freely accessible.
8. For precise assembly of the Anchor Positioning Plate M30 (**173**), hold the Climbing Cone-2 M30/DW 20 (**170**) against the Leading Tie Plate ACS 399 (**176**).
9. Screw down the Climbing Cone-2 M30/DW 20 (**170**) from the opposite side with the Positioning Screw M30 (**175**) and the Anchor Positioning Plate M30 (**173**).
10. Align the Anchor Positioning Plate M30 (**173**) and screw it to the formlining with a 6 x 20 wood screw (**174**).
11. Remove Climbing Cone-2 M30/DW 20 (**170**) and Positioning Screw M30 (**175**).

(Fig. B7.02 + B7.02a)

Note

- For safe lifting and transport, attach the formwork unit to the lifting beam 9 t with two crane splices 24.
- If no lifting beam 9 t is used, mount a compression brace between the crane splices 24.

Lateral view

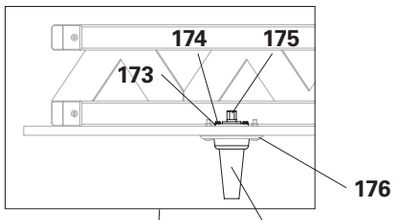


Fig. B7.02a

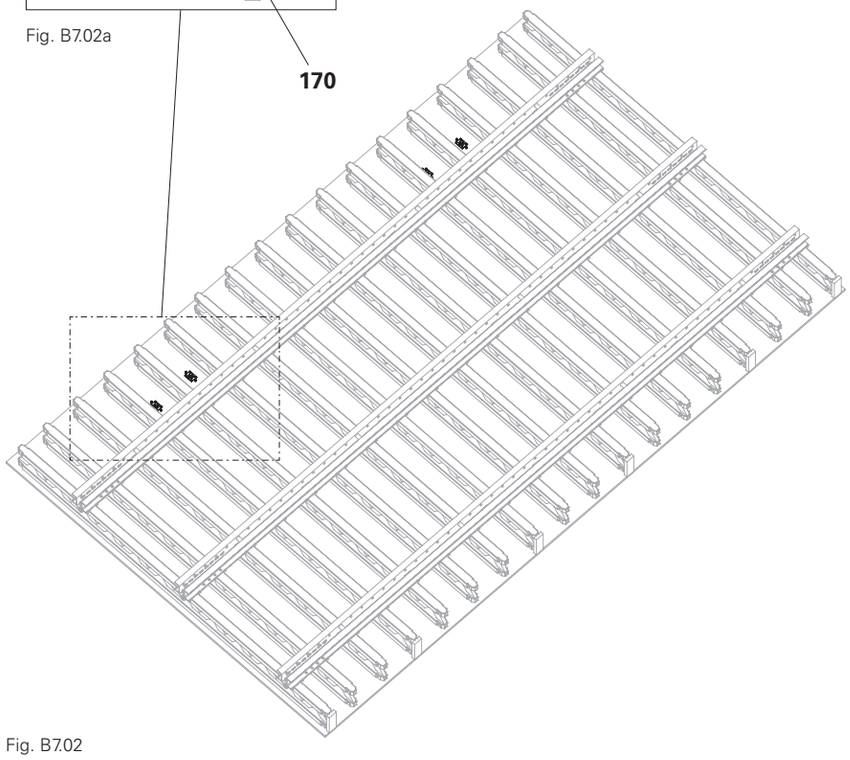


Fig. B7.02

B7 Concreting platform (level +1)

General information

The concreting platform is above the work platform. From here, the leading anchoring is installed, reinforcement work is carried out and concrete is poured.
The concreting platform is usually circumferential, from here one has access to the work platform or the intermediate formwork platform below.

Recommended platform decking distance

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

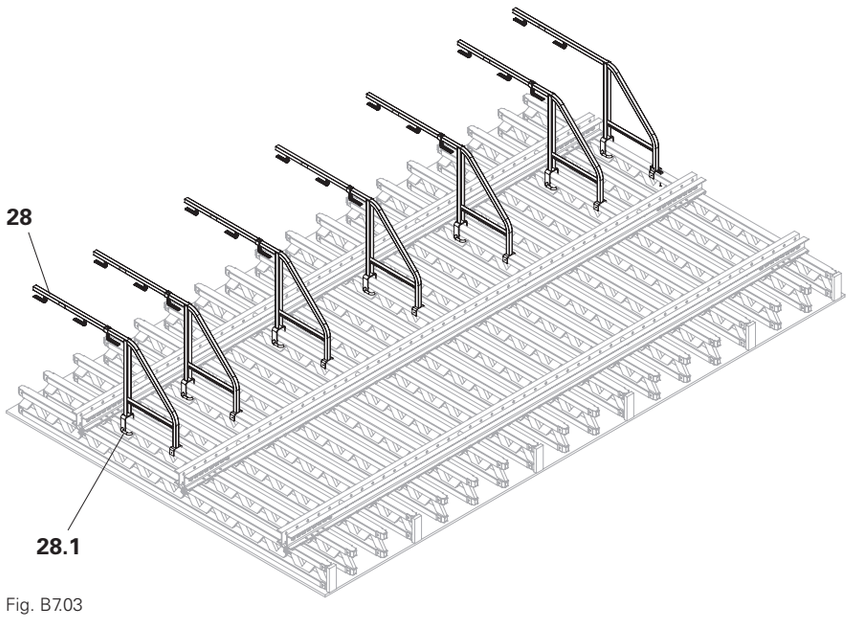


Fig. B7.03

Mounting the concreting platform

Components

28	Scaffold Bracket GB 80
29	End Guardrail 55
200	Torx 6 x 40
262	Planking
264	Guardrail board
280	Hinged Hatch 55 x 60-2

Assembly

1. Attach Scaffold Bracket GB 80 (**28**) to Formwork Girder GT 24 (**21**) and secure with clamp (**28.1**).

(Fig. B7.03)

2. Saw the planking (**262**) to length.
3. Place the planking (**262**) on Scaffold Bracket GB 80 (**28**), align and secure from below with Torx 6 x 40 (**200**).

(Fig. B7.04)

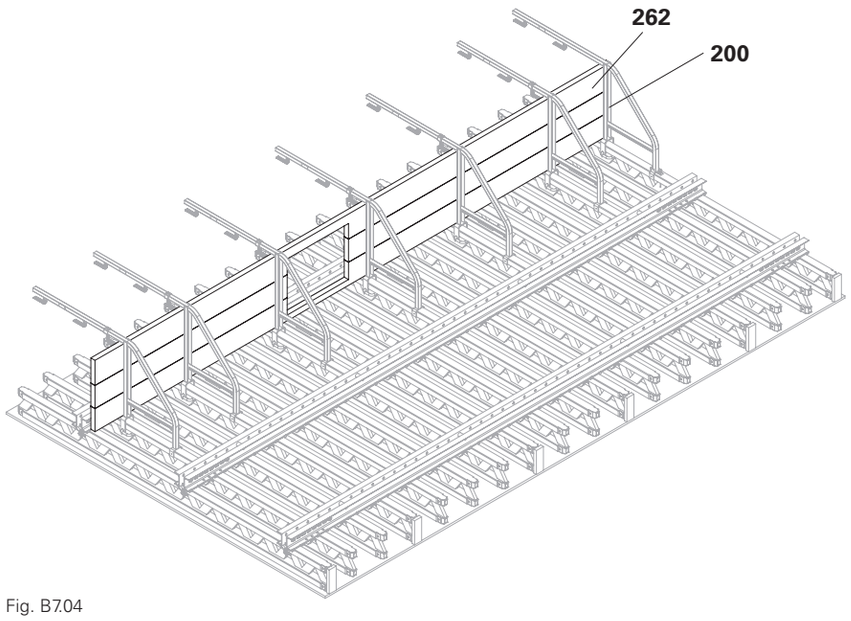


Fig. B7.04

5. Saw the cut-outs in the platform planking according to figure B7.06.
6. Fit the hatch (**280**), see "Fitting the descent hatch" on page 60.
7. Insert guardrail boards (**264**) into holders and screw down with Torx 6 x 40 (**200**). If necessary, reline the guardrail boards.
8. If the concreting platform is not circumferential, put an end guardrail 55 (**29**) on the platform planking as far as it will go and tighten hook gauge (**29.1**) with drive nut (**29.2**).

(Fig. B7.05)

The dimensions $x_1 - x_2$ are project-specific.

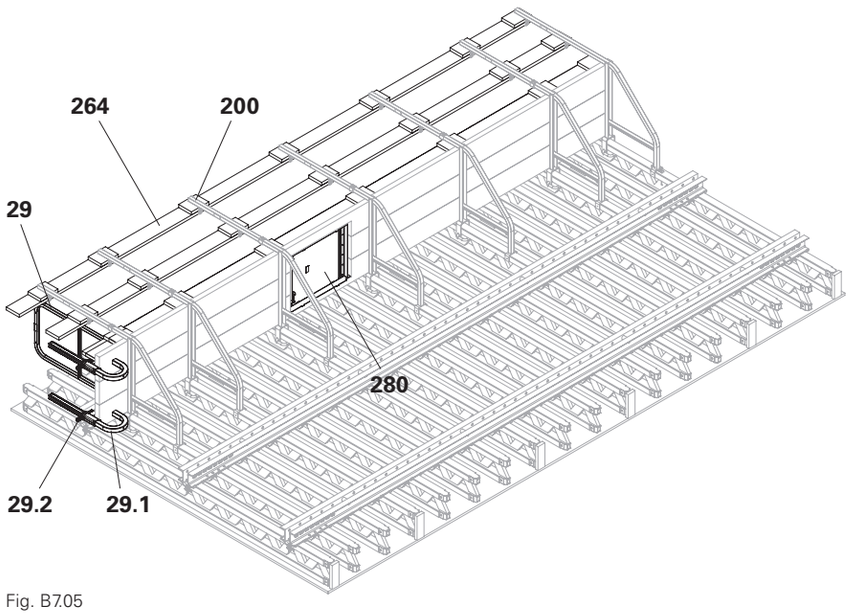


Fig. B7.05

Installing the intermediate formwork platform

The intermediate formwork platform at level +0.5 is above the work platform. Additional formwork ties are mounted from here for large concreting heights. The intermediate formwork platform is usually circumferential. From here, one has access to the work platform below and the concreting platform above.

The intermediate formwork platform and concreting platform are almost identical assemblies.
(Fig. B7.06 + B7.07)
The assembly of the intermediate formwork platform is like the assembly of the concreting platform and is assembled with it.

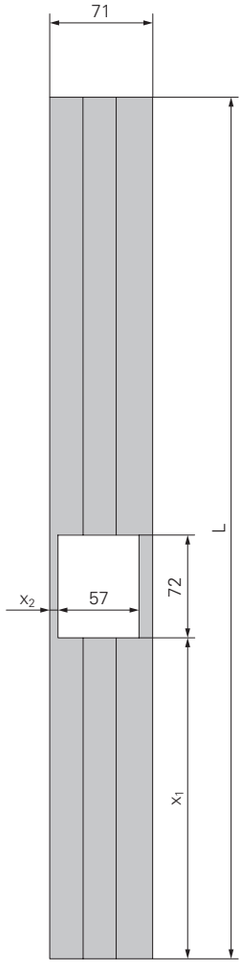


Fig. B7.06

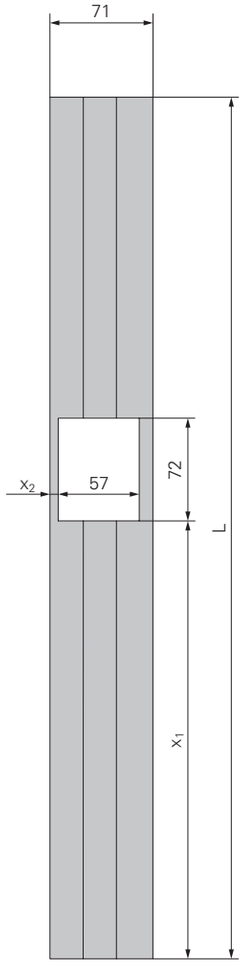


Fig. B7.07

B8 Corner platforms

General information

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

- a longer cantilever arm post,
- the additional assembly of the lateral protection.

Implementation

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 post. This projection facilitates the transition to the adjacent climbing unit.
The work, climbing and finishing platforms are built in the same manner.
(Fig. B8.01 + B8.02 + B8.03 + B8.04)

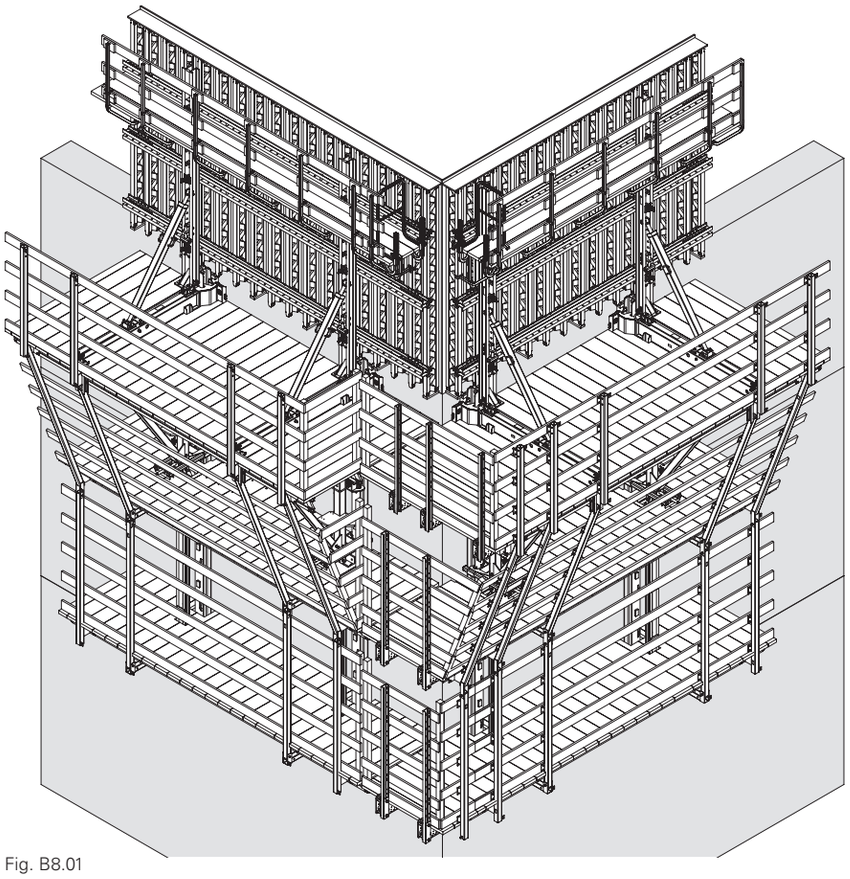


Fig. B8.01

Work platform and concreting platform

Figure B8.02 shows the work platform and concreting platform with ladder cage and lateral protection in top view.

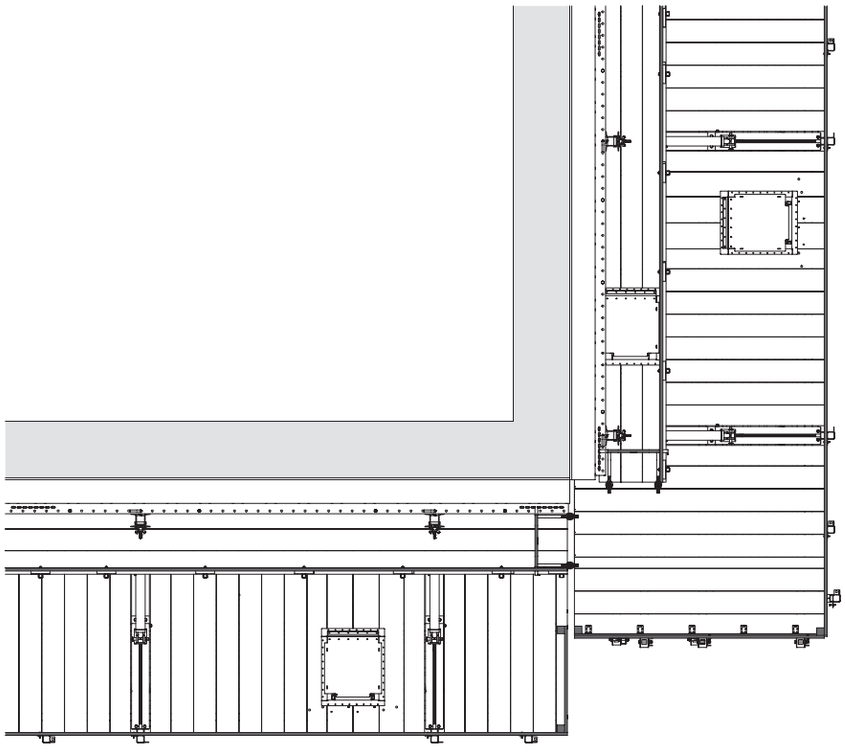


Fig. B8.02

B8 Corner platforms

Climbing platform
Figure B8.03 shows the climbing platform with ladder cage and lateral protection in top view.

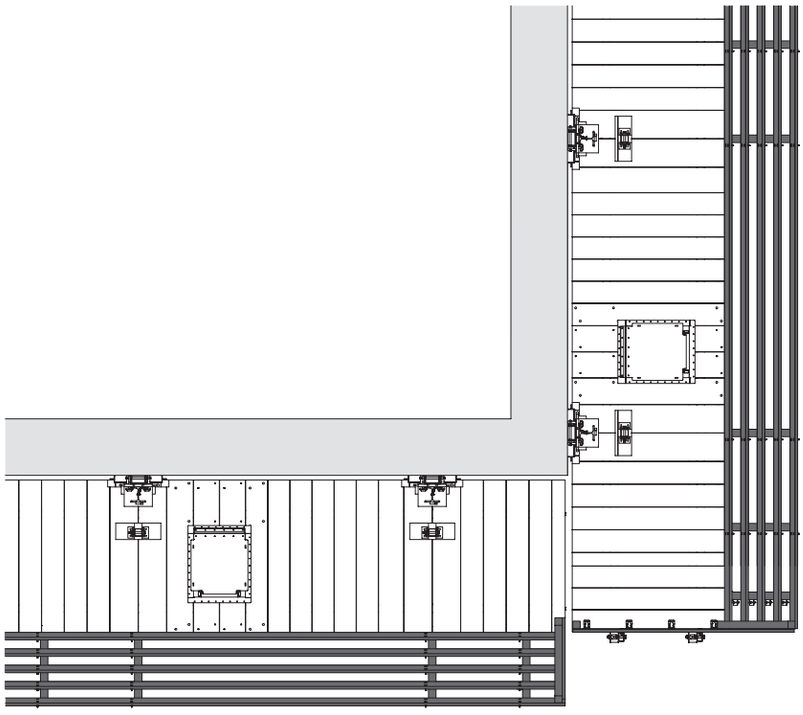


Fig. B8.03

Finishing platform
Figure B8.04 shows the finishing platform with ladder cage and lateral protection in top view.

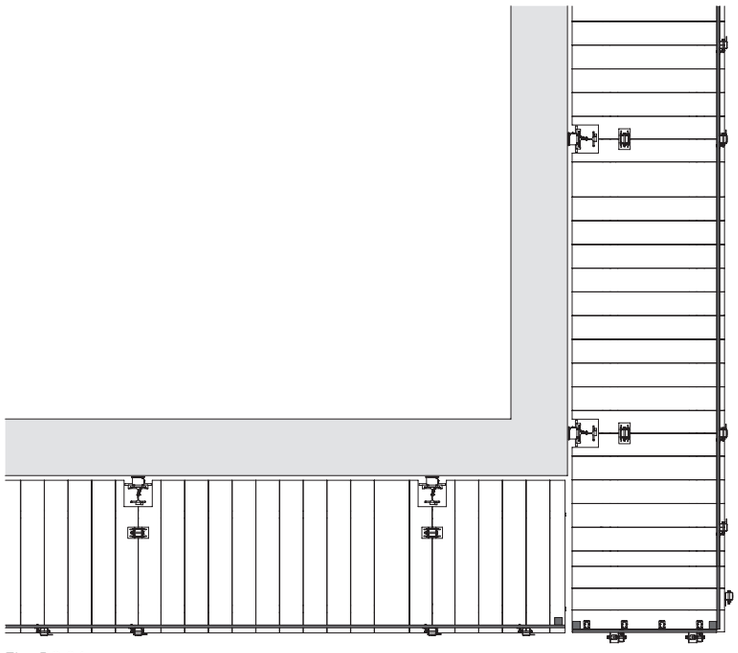


Fig. B8.04

Lateral protection work platform

Components

14 Guardrail Post Holders Multi
17 Guardrail Post RCS/SRU 184
203 Squared timber angle connector 90°
204 Torx 5 x 20
232 F.H. bolt DIN 603 M8 x 60 MU
240 Screw 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

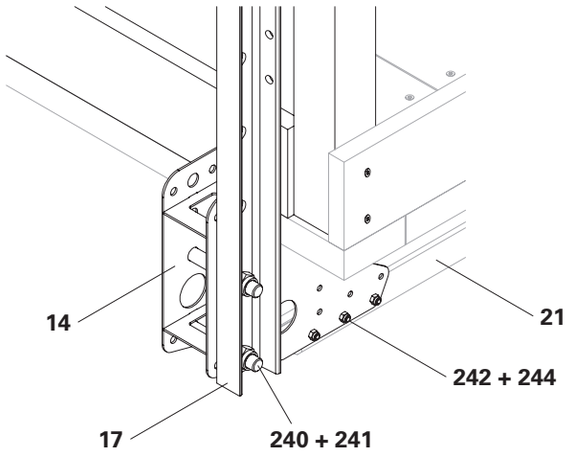


Fig. B8.05

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. Fix Guardrail Post Holder Multi (**14**) to Formwork Girder GT 24 (**21**) using bolt ISO 4014 M8 x 100-8.8 (**242**) and nut M8 (**244**).
3. Screw the Guardrail Post RCS/SRU 184 (**17**) to the Guardrail Post Holder Multi (**14**) using Screw ISO 4014 M20 x 130-8.8 (**240**) and nut M20 (**241**).

(Fig. B8.05)

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

5. Screw guardrail boards (**264**) with F.H. bolt DIN 603 M8 x 60 MU (**232**) to Guardrail Post RCS/SRU 184 (**17**).
6. Cut the toe board (**263**) to size and screw it to the platform decking with 90° squared timber angle connectors.

(not shown)

Connecting the ladder cage and lateral protection

For greater stability of the guardrail, connect the ladder cage and lateral protection.

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 squared timber 8/8 (**275**) with 2x Torx 6 x 60 (**201**) per board to the ladder cage and toe board.
3. Screw squared timber 8/8 (**275**) with 2x Torx 6 x 60 (**201**) per board to lateral protection and toe board.

(Fig. B8.06)

Instead of guardrail boards, scaffold tubes can also be used as lateral protection. See “Guardrail” on page 57.

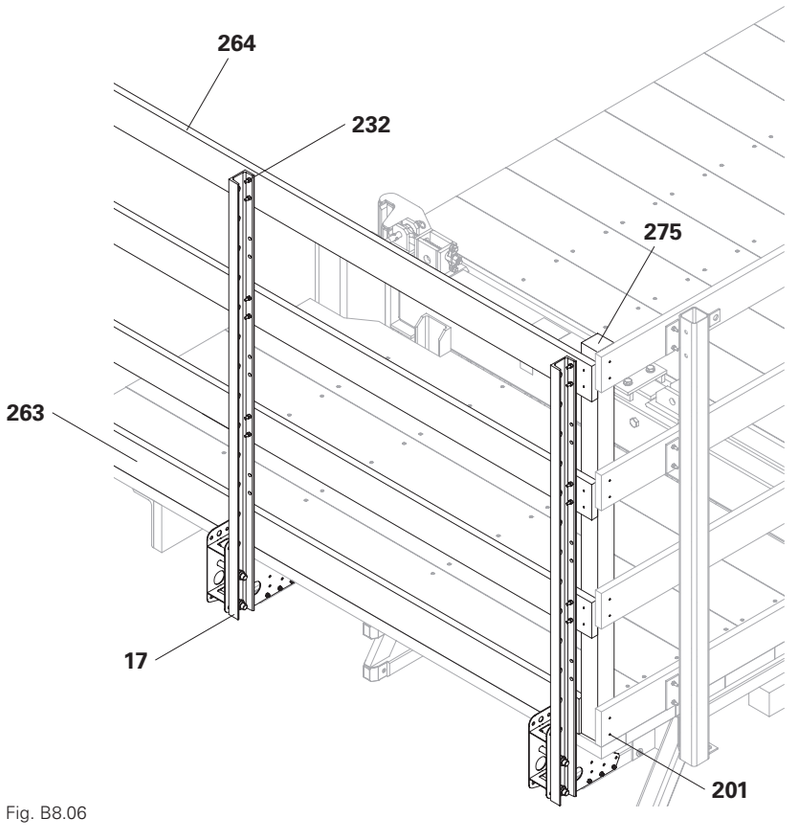


Fig. B8.06

Climbing platform lateral protection

Components

14 Guardrail Post Holders Multi
16 Guardrail Post RCS 226
203 Squared timber angle connector 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 Screw ISO 4014 M20 x 180-8.8
244 Nut ISO 7042 M8-8
263 Toe board
264 Guardrail board

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. Fix Guardrail Post Holder Multi (**14**) to Formwork Girder GT 24 (**21**) using bolt ISO 4014 M8 x 100-8.8 (**242**) and nut M8 (**244**).
3. Screw the Guardrail Post RCS 226 (**16**) to the Guardrail Post Holder Multi (**14**) using Screw ISO 4014 M20 x 180-8.8 (**243**) and nut M20 (**241**).

(Fig. B8.07)

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

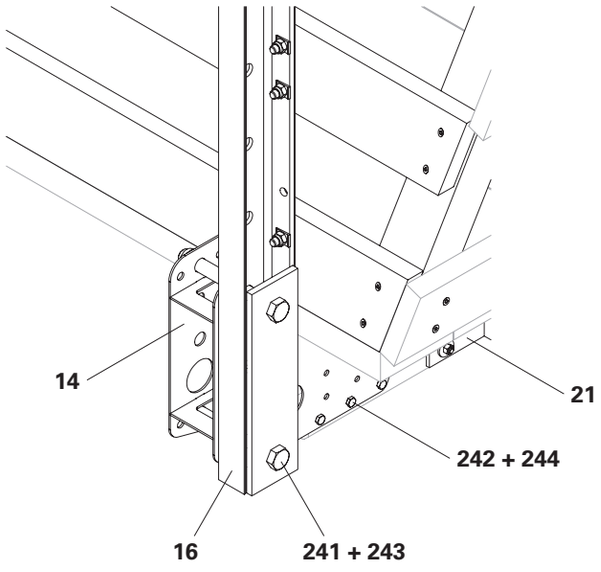


Fig. B8.07

5. Screw guardrail boards (**264**) with F.H. bolt DIN 603 M8 x 60 MU (**232**) to Guardrail Post RCS 226 (**16**).
6. Cut the toe board (**263**) to size and screw it to the platform decking with 90° squared timber angle connectors.

(not shown)

Connecting the ladder cage and lateral protection

For greater stability of the guardrail, connect the ladder cage and lateral protection.

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 squared timber 8/8 (**275**) with 2x Torx 6 x 60 (**201**) per board to the ladder cage and toe board.
3. Screw squared timber 8/8 (**275**) with 2x Torx 6 x 60 (**201**) per board to lateral protection and toe board.

(Fig. B8.08)

Instead of guardrail boards, scaffold tubes can also be used as lateral protection. See “Guardrail” on page 57.

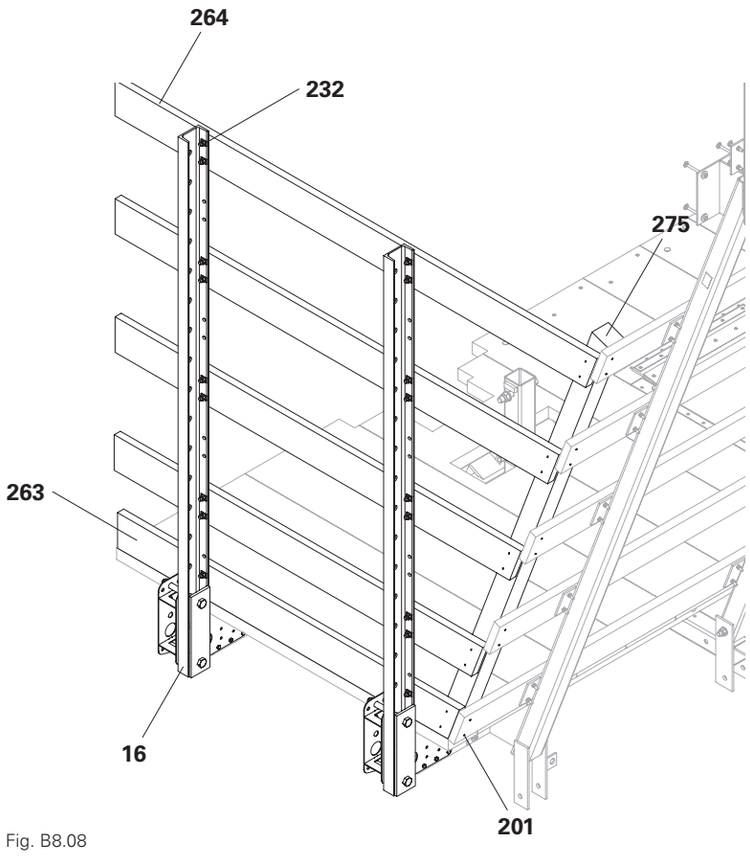


Fig. B8.08

Finishing platform lateral protection

Components

14 Guardrail Post Holders Multi
16 Guardrail Post RCS 226
203 Squared timber angle connector 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 Screw ISO 4014 M20 x 180-8.8
244 Nut ISO 7042 M8-8
263 Toe board
264 Guardrail board

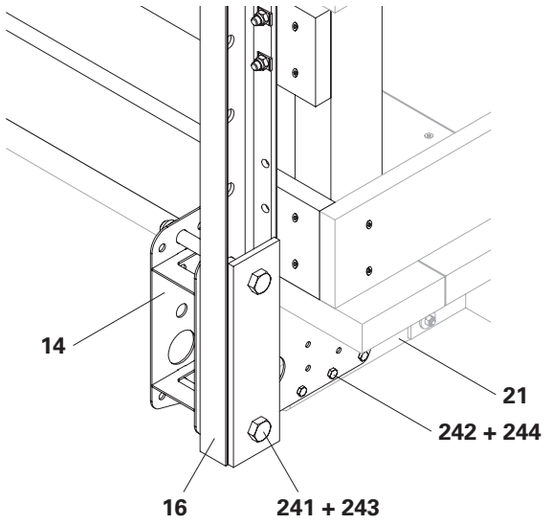


Fig. B8.09

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. Fix Guardrail Post Holder Multi (**14**) to Formwork Girder GT 24 (**21**) using bolt ISO 4014 M8 x 100-8.8 (**242**) and nut M8 (**244**).
3. Screw the Guardrail Post RCS 226 (**16**) to the Guardrail Post Holder Multi (**14**) using Screw ISO 4014 M20 x 180-8.8 (**243**) and nut M20 (**241**).

(Fig. B8.09)

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

5. Screw guardrail boards (**264**) with F.H. bolt DIN 603 M8 x 60 MU (**232**) to Guardrail Post RCS 226 (**16**).
6. Cut the toe board (**263**) to size and screw it to the platform decking with 90° squared timber angle connectors.

(not shown)

Connecting the ladder cage and lateral protection

For greater stability of the guardrail, connect the ladder cage and lateral protection.

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 squared timber 8/8 (**275**) with 2x Torx 6 x 60 (**201**) per board to the ladder cage and toe board.
3. Screw squared timber 8/8 (**275**) with 2x Torx 6 x 60 (**201**) per board to lateral protection and toe board.

(Fig. B8.10)

Instead of guardrail boards, scaffold tubes can also be used as lateral protection. See "Guardrail" on page 57.

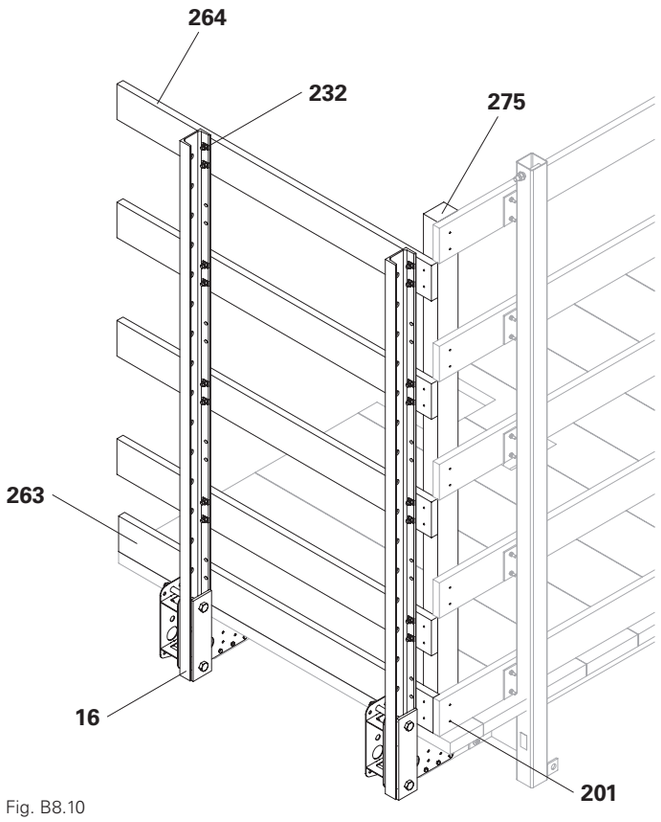


Fig. B8.10

Prepare vertical strut

Components

3 Vertical Strut ACS
22 Landing Platform ACS
147 Slide ACS
148 Pressure Point Spindle ACS

- If necessary, dismantle the mounting parts of the pressure point spindle.
- Before assembly of the pressure point spindle, carefully grease the thread with slide bearing grease.

(Fig. B9.01 + B9.01a)

Assembly

1. Screw spindle (**148.1**) into slide (**147**).
2. Push slide (**147**) into the mounts of the vertical strut (**3**) and insert spindle (**148.1**) through the opening of the vertical strut (**3**).
3. Slide washer ACS (**148.4**) onto spindle and screw on R-nut TR (**148.2**).
4. Secure R-nut TR (**148.2**) with sleeve (**148.3**).

(Fig. B9.01 + B9.01a)

Figure B9.02 shows the vertical strut with slide and pressure point spindle in assembled state.

View from above

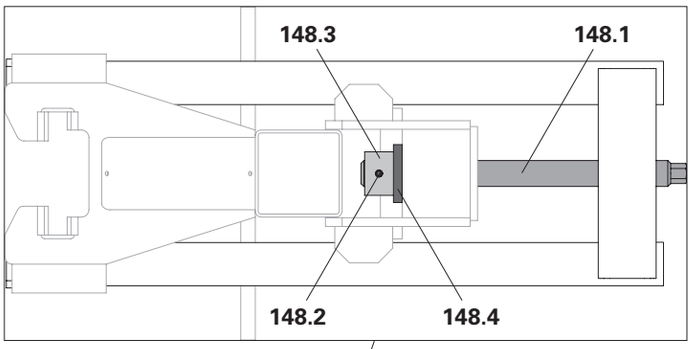


Fig. B9.01a

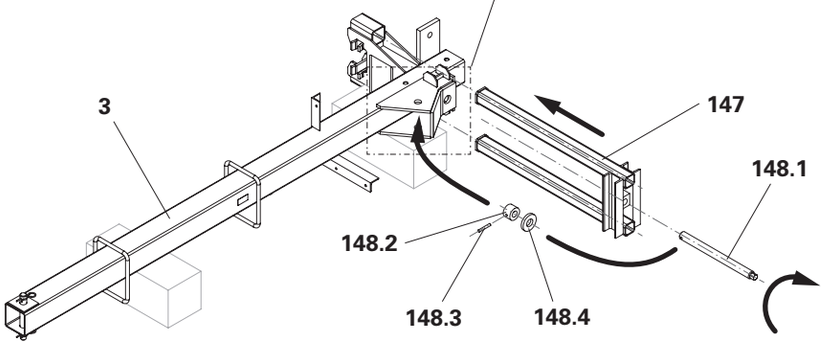


Fig. B9.01

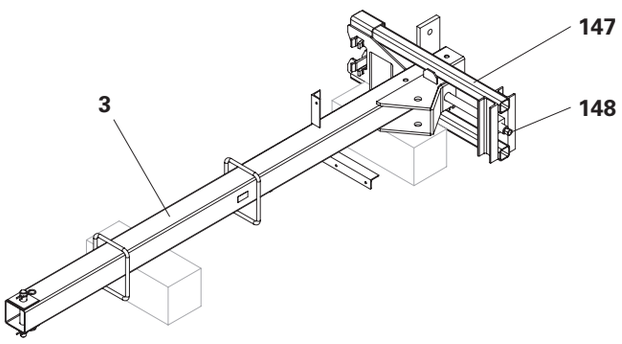


Fig. B9.02

5. Screw Landing Platform ACS (**22**) with F.H. Bolts DIN 603 M8 x 45 MU (**3.3**) onto the vertical strut (**3**). (Fig. B9.03)

- Extend the slide (**147**) 22 cm. This facilitates the installation of the vertical strut. (Fig. B9.04)
- To move the slide, turn the pressure point spindle with the cordless screwdriver. Follow the instructions for using the cordless screwdriver.
- If a high level of effort is required, e.g. when supporting the climbing unit, turn the pressure point spindle with a ratchet or torque wrench.

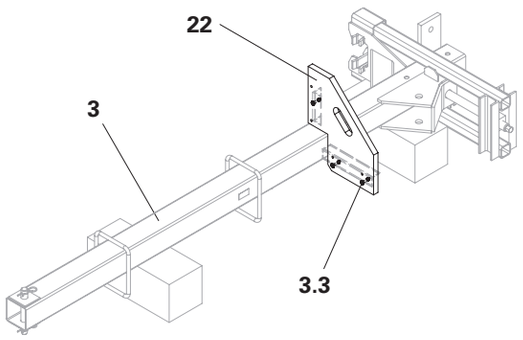


Fig. B9.03

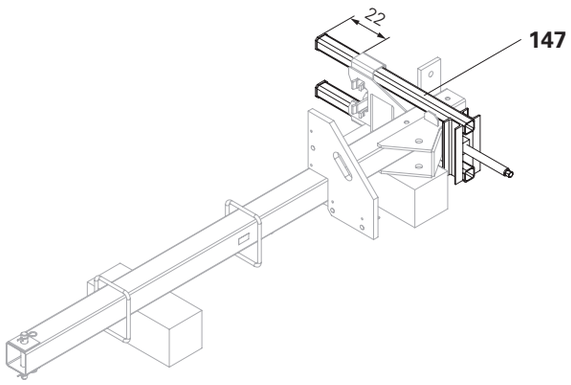


Fig. B9.04

Preparing work platform

Components

4	Diagonal Strut ACS
12	Guardrail Post Main Platform ACS
271	Squared timber

Note

Do not remove the crane lifting gear until the diagonal strut has been installed.

Assembly

1. Support the head adapter with squared timbers (**271**) and boards.
   → Work platform does not stand on the platform decking.
   → Fouling of the head adapters is avoided.
2. Insert guardrail post (**12**) into guardrail post holder of crossbeam (**1**) and screw tight using the attached assembly materials.
3. Attach the crane lifting gear to the guardrail posts (**12**) and erect the work platform vertically.

(Fig. B9.05 + B9.05a)

4. Insert pre-assembled vertical strut (**3**) into mount of crossbeam (**1**), fix with bolt 30 x 235 (**3.1**) and secure with cotter pin 5/1 (**3.2**).

(Fig. B9.06 + B9.06a)

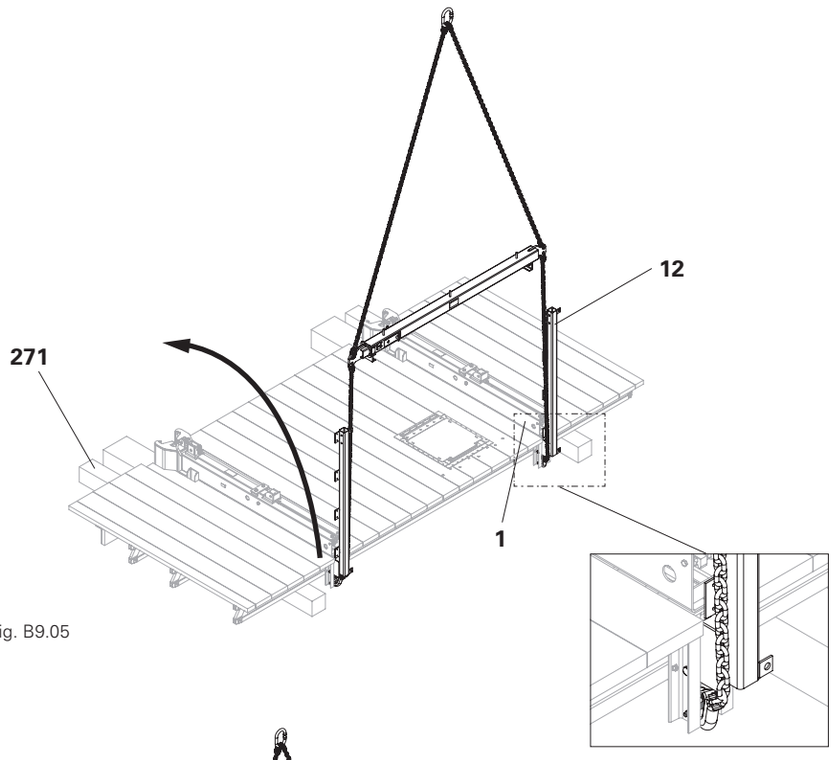


Fig. B9.05

Fig. B9.05a

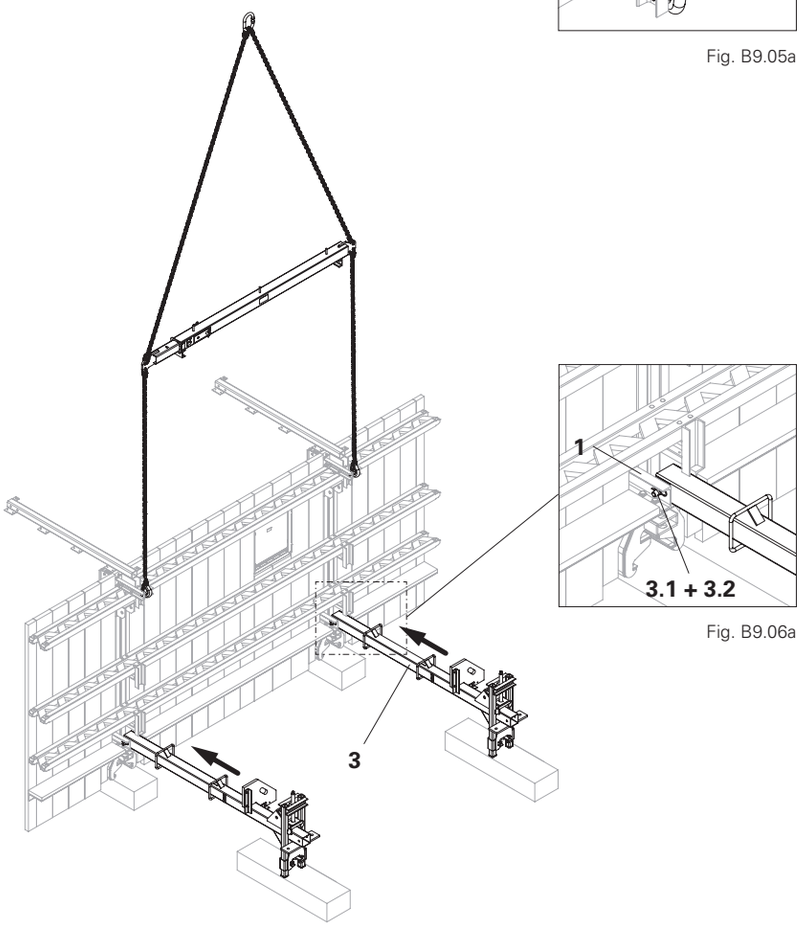


Fig. B9.06a

Fig. B9.06

B9 Coupling the work and climbing platform

5. Insert the Diagonal Strut ACS (**4**) into the mount of the vertical strut (**3**) and the crossbeam (**1**).
   Ensure correct installation position of the diagonal strut.
6. Fasten them with bolts 30 x 235 (**4.1**) and secure with cotter pins 5/1 (**4.2**).
7. Remove the crane lifting gear.

(Fig. B9.07 + B9.07a)

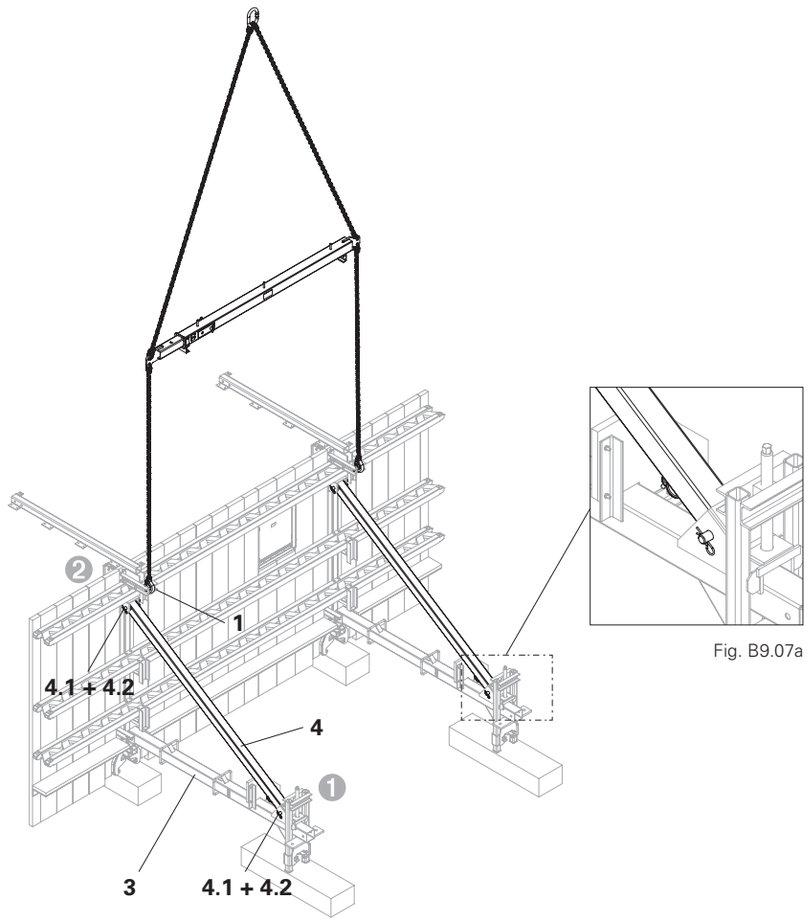


Fig. B9.07a

Fig. B9.07

Attaching climbing platform

Components

6 Cantilever Arm Post Climbing Platform ACS
7 Guardrail Post Climbing Platform ACS l = 2.83 m
222 F.H. bolt DIN 603 M8 x 100 MU

Assembly

1. Attach the climbing platform to the crane at the front edge and erect it.
2. Place the climbing platform in the assembly position. Slide the square tube of the Climbing Platform Girder ACS (**5**) into the Vertical Strut ACS (**3**) and screw it tight using the attached assembly materials.

(Fig. B9.08)

3. Thread the climbing platform guardrail post (**7**) first into the climbing platform beam ACS (**5**), then into the crossbeam ACS (**1**) and screw it tight using the attached assembly materials.
   Make sure that the climbing platform guardrail post (**7**) is installed in the correct position.
4. Place cantilever arm post (**6**) at assembly position on Formwork Girder GT 24 (**21**) and secure with F.H. bolt DIN 603 M8 x 100 MU (**222**).

(Fig. B9.09)

- For easy coupling of the climbing platform to the work platform, planking must be removed again.
- If the platform decking consists of a multi-layer plywood sheet, temporarily loosen the screws of the platform decking.

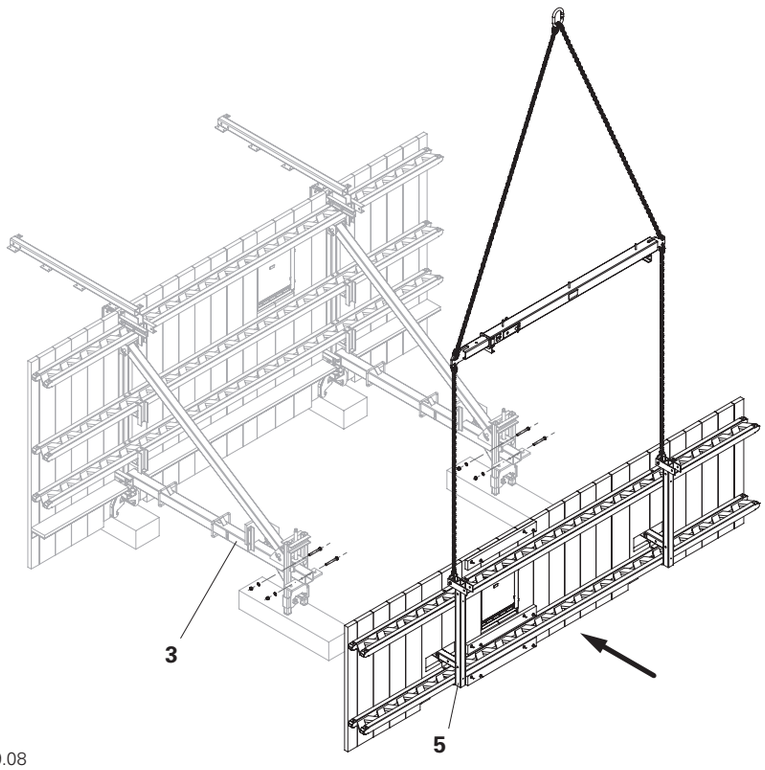


Fig. B9.08

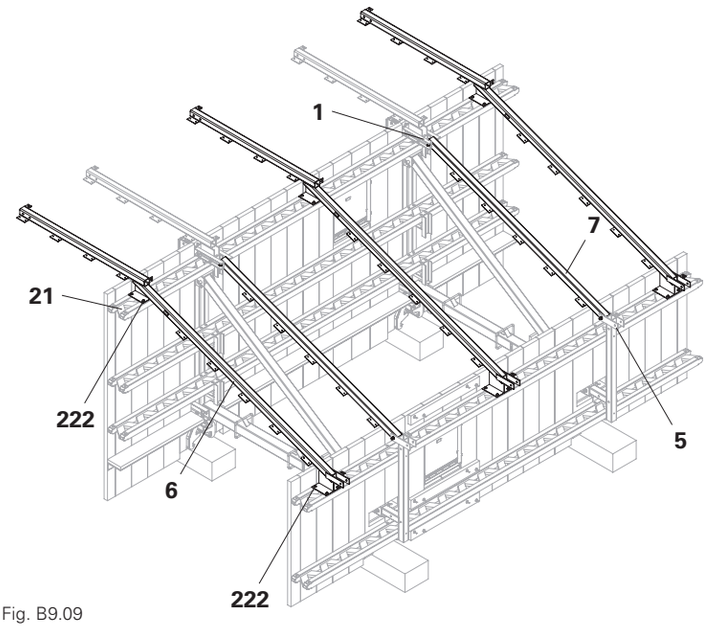


Fig. B9.09

Completing platforms

Components

140 Climbing Device ACS 100
223 F.H. bolt DIN 603 M8 x 50
224 Nut ISO 7040 M8-8
263 Toe board
264 Guardrail board

Install Climbing Device ACS 100
Attach the Climbing Device ACS 100 (**140**). See assembly instructions for "ACS 100 Climbing Device and Hydraulics".
(Fig. B9.10)

Fitting the ladder
Fit the ladder for the work platform and climbing platform. See "Fitting the ladder" on page 61.
(Fig. B9.10)

Installing the toe boards
Mount toe boards of work platform and climbing platform. See "Toe boards" on page 55.
(Fig. B9.11)

Mounting the Ladder Cage
Mounting the ladder cage of the work platform and climbing platform. See "Guardrail" on page 57.
(Fig. B9.11)

Complete platform decking
Close the recesses in the platform decking of the climbing platform.

Observe the permissible gap!

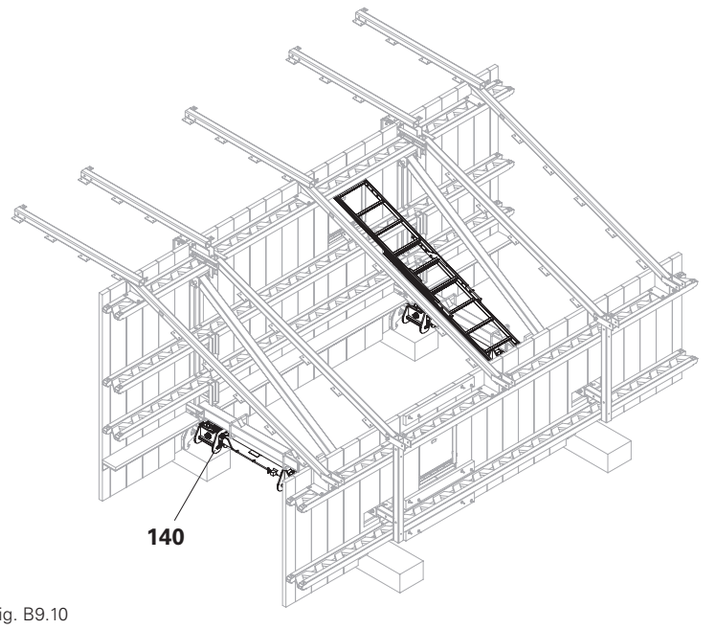


Fig. B9.10

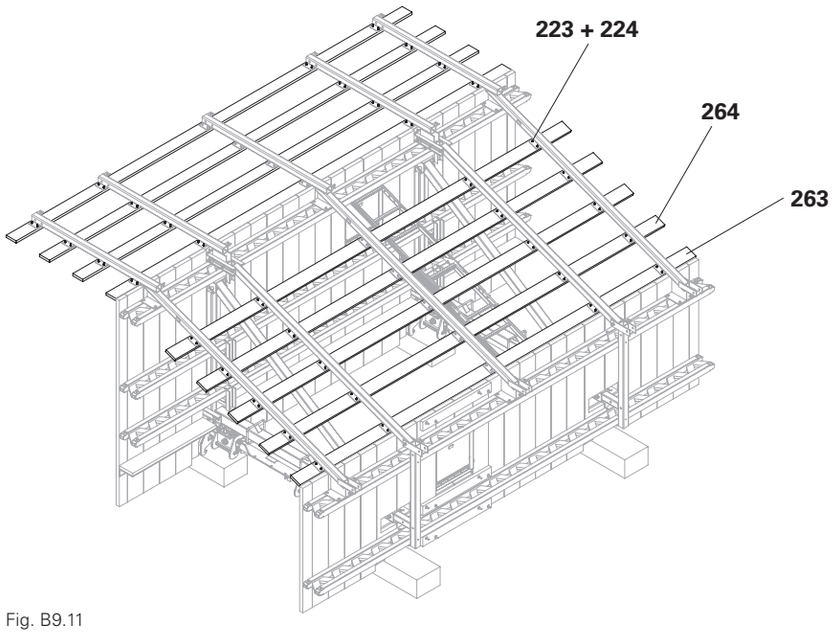


Fig. B9.11

C1 First concreting section

Precondition

- Work platform and climbing platform are coupled.
- Concreting platform and finishing platform are pre-assembled.
- The ladder descent is prepared for final assembly.

Concreting the starter

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

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

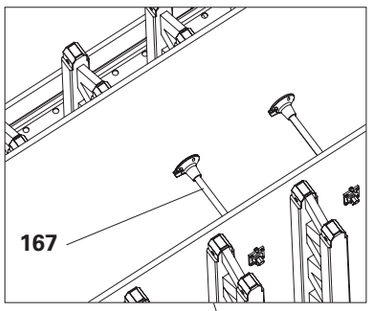


Fig. C1.01a

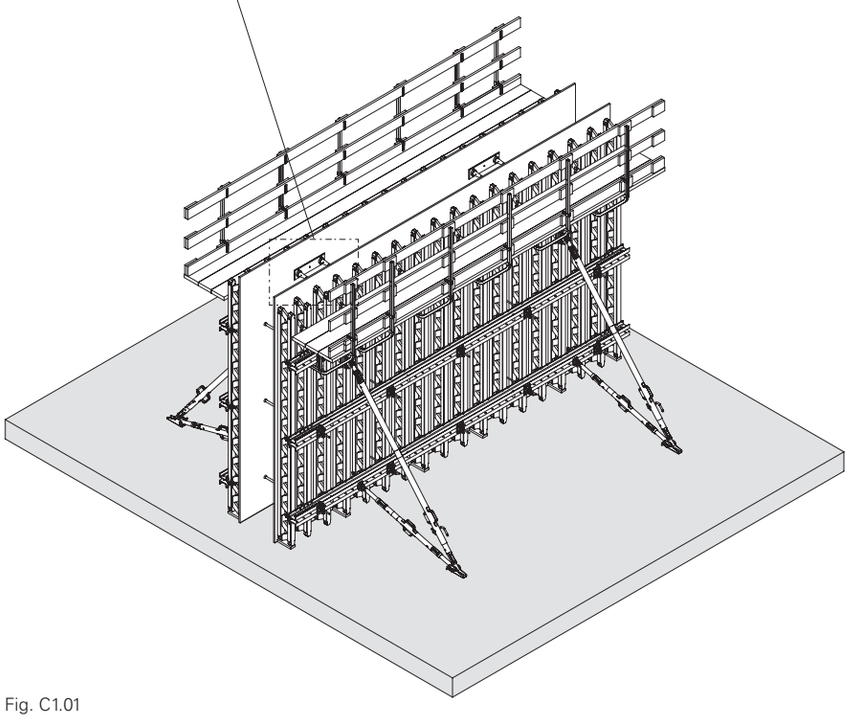


Fig. C1.01

Precondition

Note
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 (**30**) of 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 (**30**) of the primary formwork.
8. Fly out the primary formwork and store it temporarily at the installation site.

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

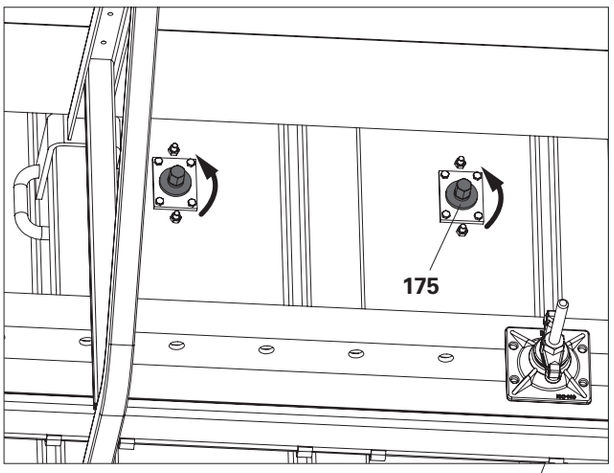


Fig. C2.01a

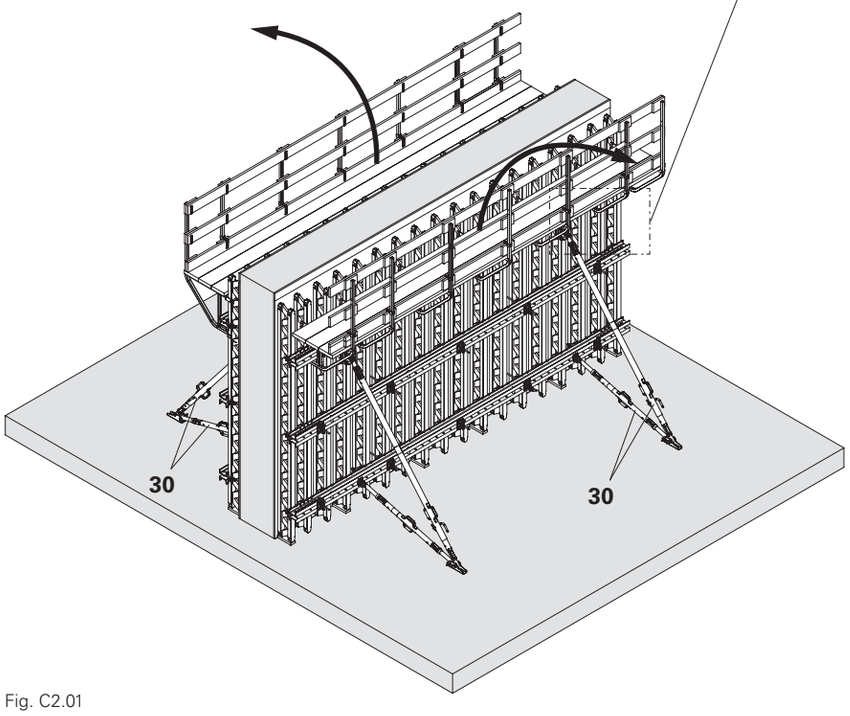


Fig. C2.01

Installing the tie tube and climbing shoe

Note

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

Components

161 Climbing Shoe II ACS
163 Tie Tube ACS, right
164 Tie Tube ACS, left
180 Cyl. Screw 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**) with the clamping screw (**161.1**) on the Tie Tubes ACS (**163 + 164**).

(Fig. C2.02)

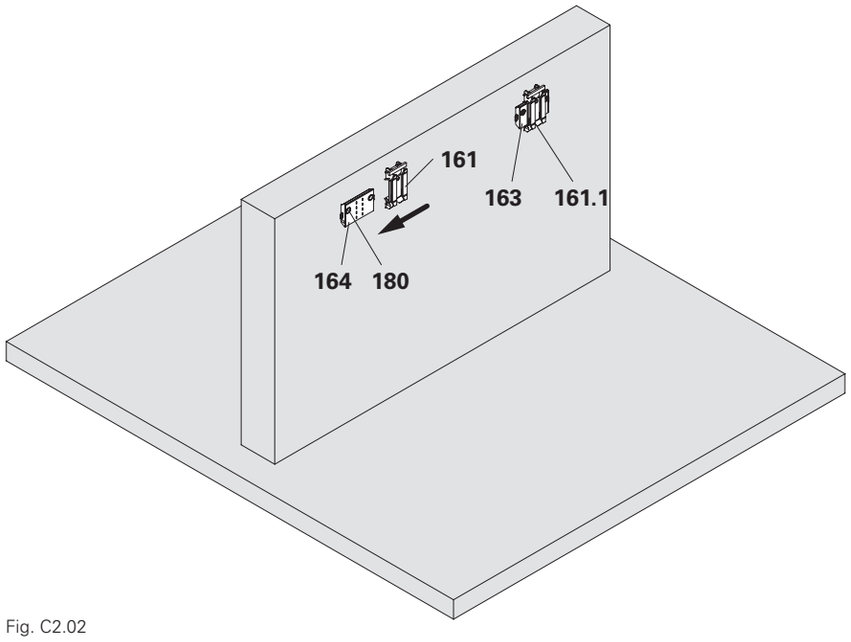


Fig. C2.02

C3 Mounting the climbing unit

General information

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

Preparation

Components

145 Ledger ACS
219 Binding wire

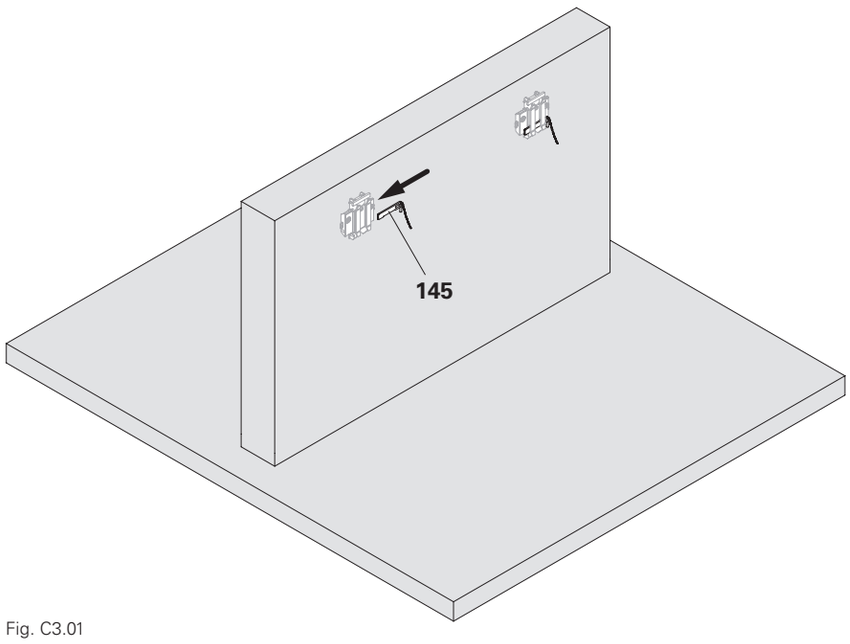


Fig. C3.01

Assembly

1. Install temporary guardrail as lateral protection, e.g. with Guardrail Post PD 8 and guardrail board.
   On the first climbing unit that is hooked in on both sides, on all further climbing units on the open side.
2. Insert the Ledger ACS (**145**) into the Climbing Shoe II ACS (**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?

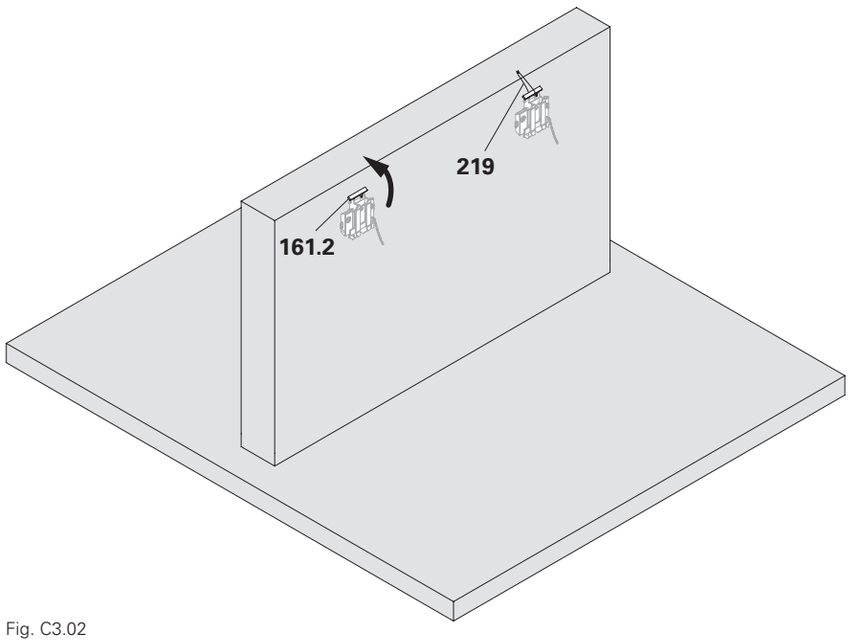


Fig. C3.02

Installing the climbing unit

Components

1.3 Locking pin Ø 20 x 205
1.4 Column Tie Yoke DW 15
1.5 Wing Nut DW 15
1.6 Cotter pin 4/1
1.7 Carriage rear end
23.1 Bolt 25 x 180
23.2 Cotter pin 4/1

Attaching four-sling lifting gear

1. Remove the top guardrail board (**264**) from the ladder cage and temporarily screw it to the next guardrail board.
2. Remove Column Tie Yoke DW 15 (**1.4**) from Crossbeam ACS (**1**).
3. Reinstall locking pin Ø 20 x 205 (**1.3**) and secure with cotter pin 4/1 (**1.6**).
4. Attach the four-sling lifting gear to the locking pin Ø 20 x 205 (**1.3**).
5. Move the Carriage ACS (**1.2**) backwards as far as it will go. See "Aligning the formwork" on page 109.
6. Remove the lower bolt 25 x 180 (**23.1**) of the Thrust Spindle 177-233 ACS.
7. Fit bolt 25 x 180 (**23.1**) into the rear end of the carriage (**1.7**) and secure with cotter pin 4/1 (**23.2**).
8. Attach the four-sling lifting gear to bolt 25 x 180 (**23.1**).

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

If the ladder cage consists of scaffold tubes, the top scaffold tube does not have to be removed.

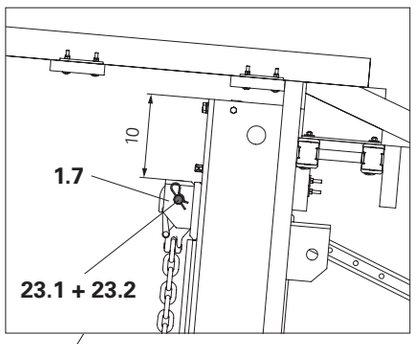


Fig. C3.03a

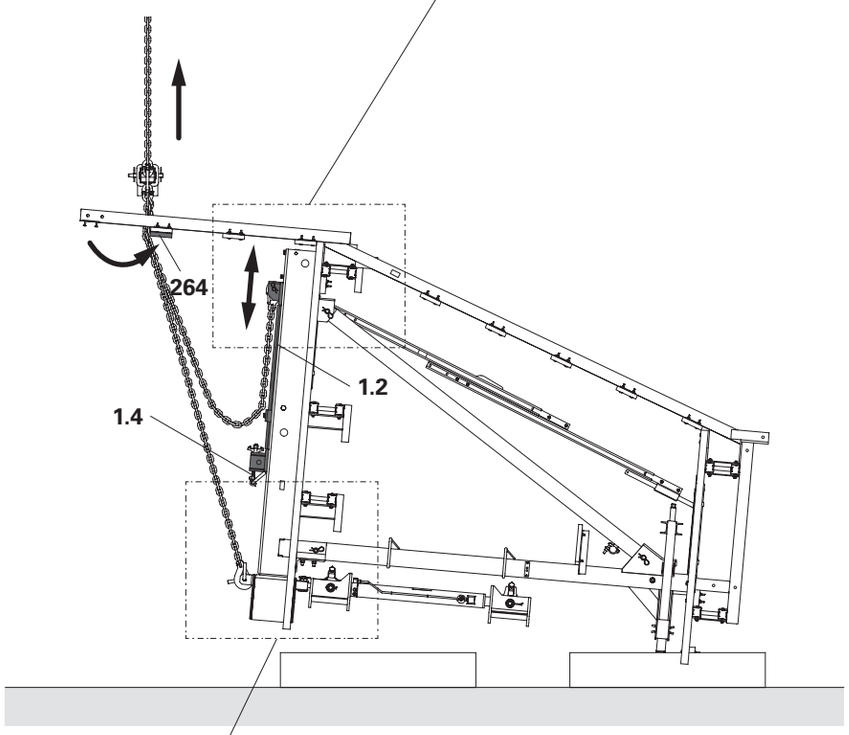


Fig. C3.03

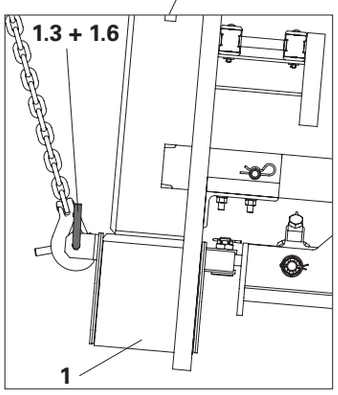


Fig. C3.03b

C3 Mounting the climbing unit

Inserting the hydraulic unit

1. Erect the climbing unit and set it down on the ground.
2. Place the hydraulic unit on the climbing platform and fix it to the platform deck.

(Fig. C3.04)

Note

Before mounting the climbing unit, secure the hydraulic unit against slipping and tipping.

Balancing the climbing unit

Balance the climbing unit using the carriages. To do this, move both carriages forwards or backwards until the climbing platform has a slight overhang to the rear.
Basic setting: Move the carriage forwards approx. 10 cm from the rear stop.
(Fig. C3.03 + C3.03a + C3.05)

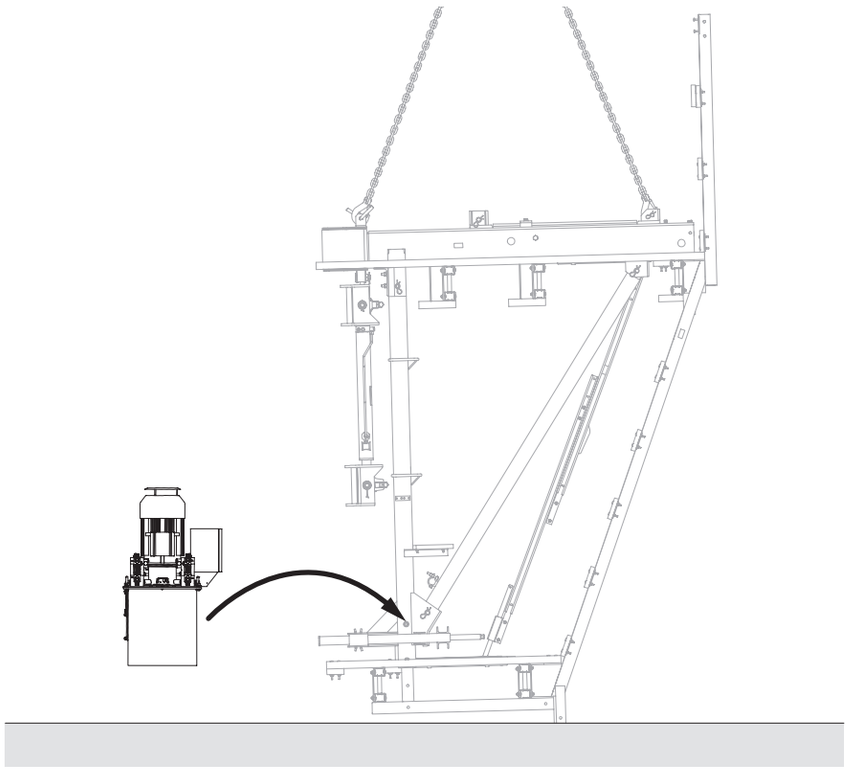


Fig. C3.04

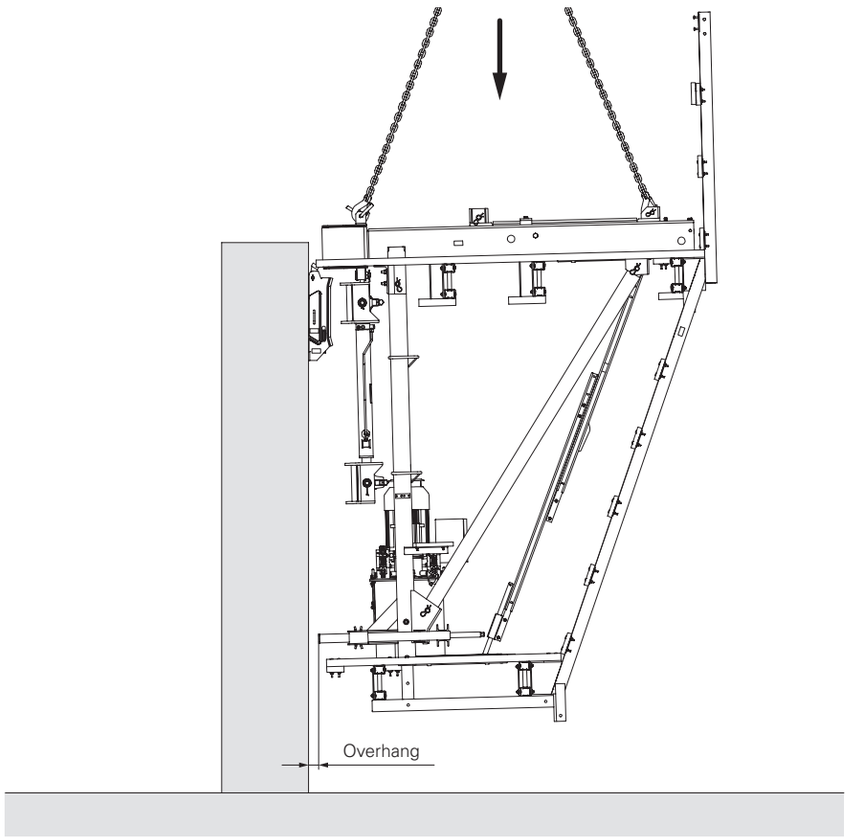


Fig. C3.05

C3 Mounting the climbing unit

Installing the climbing unit

Note

Do not mount climbing units until the required concrete strength has been reached.

1. Lift the climbing unit and position it over the Climbing Shoes II ACS (**161**).
2. Slowly lower the climbing unit and thread the heads of Cross-beams ACS (**1**) into the Climb-ing Shoes II ACS (**161**).
3. Lower the climbing unit until the heads of the Crossbeams (**1**) rest completely on the Ledger ACS (**145**).
4. Check that the climbing unit is aligned vertically. This is most easily done on the Vertical Strut ACS (**3**).
5. If necessary, adjust the climbing unit vertically with the Slide ACS (**147**).
6. Attach the chain of the Ledger ACS (**145**) to the angle for the Con-sole Bracket ACS-2 (**2**).
7. Fold the swing ledger (**161.2**) down-wards.
8. Screw the top guardrail board (**264**) of the ladder cage to its original posi-tion.

(Fig. C3.06 + C3.06a + C3.06b)

- Does the Crossbeam ACS rest com-pletely on the Ledger ACS?
- Is the swing ledger folded down?
- Is the guardrail board of the ladder cage fitted?

View from below

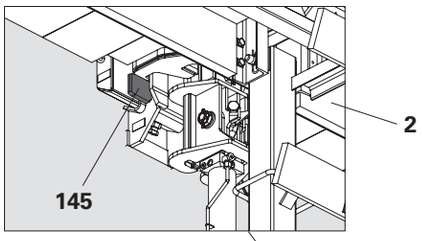


Fig. C3.06a

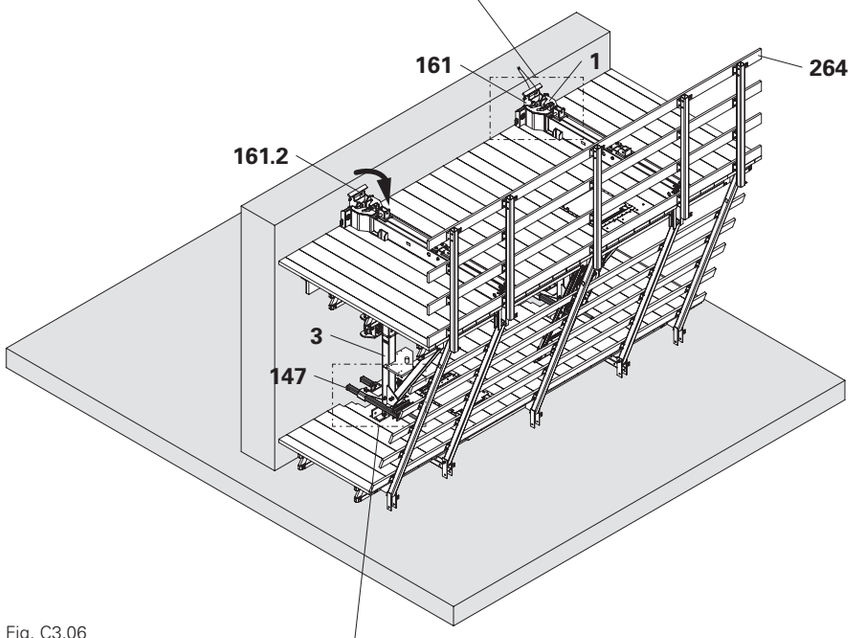


Fig. C3.06

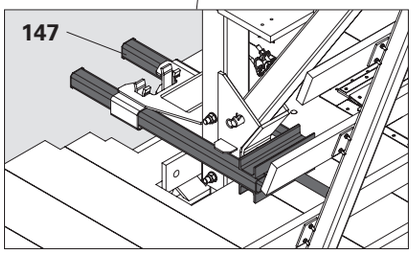


Fig. C3.06b

Preparing the strongback

The strongback is mounted on the carriage. Then the formwork is mounted on the strongback.

Without wall offset

Components

24 Strongback 365 ACS
25 Screw Adapter 50

Assembly

1. Screw the Screw Adapter 50 (**25**) to the Strongback 365 ACS (**24**) using the attached assembly materials.
   ➡ Pay close attention to the assembly position!
   (Fig. C4.01 + C4.02)

➡

The dimensions apply to VARIO system formwork with Formwork Girders GT 24 and Steel Walers SRU.

Assembly position without wall offset

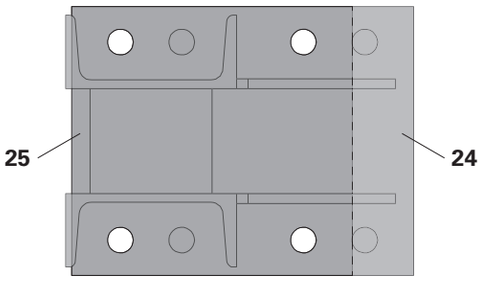


Fig. C4.01

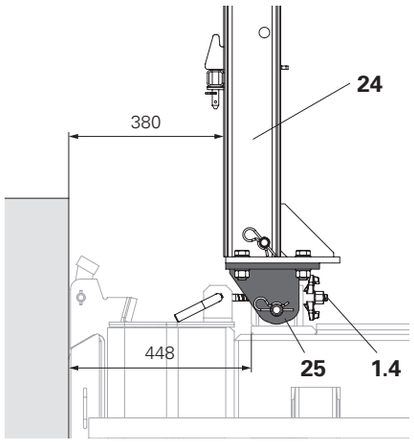


Fig. C4.02

Wall offset 0 – 50 mm

Components

24 Strongback 365 ACS
25 Screw Adapter 50
27 Tie Yoke 465 ACS

Assembly

1. Screw the Screw Adapter 50 (**25**) to the Strongback 365 ACS (**24**) using the attached assembly materials.
   ➔ Pay close attention to the assembly position!
   (Fig. C4.03 – C4.05)

- For concreting wall offsets, the Column Tie Yoke DW 15 must be replaced with the Tie Yoke 465 ACS (**27**).
- The dimensions apply to VARIO system formwork with Formwork Girders GT 24 and Steel Walers SRU with a wall offset of 50 mm.

Assembly position with wall offset 0 – 50 mm

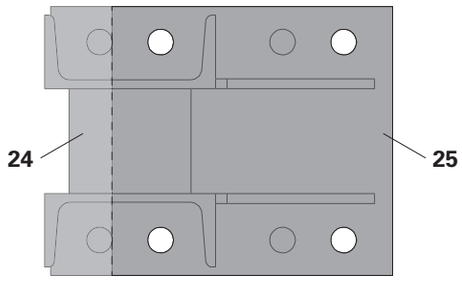


Fig. C4.03

Position of carriage in front of wall offset

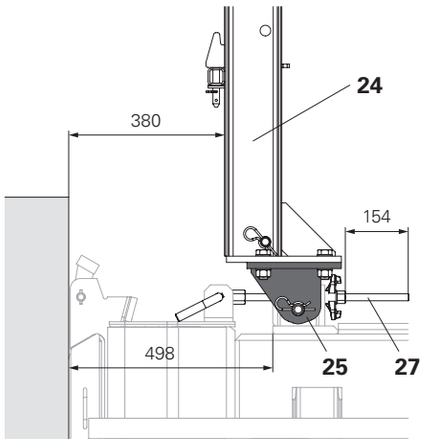


Fig. C4.04

Position of carriage at wall offset

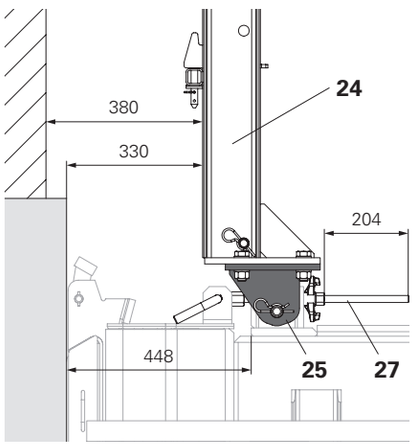


Fig. C4.05

Wall offset 0 – 150 mm

Components

24 Strongback 365 ACS
26 Screw Adapter 200
27 Tie Yoke 465 ACS

Assembly

1. Screw the Screw Adapter 200 (**26**) to the Strongback 365 ACS (**24**) using the attached assembly materials.
   ➔ Pay close attention to the assembly position!
   (Fig. C4.06 – C4.08)

- For concreting wall offsets, the Column Tie Yoke DW 15 must be replaced with the Tie Yoke 465 ACS (**27**).
- The dimensions apply to VARIO system formwork with Formwork Girders GT 24 and Steel Walers SRU with a wall offset of 150 mm.

Assembly position with wall offset 0 – 150 mm

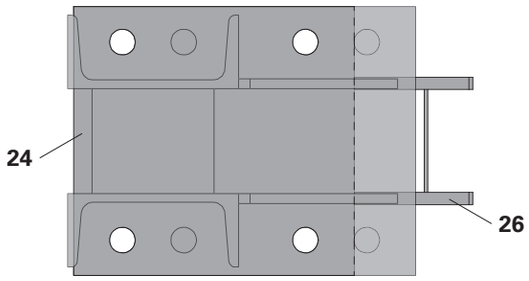


Fig. C4.06

Position of carriage in front of wall offset

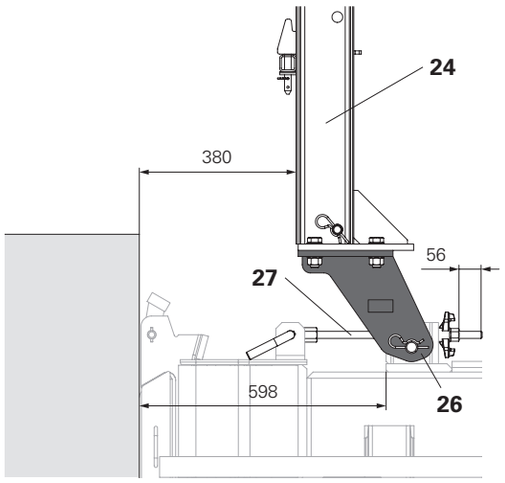


Fig. C4.07

Position of carriage at wall offset

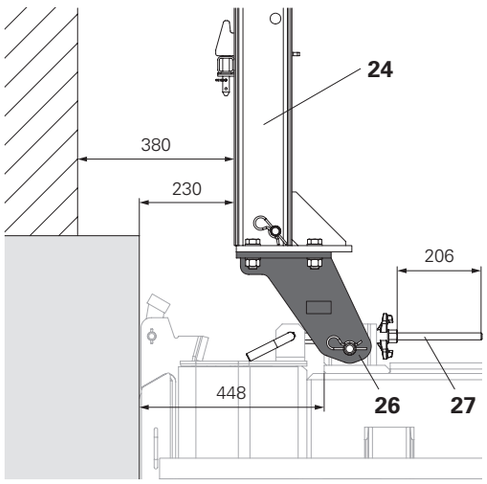


Fig. C4.08

Wall offset 0 – 200 mm

Components

24 Strongback 365 ACS
26 Screw Adapter 200
27 Tie Yoke 465 ACS

Assembly

1. Screw the Screw Adapter 200 (**26**) to the Strongback 365 ACS (**24**) using the attached assembly materials.
   ➔ Pay close attention to the assembly position!
   (Fig. C4.09 – C4.11)

- For concreting wall offsets, the Column Tie Yoke DW 15 must be replaced with the Tie Yoke 465 ACS (**27**).
- The dimensions apply to VARIO system formwork with Formwork Girders GT 24 and Steel Walers SRU with a wall offset of 200 mm.

Assembly position with wall offset 0 – 200 mm

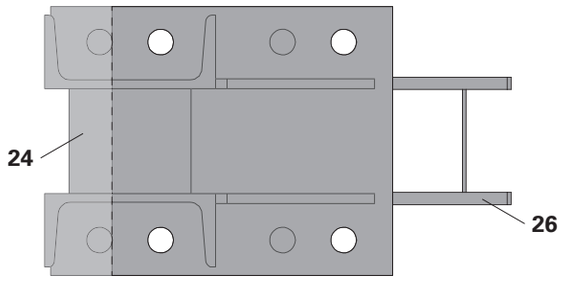


Fig. C4.09

Position of carriage in front of wall offset

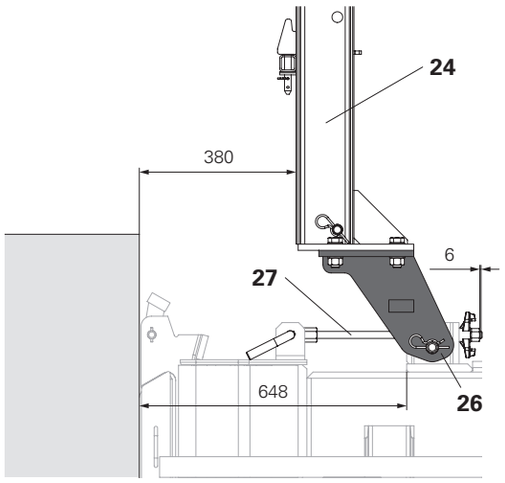


Fig. C4.10

Position of carriage at wall offset

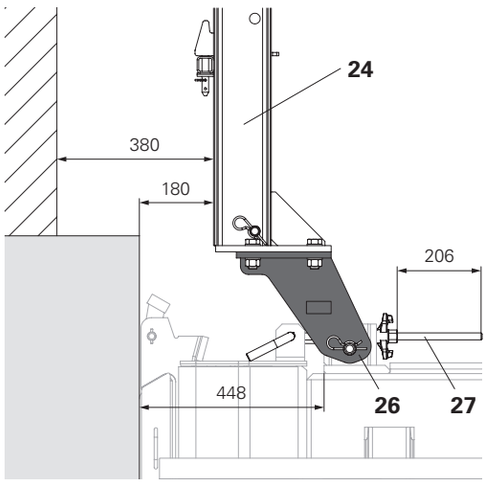


Fig. C4.11

Converting to Tie Yoke 465 ACS
This is necessary for concreting wall offsets.

Components

27	Tie Yoke 465 ACS

Assembly
1. Remove the Column Tie Yoke DW 15 (**1.4**).
2. Insert Tie Yoke 465 ACS (**27**) through the front part of the carriage and screw on Wing Nut DW 15 (**1.5**).
3. Fix the Tie Yoke 465 ACS (**27**) using locking pins Ø 20 x 205 (**1.3**) to the crossbeam head and secure with cotter pins 4/1 (**1.6**).

(Fig. C4.12 + C4.13)

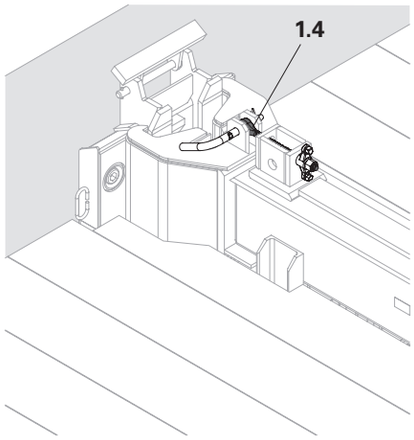


Fig. C4.12

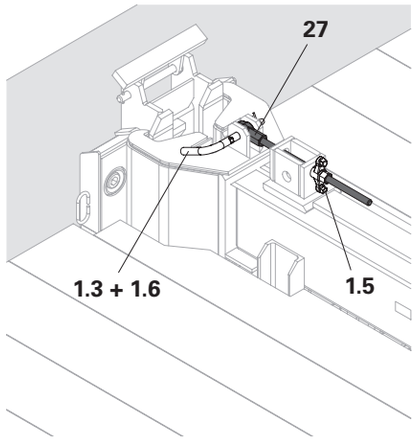


Fig. C4.13

Height adjustment assembly
1. Fix height adjustment (**24.9**) at assembly position and secure with cotter pin.

(Fig. C4.14 + C4.15)

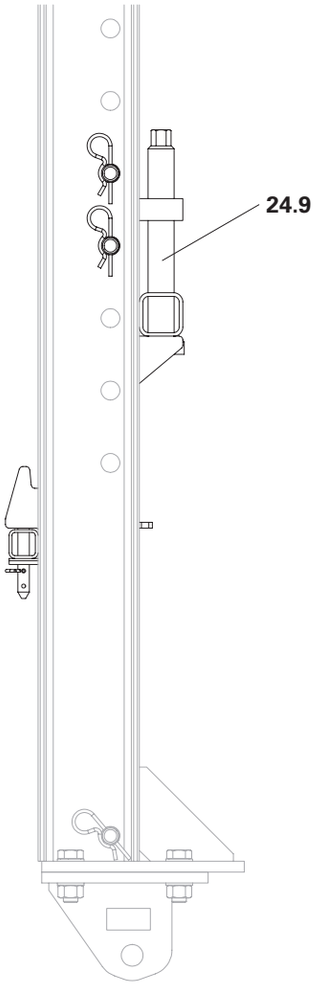


Fig. C4.14

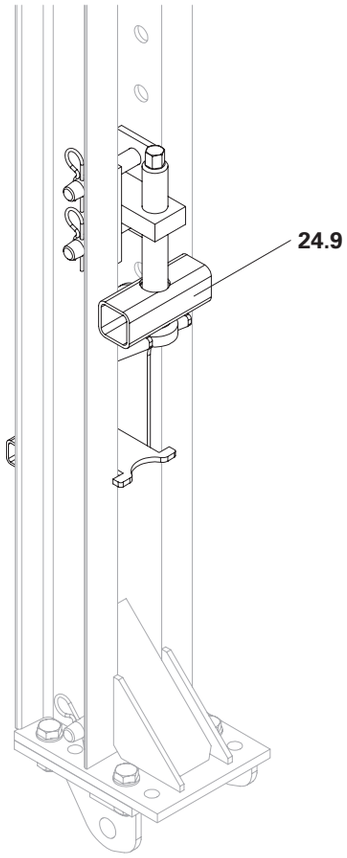


Fig. C4.15

Installing the strongbacks

Components

23 Thrust Spindle 177-233 ACS

Installation on carriage

1. Bolt Thrust Spindle 177-233 ACS (**23**) with bolt 25 x 180 (**23.1**) into the rear end of the carriage and secure with cotter pin 4/1 (**23.2**).
2. Lean Thrust Spindle 177-233 ACS (**23**) against ladder cage and secure with binding wire.
3. Secure the pre-assembled Strongback 365 ACS (**24**) with bolt 30 x 235 ACS (**25.1**) to the carriage front end and secure with cotter pin 5/1 (**25.2**).
4. Bolt Thrust Spindle 177-233 ACS (**23**) with bolt 25 x 180 (**23.1**) into the Strongback 365 ACS (**24**) and secure with cotter pin 4/1 (**23.2**).

(Fig. C4.16)

- Tilt both Strongbacks 365 ACS (**24**) slightly backwards. This facilitates the assembly of the formwork.
- Inclination: max. 5 °.

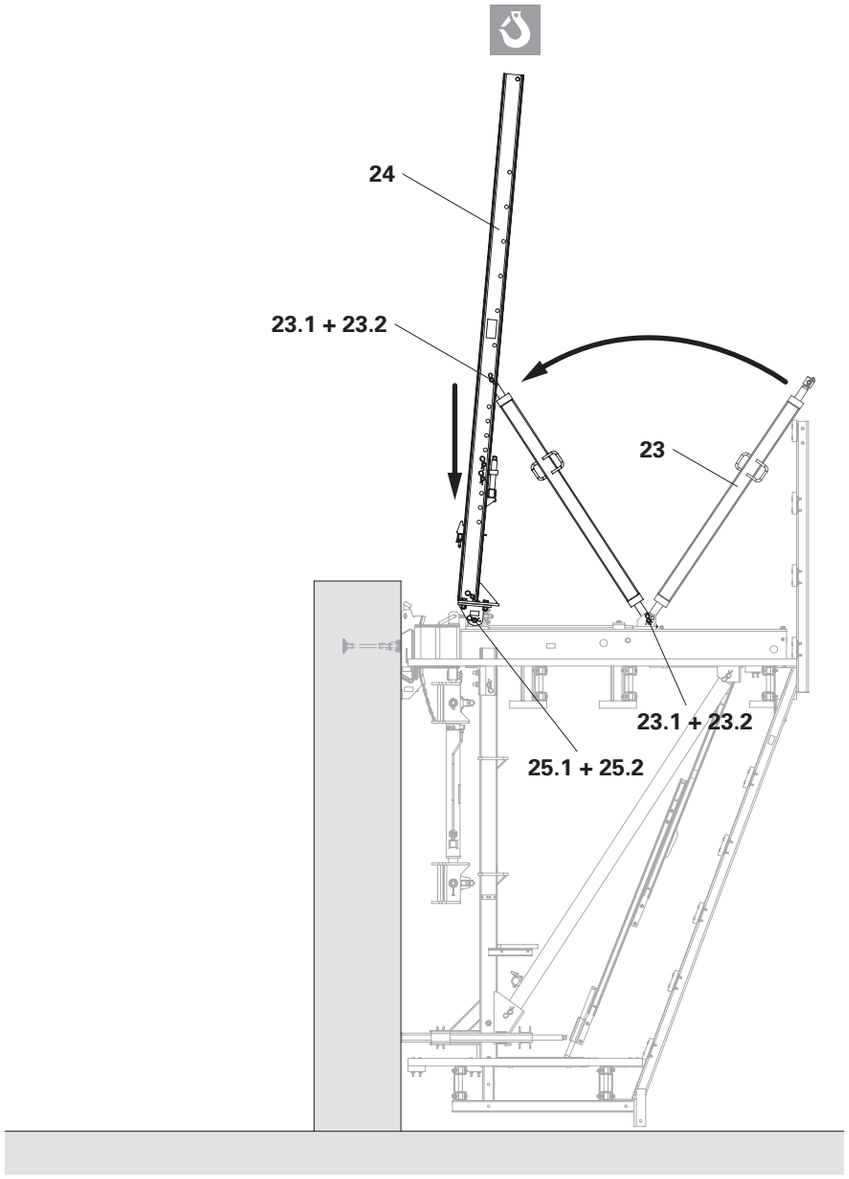


Fig. C4.16

Assembling the formwork

Warning

Heavy components that can fall over! Body parts can get trapped, resulting in injuries.

⇒ Do not reach into pinch points.

⇒ Leave components attached to the crane until the assembly is completely mounted.

Components

234 Locking pin Ø 20 x 205
235 Column Tie Yoke DW 15
236 Cross Strap-2
237 Wing Nut DW 15
303 Crane Splice 24

Assembly

1. Attach the formwork unit with two crane splices 24 (**303**) to the lifting beam 9 t (**304**) and hook the formwork unit into the claws of the height adjustment.
2. Place the formwork unit against the strongback.

(Fig. C4.17 + C4.17a)

3. Insert the Column Tie Yoke DW 15 (**235**) between the profiles of the Strongback 365 ACS (**24**) and fix it to the Steel Waler SRU of the formwork unit with the locking pin Ø 20 x 205 (**234**). Secure with cotter pins 4/1 (**234.1**).
4. Insert Cross Strap-2 (**236**) on Column Tie Yoke DW 15 (**235**).
5. Screw on Wing Nut DW 15 (**237**) and tighten.
6. Repeat steps 3 – 5 and install all other column tie yokes.

(Fig. C4.17b)

If necessary, temporarily remove obstructive concreting platform planking.

Lateral view

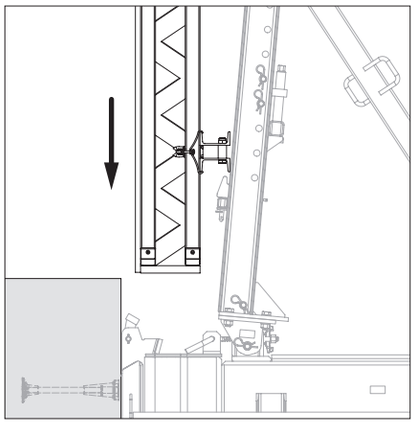


Fig. C4.17a

Top view

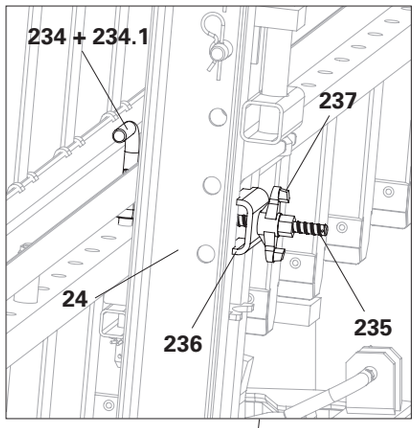


Fig. C4.17b

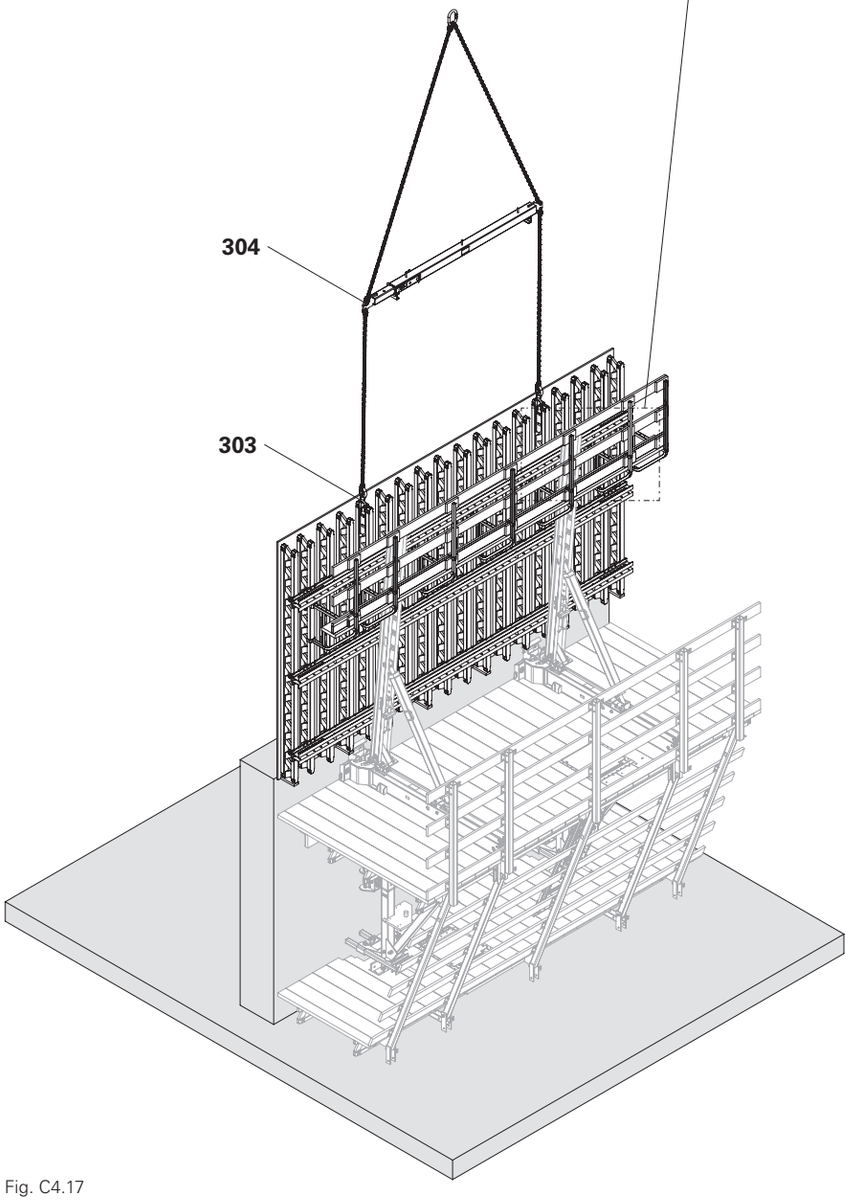


Fig. C4.17

Positioning the formwork

The position of the formwork is adjusted with the following components:
- forwards/backwards with the Carriage ACS.
- inclination with the Thrust Spindle ACS.
- vertically with the Adjustable Spindle ACS.
- normally the formwork does not have to be aligned horizontally.

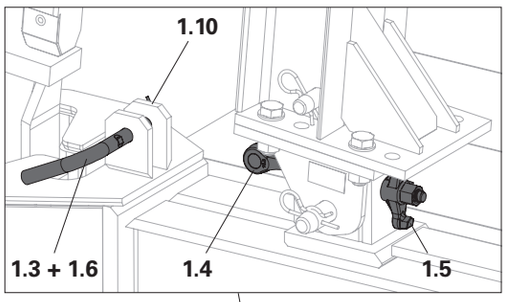


Fig. C5.01a

Carriage ACS

- The max. travel distance is approx. 80 cm.
- Follow the manufacturer's instructions for operating the cordless screwdriver.
- The operation describes the mechanical drive for the Carriage ACS.

Tool

300.1 Screwdriver ACS 18V
300.2 12-sided socket AF 17-1/2"
300.3 Extension 1/2" 130 mm

Operating the carriage

1. Pull the locking pin Ø 20 x 205 (**1.3**). After driving, put the locking pin back into the crossbeam head.
2. Assemble the screwdriver set (**300.1 + 300.2 + 300.3**).
3. To move the carriage forwards, turn the traction screw (**1.9**) anti-clockwise.
   To move the carriage backwards, turn the traction screw (**1.9**) clockwise.
4. Operate both carriages at the same time.
   If this is not possible, move the two carriages alternately in small steps.

(Fig. C5.01 + C5.01a + C5.01b)

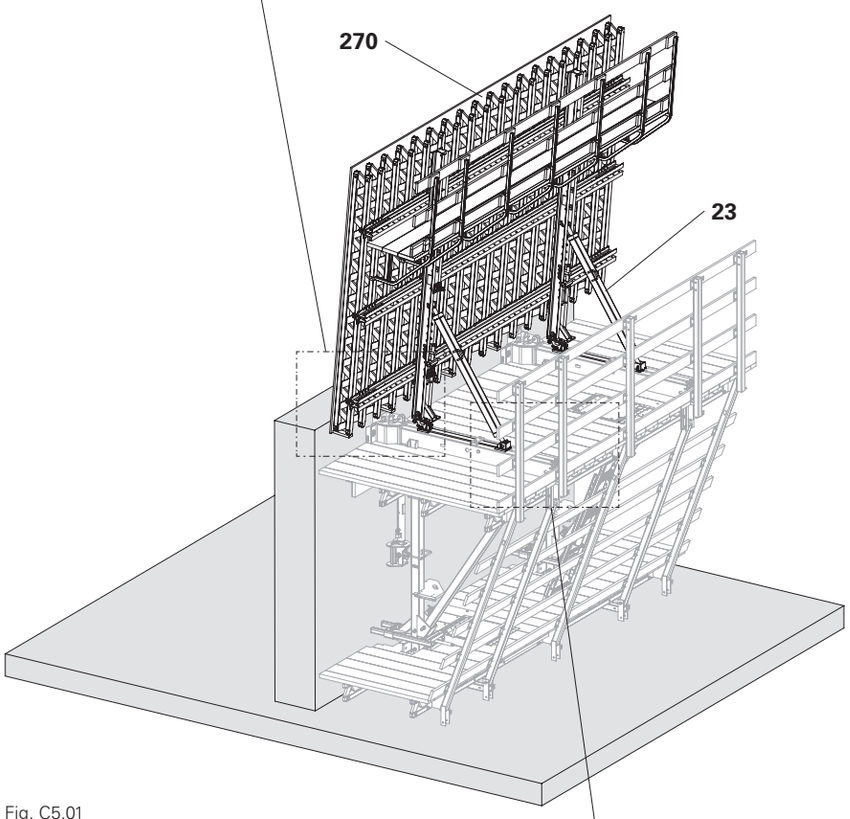


Fig. C5.01

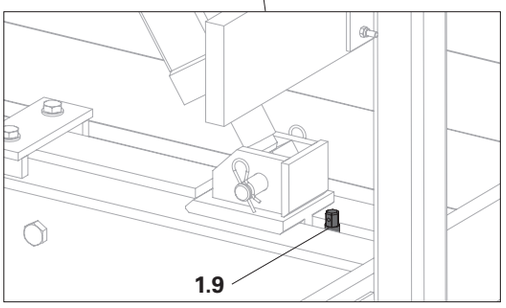


Fig. C5.01b

Securing the formwork unit
When concreting, press the formwork unit against the previous concreting section and prevent "bleeding" at the lower edge of the formwork. This is done with the Column Tie Yoke DW 15, or the Tie Yoke 465 ACS.
At the same time, this relieves the load on the carriage drive unit.

1. Move the formwork forwards.
2. Bolt Column Tie Yoke DW 15 (**1.4**) with locking pin Ø 20 x 205 (**1.3**) to crossbeam head (**1.10**) and secure with cotter pin 4/1 (**1.6**).
3. Tighten with Wing Nut DW 15 (**1.5**).

(Fig. C5.01a)

Use cordless screwdriver

Using a screwdriver makes it easier to work on the carriage and the pressure point spindle.
PERI recommends the use of the Cordless Screwdriver-Set ACS.

Note

Do not damage the mechanics of the carriage or pressure point spindle, therefore:

- do not exceed the torque of 40 Nm.
- do not use screwdrivers with roto hammer.

Recommended settings for the Screwdriver ACS 18V

- Set the speed to "Level 1". (Fig. C5.02)
- Set the operating mode to "Screw". (Fig. C5.03)
- Set the torque level to "17". (Fig. C5.04)

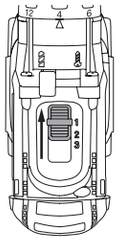


Fig. C5.02

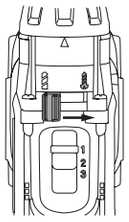


Fig. C5.03

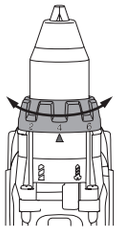


Fig. C5.04

Aligning the formwork

Ensuring the formwork is vertical

1. Hold the spirit level against the formlining (**270**) and align the formwork vertically by turning the Thrust Spindle ACS (**23**). (Fig. C5.01)

The adjustment of the two strongbacks is done one after the other.

Adjusting the height

1. Loosen Wing Nuts DW 15 (**237**).
2. Adjust the formwork to the required height by turning the Adjustable Spindle ACS (**24.1**).
3. Tighten Wing Nuts DW 15 (**237**).

The adjustment of the two Adjustable Spindles ACS is done one after the other.
(Fig. C5.05)

The formwork should have an overlap of approx. 5 cm.

Moving the formwork horizontally

1. Loosen Wing Nuts DW 15 (**237**).
2. Move the formwork with the lever against the strongback (**24**).
3. Tighten Wing Nuts DW 15 (**237**).

(Fig. C5.05)

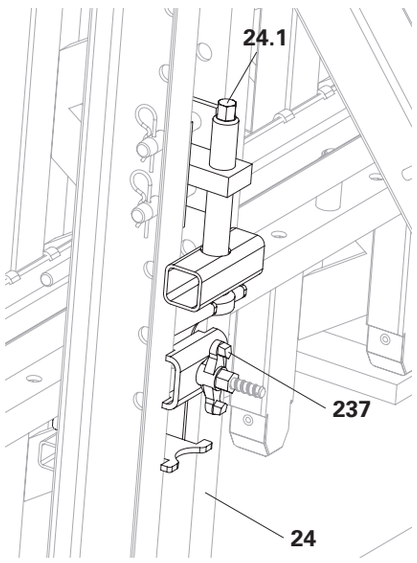


Fig. C5.05

C6 Second concreting section

Work to be carried out
In the second concreting section, carry out the installation and commissioning of the hydraulic system.
At the same time, carry out the reinforcement work for the second concreting section.

Note
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 the hydraulic hoses.
- Connect remote control.
- Fill the hydraulic pump with hydraulic oil.
- Bleed the hydraulic system and put it into operation.

(Fig. C6.01 – C6.03)

For a detailed description of this work, see the assembly instructions "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.

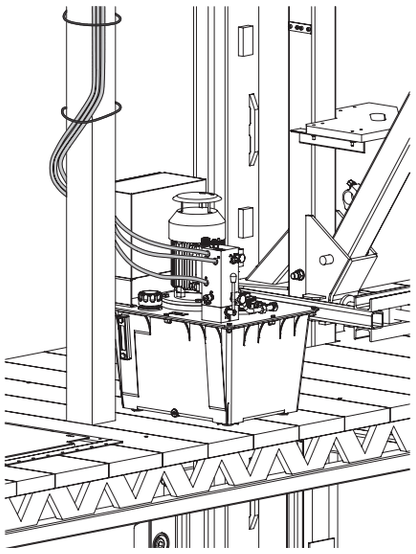


Fig. C6.01

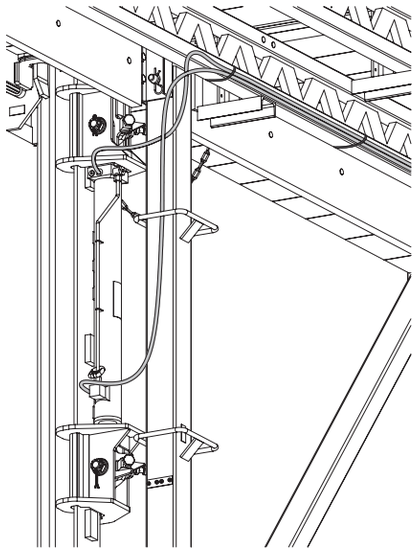


Fig. C6.02

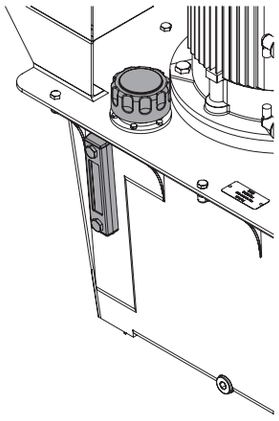


Fig. C6.03

Installing the Climbing Rail ACS

Strike the second concreting section

1. Remove the formwork ties.
2. Remove Positioning Screw M30.
3. Remove the bolts from the Column Tie Yoke DW 15 on the crossbeam.
4. Move the carriage backwards.

Installing the anchoring

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

Danger

Heavy components that can fall over!
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. C6.04 + C6.04a)

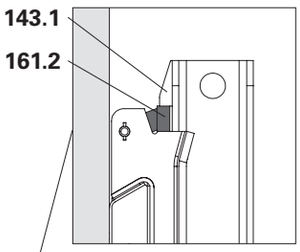


Fig. C6.04a

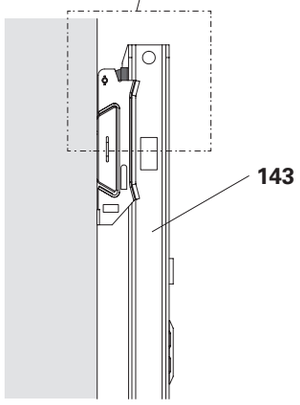


Fig. C6.04

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 on the catch blocks.

⇒ Ensure a safe and secure position.

- For further information see assembly instructions ‘ACS 100 Climbing Device and Hydraulics’.
- For a better overview, a simplified illustration is chosen for Fig. C6.05.

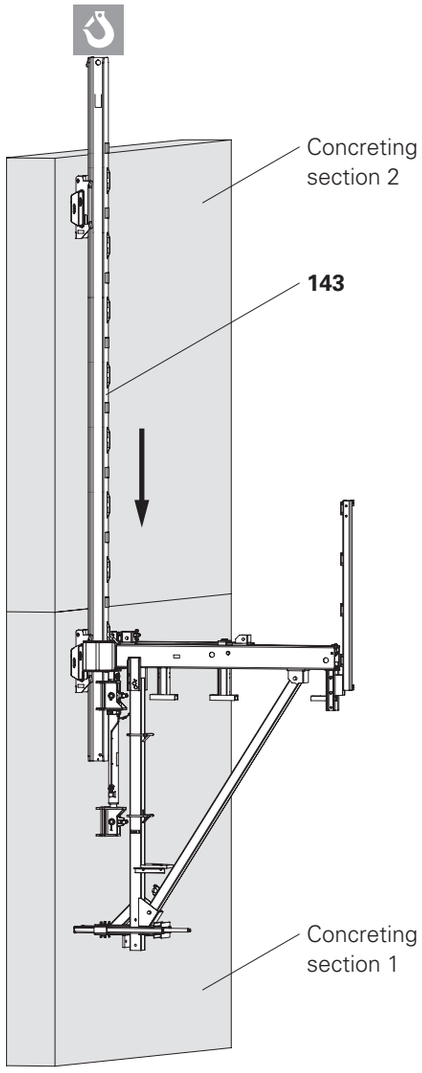


Fig. C6.05

Preparing the climbing procedure

Note

- Do not remain in the danger zone created by the moving parts.
- Cordon off leading edges formed between the platforms. If necessary, put on PPE.
- When climbing 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**). (Fig. C6.06)
2. Secure danger zones at the ends of the platforms.

Note

- Danger of collision: The slide (**147**) must be retracted when climbing the climbing unit so that climbing past the climbing shoes is collision-free. The climbing unit is supported on the Climbing Rail ACS during the climbing process.
- The spacer (**144**) must support the Climbing Rail ACS when climbing the climbing rail otherwise there is a risk that the Climbing Rail ACS will be overloaded.

3. Turn the pressure point spindle (**148**) in clockwise direction until the Slide ACS (**147**) protrudes approx. 1 cm from the guide. (Fig. C6.07)
   → The climbing unit rests exclusively on the Climbing Rail ACS.

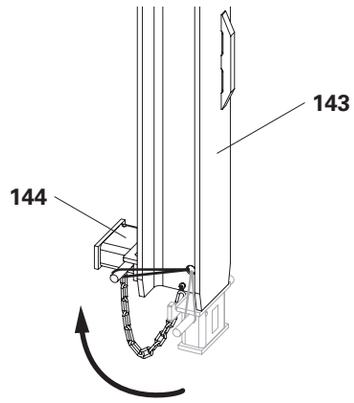


Fig. C6.06

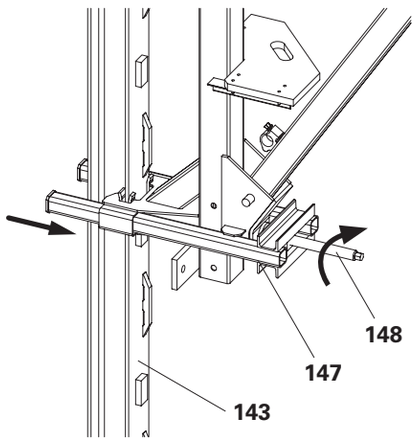


Fig. C6.07

Attaching the finishing platform

Carrying out the climbing procedure

Components

9	Finishing Platform Vertical 500 ACS
10	Cantilever Arm Post Finishing Platform ACS l = 2.61 m
11	Guardrail Post Finishing Platform ACS l = 2.51 m

Note

- 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 switch units in all the climbing heads to "Climb platform". (Fig. C6.08)
2. Extend the hydraulic cylinder approx. 10 cm. Pull the Ledger ACS out of the climbing shoes.
3. Climb the climbing unit approx. 2 m.
4. Screw the Finishing Platform Vertical 500 ACS (**9**) 1x onto the Climbing Platform Beam ACS (**5**) using the attached assembly materials.
5. Screw the Guardrail Post Finishing Platform ACS l = 2.51 m (**11**) and the Cantilever Arm Post Finishing Platform ACS l = 2.61 m (**10**) to the Climbing Platform Beam ACS (**5**) with the attached assembly materials.

(Fig. C6.09)

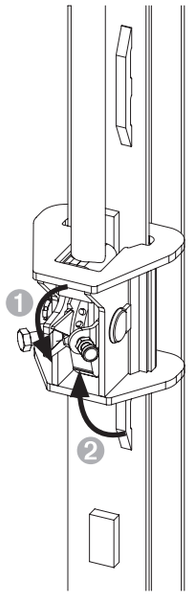


Fig. C6.08

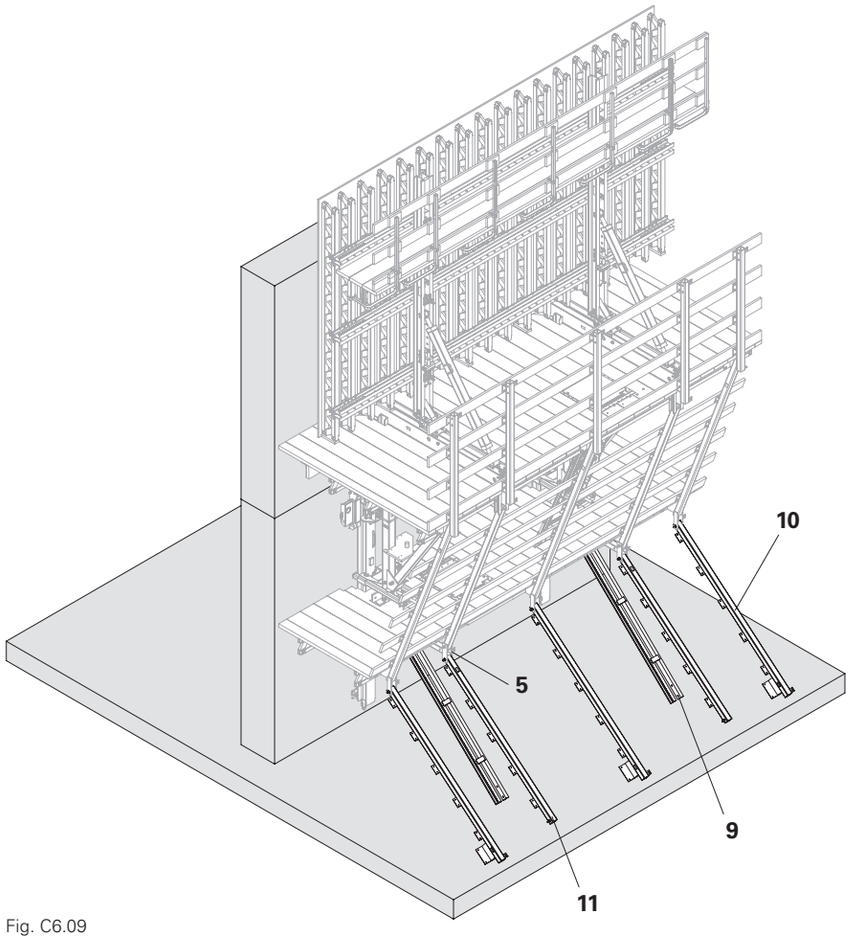


Fig. C6.09

6. Climb the climbing unit until the finishing platform can be pushed under the posts.
7. Push the pre-assembled finishing platform under the climbing unit.
8. Raise the finishing platform and screw all posts to the Finishing Platform Beam ACS (**8**) with the attached assembly materials.

(Fig. C6.10 + C6.11)

9. Screw the Finishing Platform Vertical 500 ACS (**9**) 1x onto the Climbing Platform Beam ACS (**5**) using the attached assembly materials.

(Fig. C6.11)

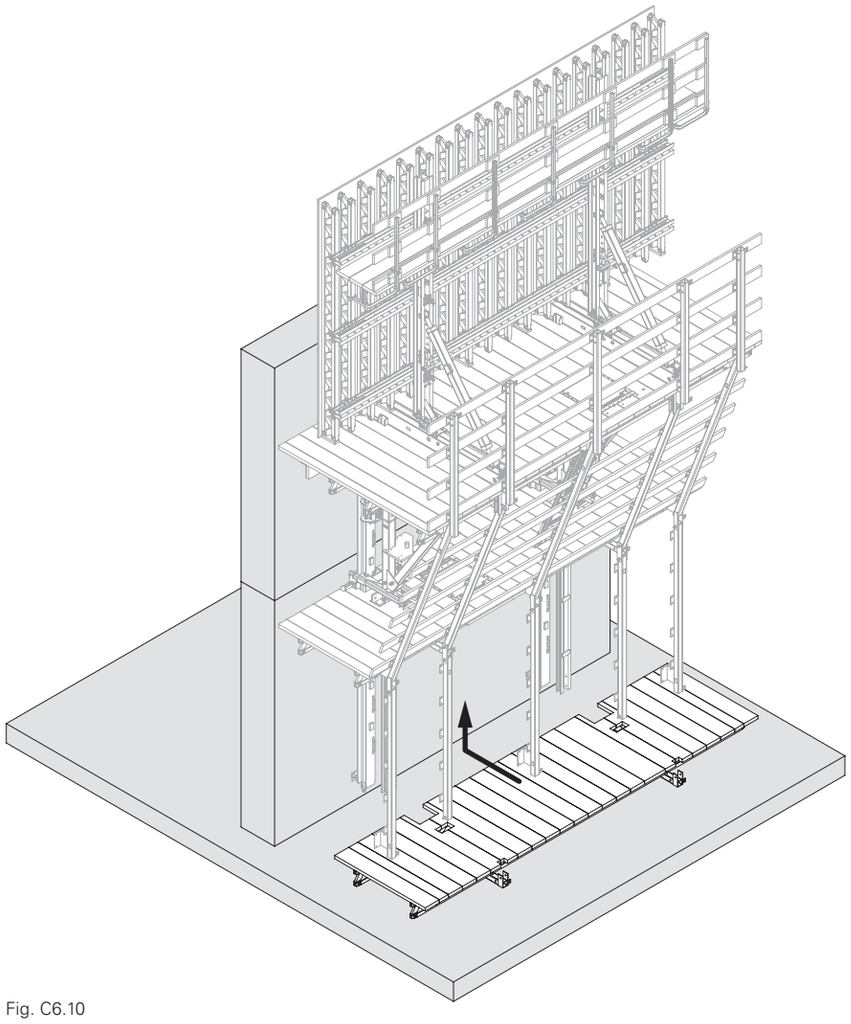


Fig. C6.10

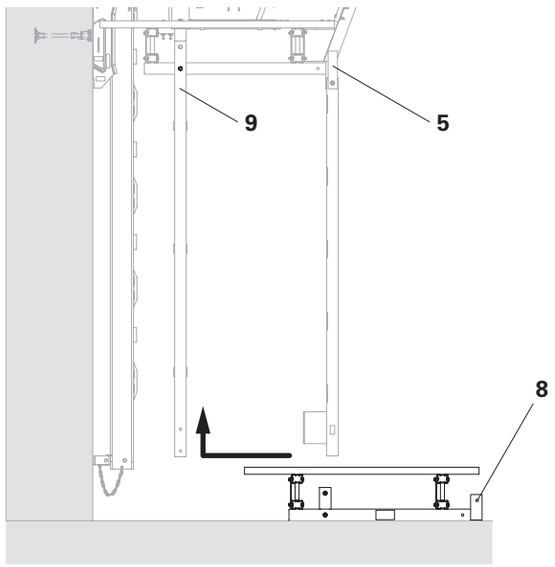


Fig. C6.11

10. Climb to the end position.
11. Insert the Ledger ACS into the Climbing Shoe II and place the climbing unit on the Ledger ACS.
12. Extend the Slide ACS (**147**) until the Climbing Rail ACS (**143**) swings freely and relieves the Climbing Rail ACS (**143**).

(Fig. C6.12)

Mounting the ladder cage

Mounting toe board and ladder cage for the finishing platform. See "Toe boards" on page 55 and "Guardrail" on page 57.
(Fig. C6.12)

Fitting the ladder

The ladder for the climbing platform and finishing platform. See "Fitting the ladder" on page 61.
(Fig. C6.12)

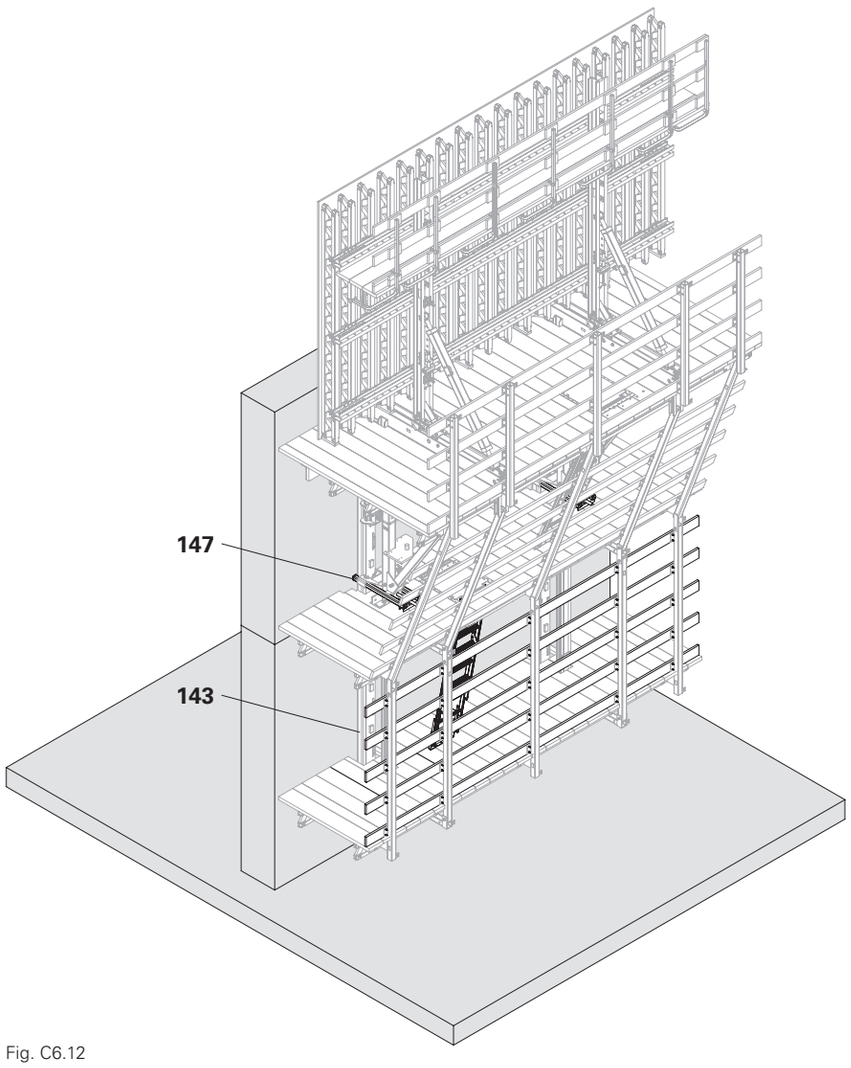


Fig. C6.12

D1 Work operations standard cycle

Concreting cycle

1. Clean the formwork unit and spray with release agent, e.g. PERI Bio Clean
2. Install the climbing tie.
3. 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.

4. Move the primary formwork forwards.
5. Move the closing formwork forwards and secure it.
6. Align, connect and tie formwork units.
7. Concreting section.

(Fig. D1.01)

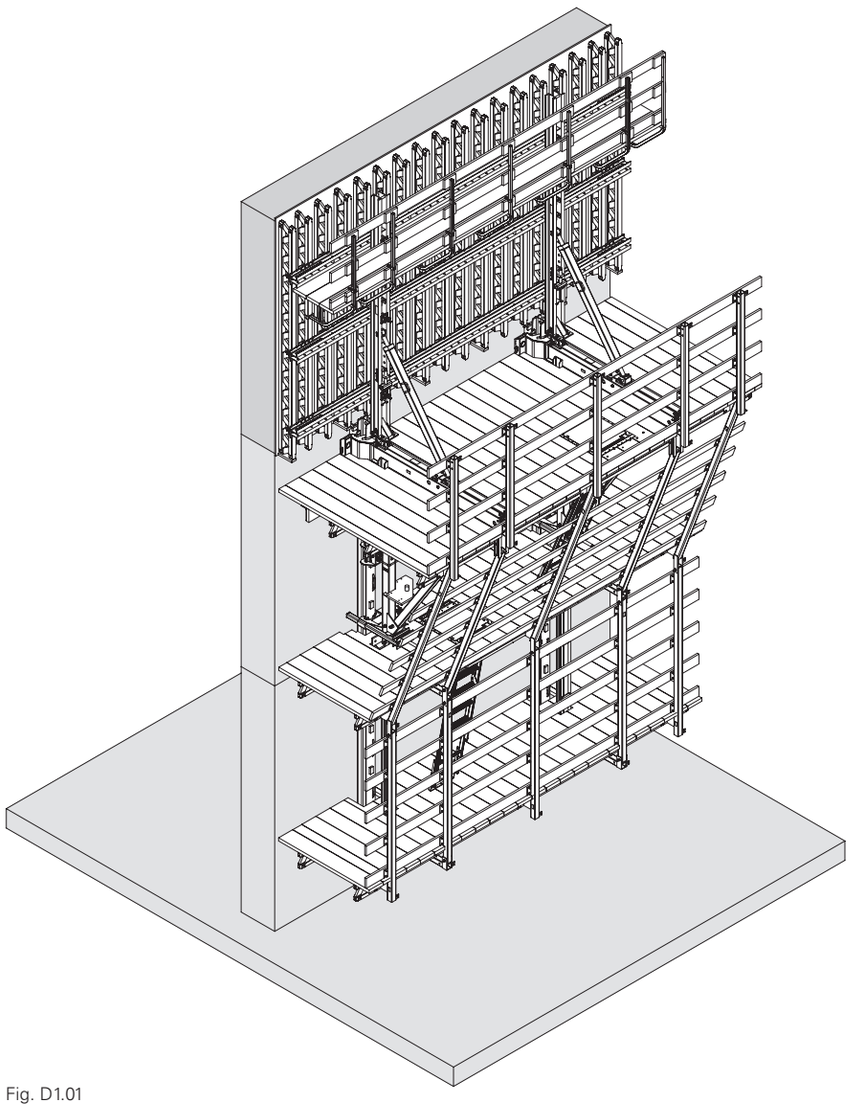


Fig. D1.01

Climbing cycle

Note

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

Preparing 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 screws 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 positioned on the concreting platform provides instructions and is responsible for ensuring that all instructions are correctly executed.
- Check the position of the catch and cam after each cylinder stroke.
  → Red marking flag of the detent points upwards.
  → The cam is in the central position.

1. Set all switch units in the climbing heads to "Climb rail". (Fig. D2.01)

Note

- Position the climbing shoes so that the climbing rails can pass through unhindered.
- After climbing the climbing rail, make sure that
  – the swing ledger is completely folded down.
  – 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 spacer (**144**) upwards. (Fig. D2.02)

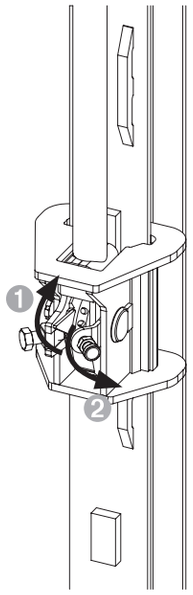


Fig. D2.01

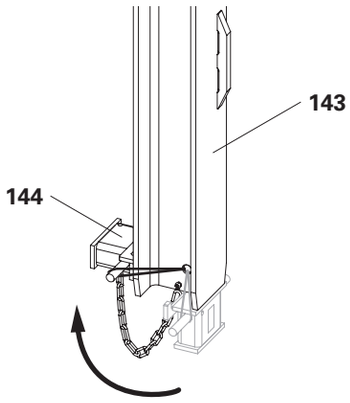


Fig. D2.02

D2 Moving the climbing unit

Preparatory work

1. Dismantle 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. Move the Slide ACS back (**147**). (Fig. D2.03)
2. Set switch units in all the climbing heads to "Climb platform". (Fig. D2.04)

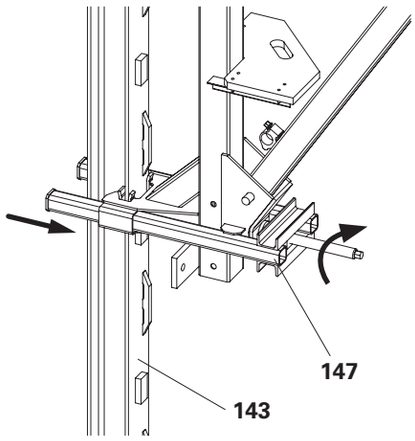


Fig. D2.03

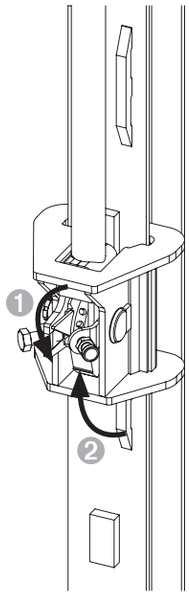


Fig. D2.04

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

Final stroke

5. Insert the Ledger ACS (**145**) into the Climbing Shoe II (**161**). (Fig. D2.05)
6. Place the climbing unit on the Ledger ACS (**145**).
7. Extend the Slide ACS (**147**) until the Climbing Rail ACS (**143**) swings freely and relieves the Climbing Rail ACS (**143**). (Fig. D2.06)

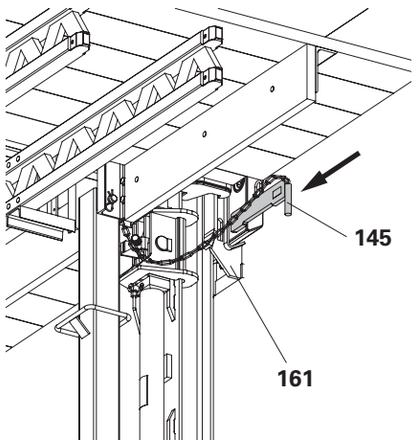


Fig. D2.05

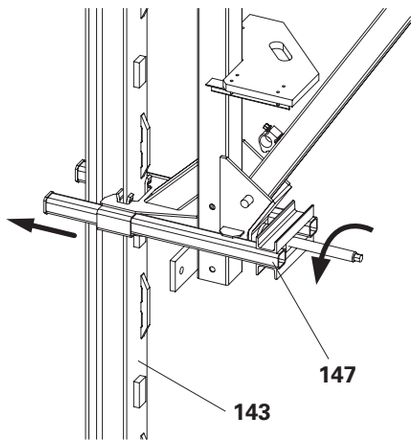


Fig. D2.06

D2 Moving the climbing unit

The climbing unit has climbed a 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.

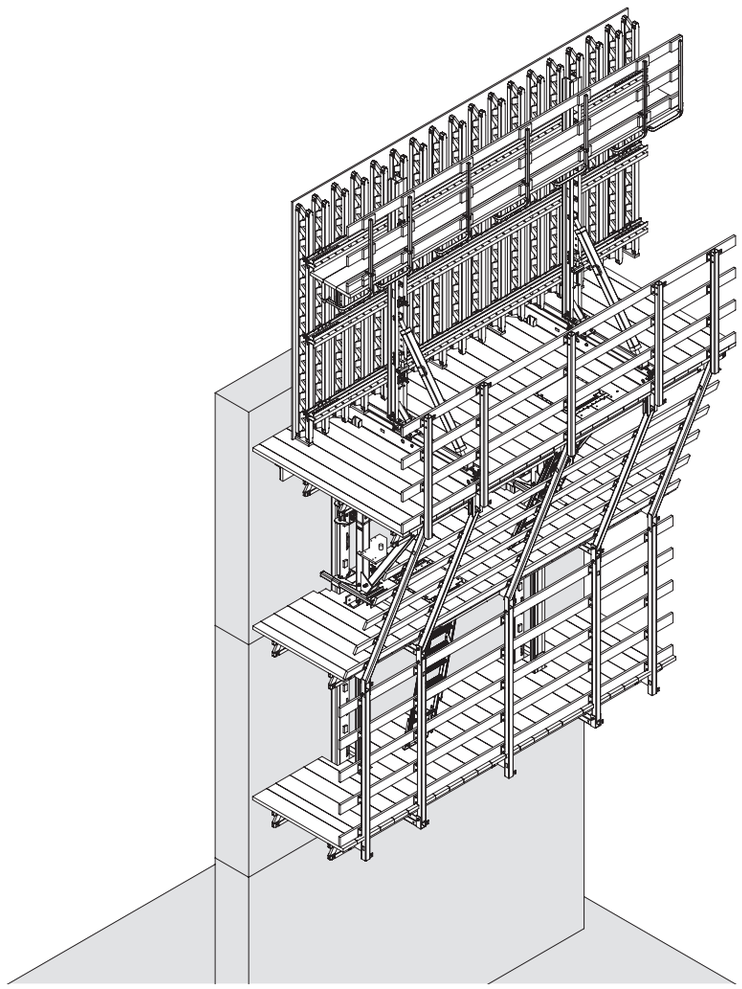


Fig. D2.07

Remove 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 ring spanner AF 46 and unscrew it completely. (Fig. D2.08)

Close 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)

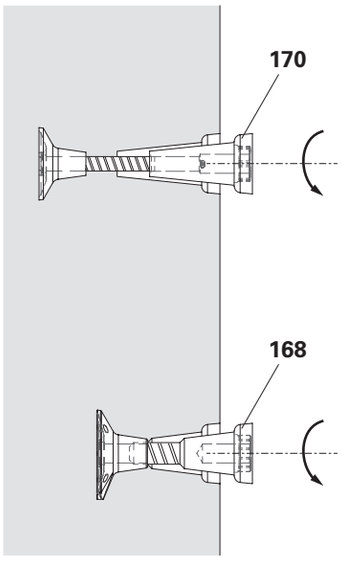


Fig. D2.08

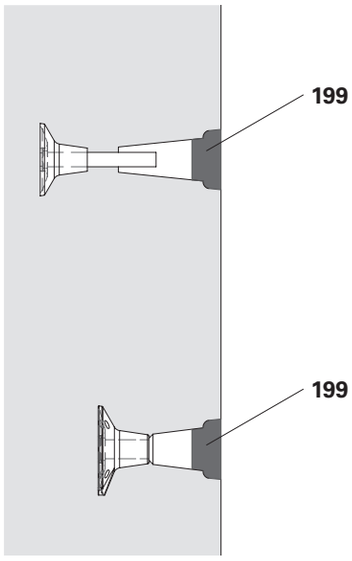


Fig. D2.09

Wall offsets

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

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

Other combinations of climbing shoes and further measures for climbing in the case of wall offsets are therefore possible or necessary.

Concreting section before the wall offset

Before concreting, fit a squared timber in the formwork from 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. 200 mm

Tab. D3.01

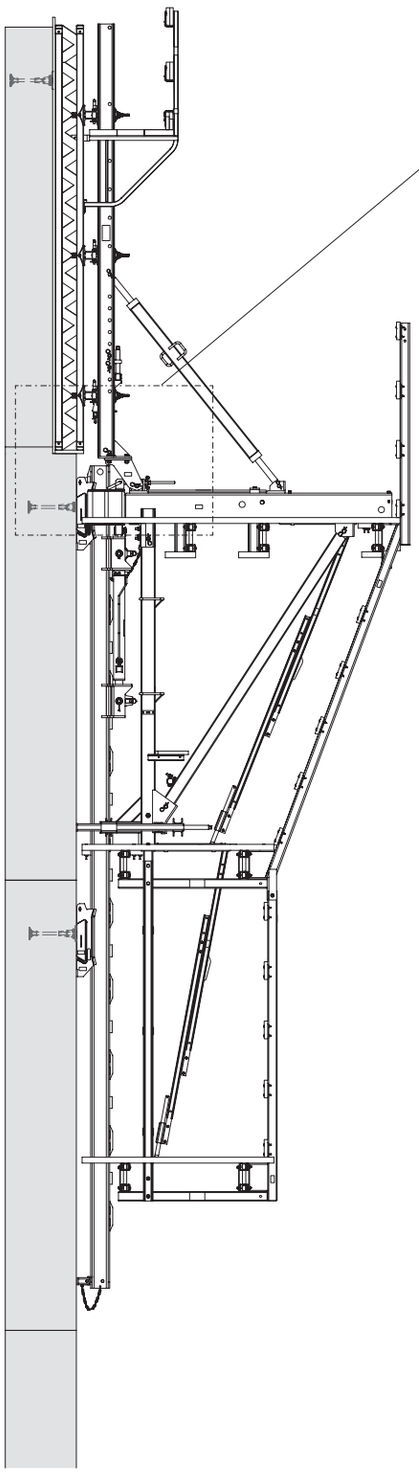


Fig. D3.01

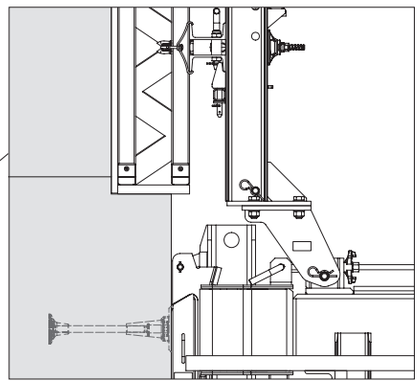


Fig. D3.01a

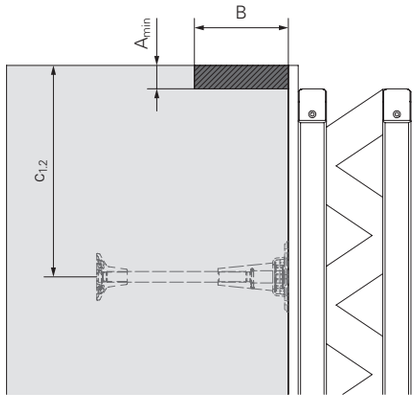


Fig. D3.02

Concreting section after 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 further forwards with the carriage by the offset.
2. Fix the Tie Yoke 465 ACS (**27**) using locking pins Ø 20 x 205 (**1.3**) to the crossbeam head and secure with cotter pins 4/1 (**1.6**).
3. Tighten with Wing Nut DW 15 (**1.5**).
4. Concrete the section.

(Fig. D3.03)

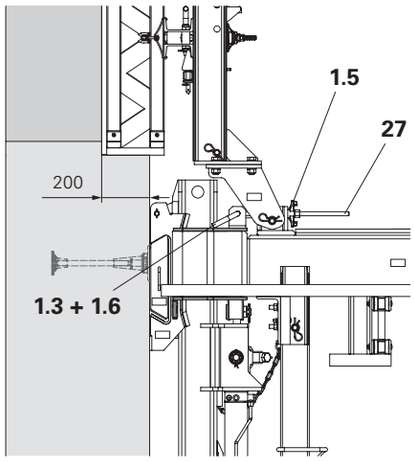


Fig. D3.03

Climbing with 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

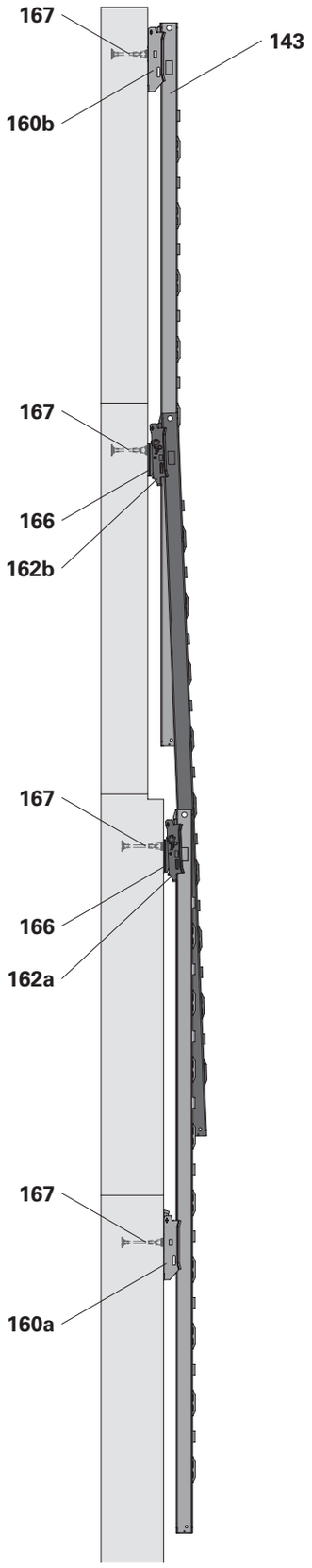


Fig. D3.04

Climbing the climbing rail

For a clear description of the climbing procedure, the operation of the hydraulic system and the climbing device is not described. See assembly instructions "ACS 100 Climbing Device and Hydraulics".

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 on 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 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 pressure point guide (**3.4**) and in the climbing heads of the Climbing Units ACS 100 (**140**).
3. Swing the climbing unit backwards with the Slide ACS (**147**) and continue climbing the climbing rail (**143**) to Climbing Shoe IV ACS (**162b**).

(Fig. D3.05)

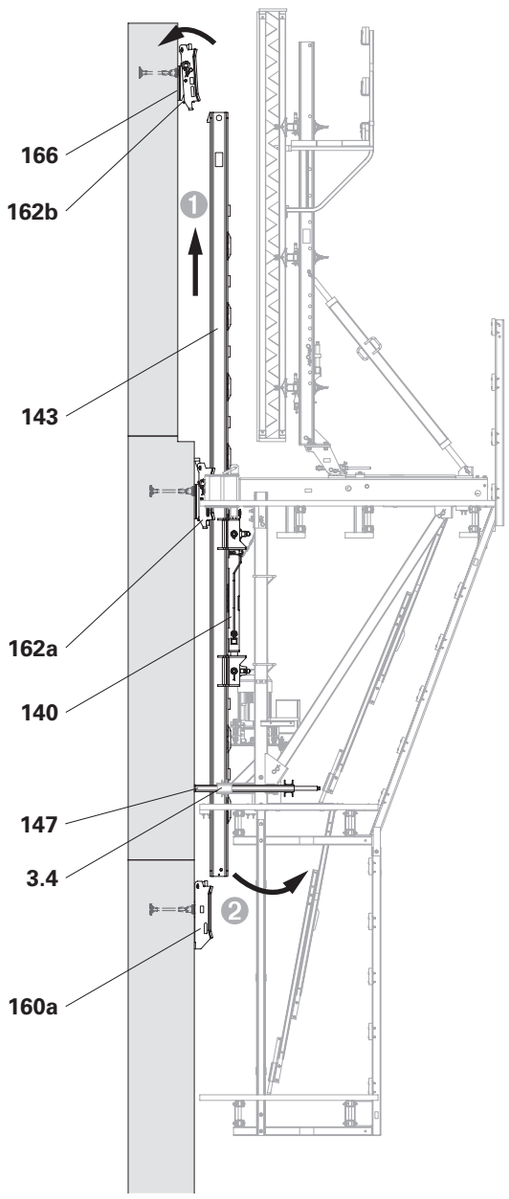


Fig. D3.05

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.

For this, PERI recommends the assembly of a hinged cover using a fire hose. (Fig. D3.06a)

- Make sure that the swing ledger of Climbing Shoe IV ACS (**162a**) is folded upwards.
- Readjust the Slide ACS (**147**) and set the climbing unit at an angle.
- If necessary, support the Slide ACS (**147**) with a squared timber.

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**) completely folded down?
- Are the support noses of the Climbing Rail ACS resting fully on the swing ledger?

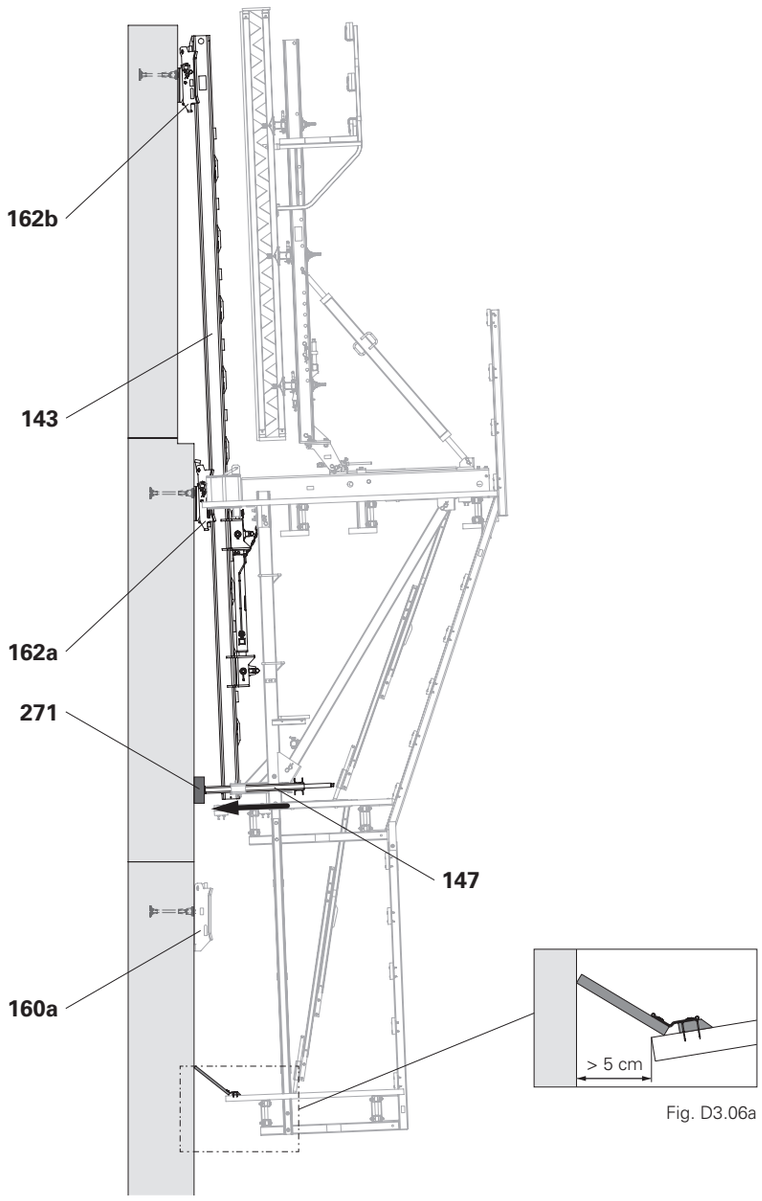


Fig. D3.06a

Fig. D3.06

Climbing the climbing unit

Note

- To prevent the climbing rail (**143**) from bending when climbing the climbing unit, strengthen the climbing rail underneath at the lower end with a squared timber (**271a**).
- Attach the squared timber (**271a**) to the climbing rail (**143**) with a chain.

Implementation

1. Retract the Slide ACS (**147**).
2. Climb the unit into the next section and attach it to Climbing Shoe IV ACS (**162b**).
3. Extend Slide ACS (**147**) and support climbing unit. If necessary, support underneath with squared timber (**271b**).

(Fig. D3.07)

Has the Ledger ACS engaged fully in the climbing shoe?

Positioning the formwork unit

As the climbing unit hangs diagonally above the wall offset, align the formwork vertically.

1. Align formwork unit vertically with the Thrust Spindle 177-233 ACS (**23**).
2. Fitting the leading tie.
3. Move the formwork unit forwards and secure the carriage to the crossbeam head.
   → The carriage is offset to the rear by the wall offset.
4. Connect and tie formwork units.
5. Concreting the second section after the wall offset.

(Fig. D3.07)

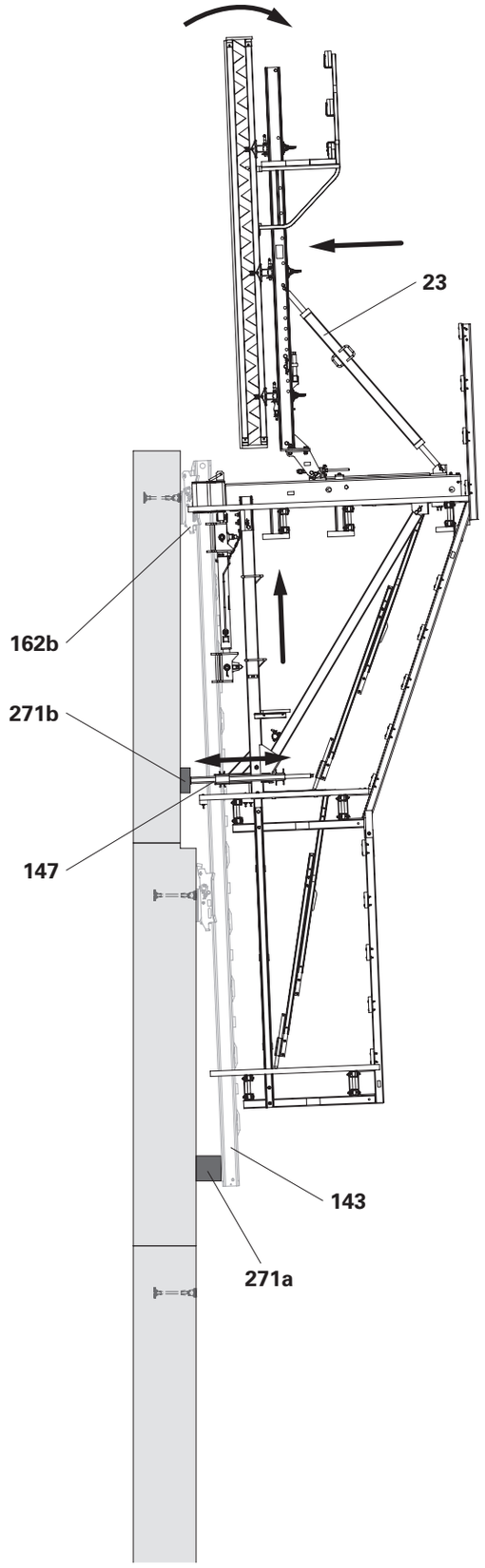


Fig. D3.07

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 Slide ACS (**147**) so that the climbing rail (**143**) can retract into the Climbing Shoe-2 I ACS (**160b**).

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

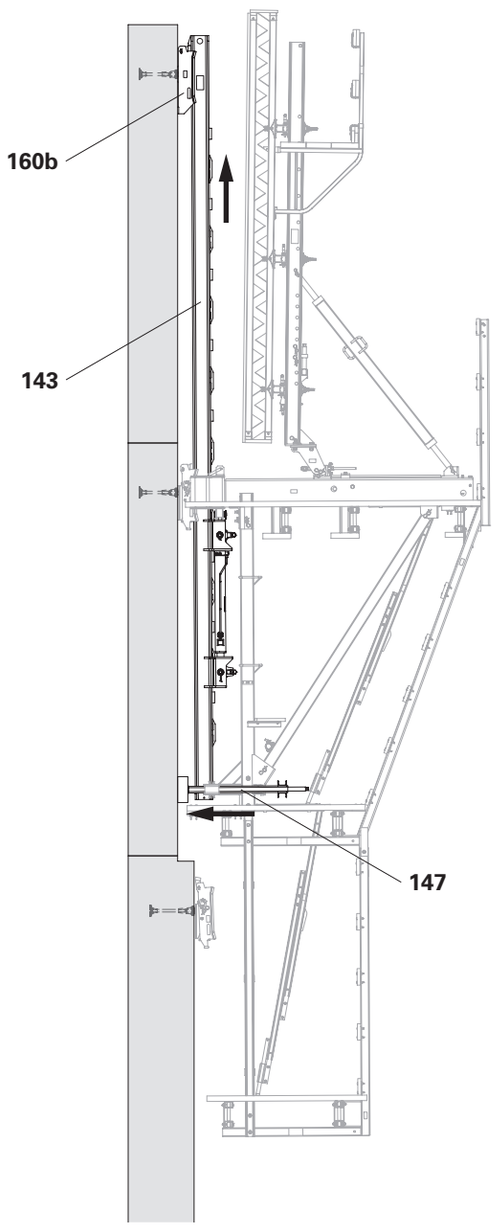


Fig. D3.08

Climbing the climbing unit

1. Retract the Slide ACS (**147**).
2. Climb the unit into the next section and attach it to Climbing Shoe-2 I ACS (**160b**).
3. Extend Slide ACS (**147**) and support climbing unit.

(Fig. D3.09)

Has the Ledger ACS engaged fully in the climbing shoe?

Positioning the formwork unit

1. Align formwork unit vertically with the Thrust Spindle 177-233 ACS (**23**).
2. Fitting the leading tie.
3. Move the formwork unit forwards and secure the carriage to the cross-beam head.
4. Connect and tie formwork units.
5. Concreting the section.

(Fig. D3.09)

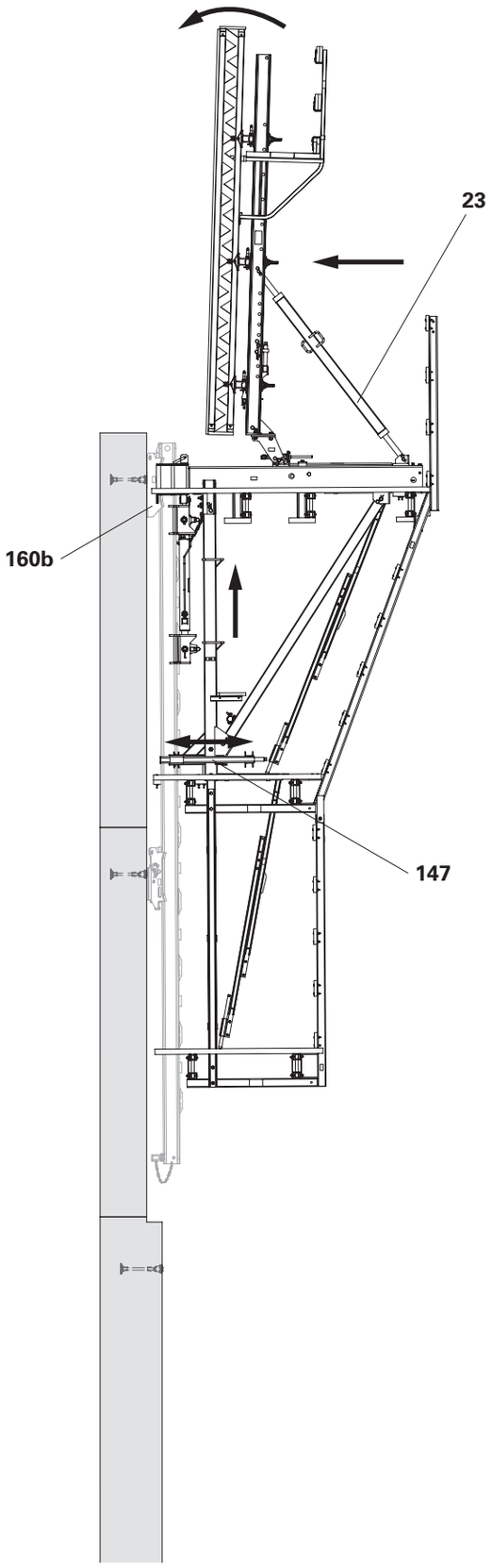


Fig. D3.09

Figure D3.10 shows the formwork unit vertically aligned after the concreting cycle.

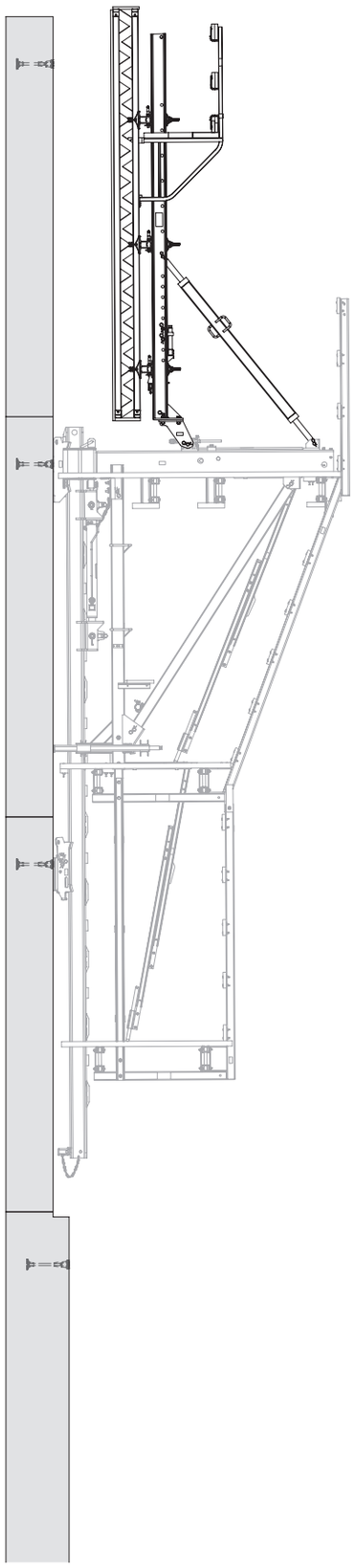


Fig. D3.10

Round building structure

- Arrange the crossbeams in parallel. This guarantees the function of the carriage on round structures.
- The Climbing Shoe IV ACS in combination with the Tie Shoe-V ACS compensates for angles α 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.

- 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.

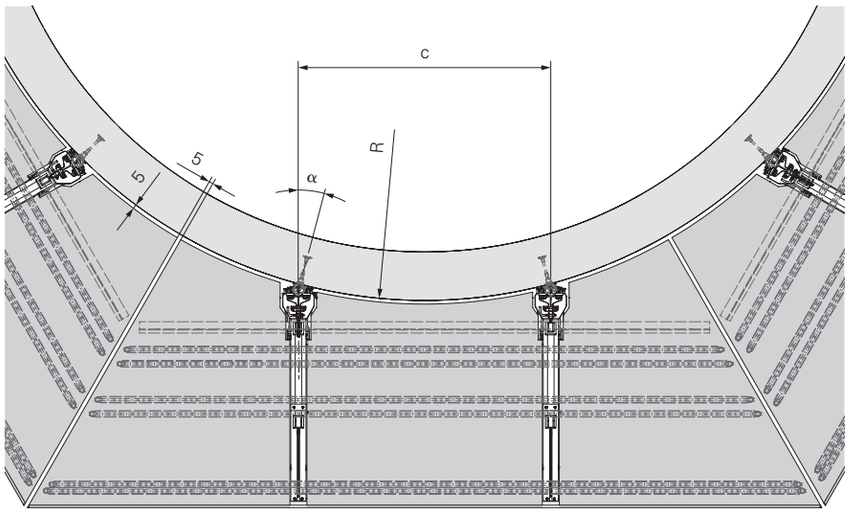


Fig. D3.11

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 guardrails.
  ⇒ Use personal protective equipment to prevent falling from a height (PPE).
- During the disassembly process, components could 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.
- Danger of the climbing unit falling due to overloading of the components!
  This can lead to serious injuries or even death.
  ⇒ Always lift out formwork and climbing unit separately.

Note

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 dismantling and removal of the hydraulic system, see assembly instructions "ACS 100 Climbing Device and Hydraulics".

Disassembling the formwork

Disassembly

1. Move the formwork backwards and hang it on the crane.
2. Unbolt strongbacks (**24**) and thrust spindle (**23**) on the carriage (**1.2**).
3. Lift out the formwork, place it on the formlining side and dismantle it.

(Fig. E1.01)

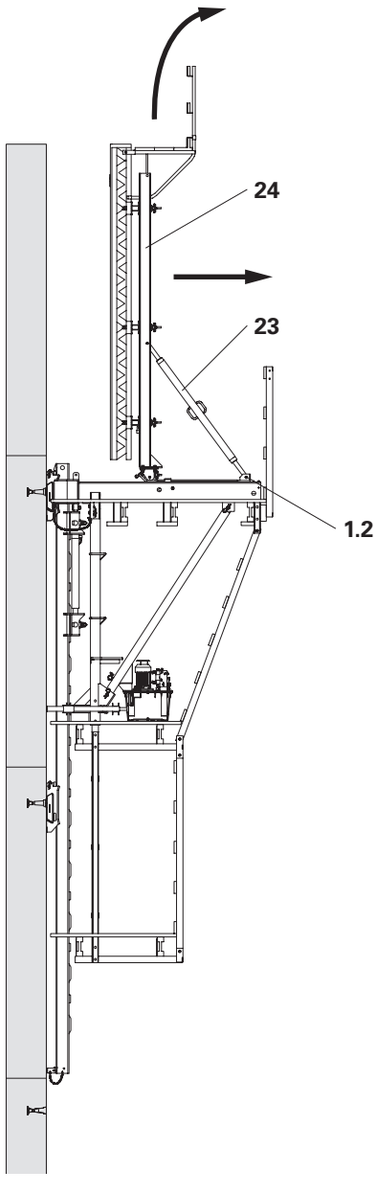


Fig. E1.01

E2 Lifting out the climbing unit

Lifting the climbing unit out

Lifting out

1. Set all climbing devices (**140**) to the "Neutral" position.
2. Fix all climbing devices (**140**) to the vertical strut (**3**) with binding wire (**219**).
3. Remove the spacer (**144**).
4. Attach the climbing rail (**143**) to the crane and pull it upwards and out.

(Fig. E2.01)

5. Unscrew the finishing climbing shoes and tie tubes. Remove climbing ties and seal tie points with concrete cones.
6. Attach climbing unit to crane. To do this, bolt it to the crossbeam head at the front and to the carriage at the rear.
7. Unhook the climbing unit.

(Fig. E2.02)

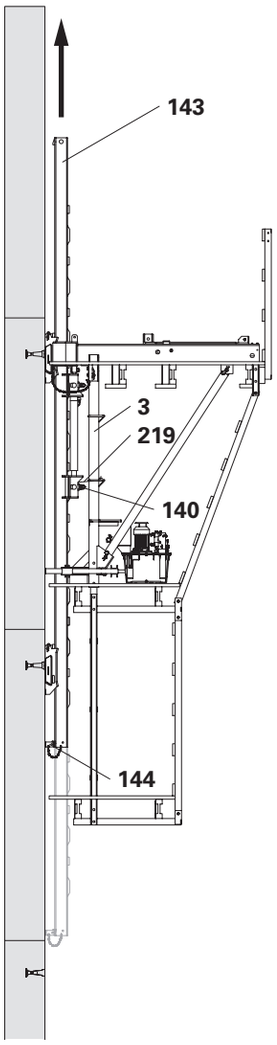


Fig. E2.01

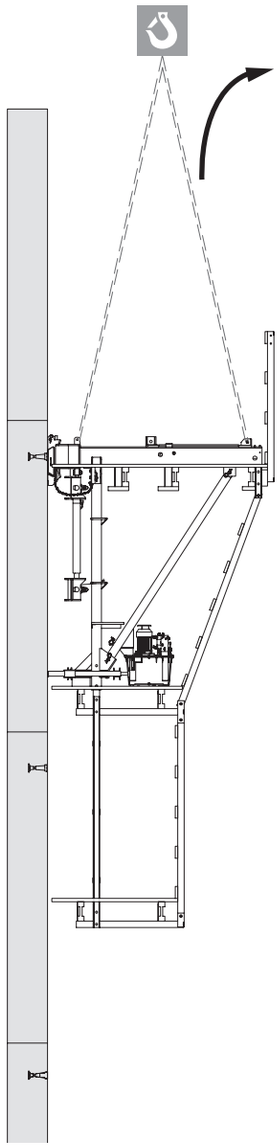


Fig. E2.02

E2 Lifting out the climbing unit

8. Lower the climbing unit to the ground and let it hang from the crane.
9. Extend ladder.
10. Unscrew the finishing platform vertical (**9**), finishing platform guardrail post (**11**) and finishing platform cantilever arm post (**10**) on the finishing platform and pull out the finishing platform.
11. Remove the finishing platform.

(Fig. E2.03)

12. Remove the top screw (**9.1**) from the finishing platform vertical (**9**) on the climbing platform.
13. Swing the ladder cage and the finishing platform vertical (**9**) to the side and lower the climbing unit further.
14. Secure the ladder cage against tipping over. Unscrew, remove and dismantle the finishing platform vertical (**9**) and the ladder cage on the finishing platform.

(Fig. E2.04)

15. Lower the climbing unit to the ground as far as the climbing platform.
16. Lift out the hydraulic unit.
17. Place the climbing unit on the front side.

(Fig. E2.05)

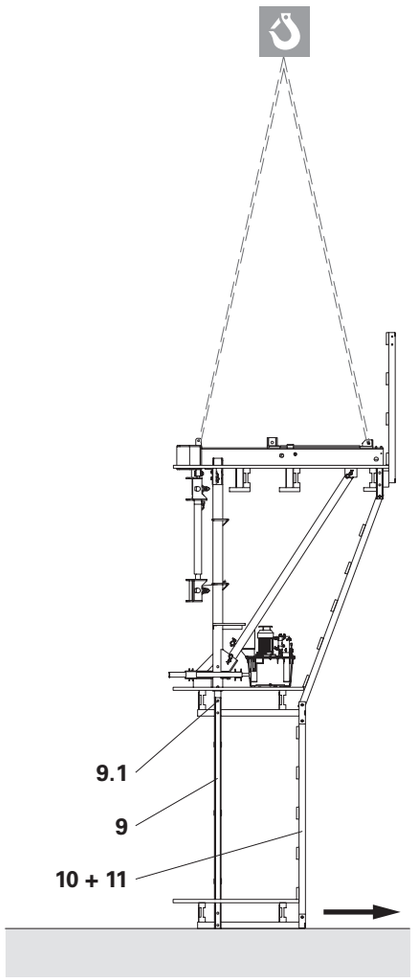


Fig. E2.03

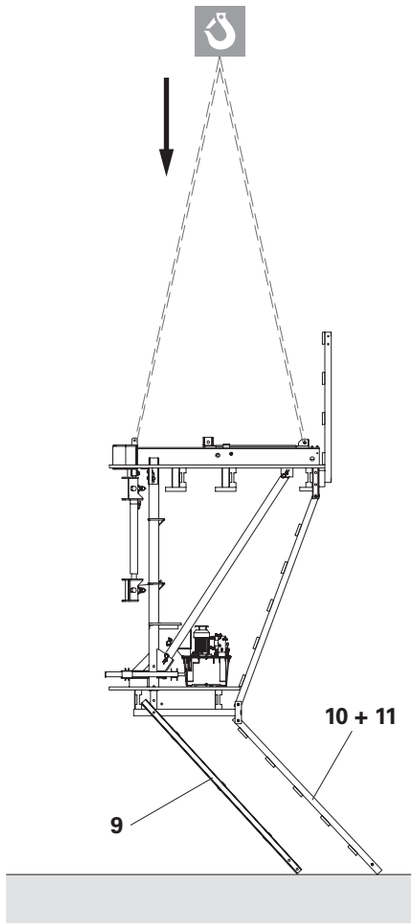


Fig. E2.04

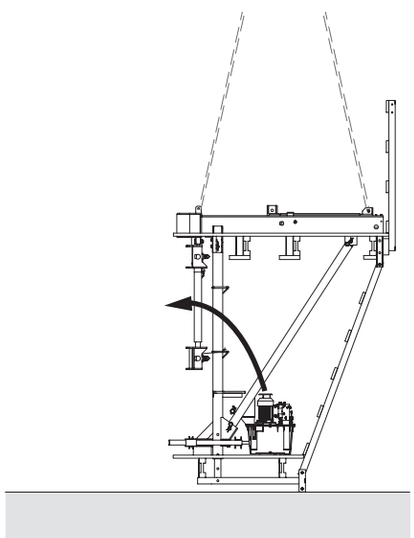


Fig. E2.05

E3 Removing the climbing unit

Dismantling assemblies

Warning

Heavy components that can fall 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.

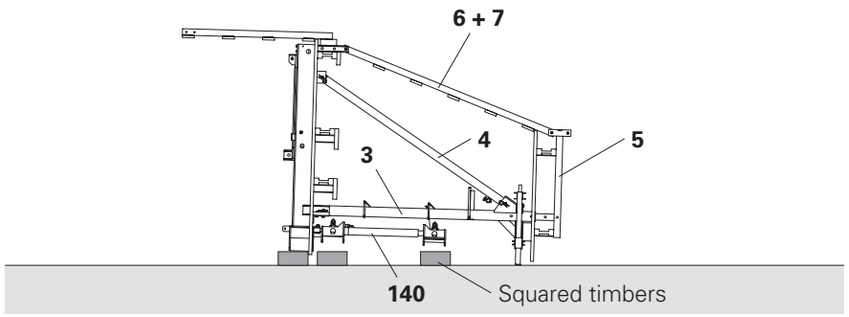


Fig. E3.01

Disassembly

1. Dismantle the ladder cage of the work platform.
2. Extend ladder.
3. Dismantle the guardrail boards and cantilever arm posts of the climbing platform (**6**).
4. Attach the climbing platform to the crane.
5. Unscrew the climbing platform guardrail posts (**7**) and the climbing platform beams (**5**).
6. Set down and dismantle the climbing platform.
7. Remove the climbing devices (**140**).
8. Attach the work platform to the crane.
9. Remove diagonal strut (**4**) and vertical strut (**3**).
10. Set down and dismantle the work platform.

(Fig. E3.01)

Concluding work

The following work is carried out using a crane cage.

Removing the uppermost tie point

1. Unscrew 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"	
Interval	**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, remove if necessary.

Climbing device For a more detailed list, see the Assembly Instructions for the "ACS 100 Climbing Device and Hydraulics"	
Interval	**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 cylinder
	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	
Interval	**Check and remedy defects**
Before each climbing operation	Spacer: Expander and chain.
Monthly	Clean and grease: ■ Sliding surfaces of the climbing rails ■ Sliding surfaces of the climbing shoes
	Clean, grease and check for ease of movement: ■ Gravity pivot 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	
Interval	**Check and remedy defects**
Before each climbing operation	■ Tighten the screw connections on the couplings ■ Check all other bolt connections
Monthly	Clean and grease: ■ 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 6 months	Repair or renew the corrosion prevention on the steel parts.

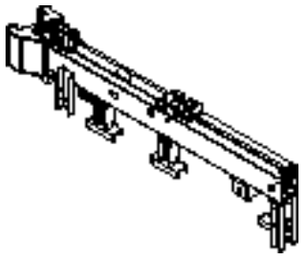
Tab. F1.02

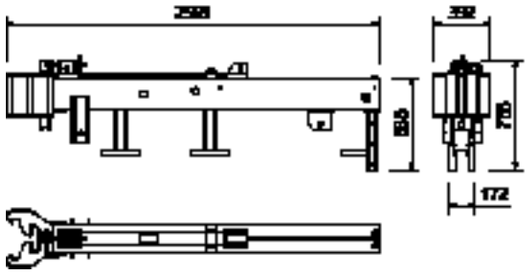
Art no.	Weight [kg]	
051701	271.000	**Main Platf. Beam w.Car./M-Dr.**

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

Notes

Used to connect Strongback 255 or 365 by means of Strongback Adapter 50 or 200.





Consists of

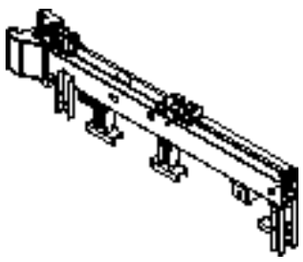
1 pc 51704 Carriage ACS cpl
1 pc 51705 Mechanical Drive ACS / A-M

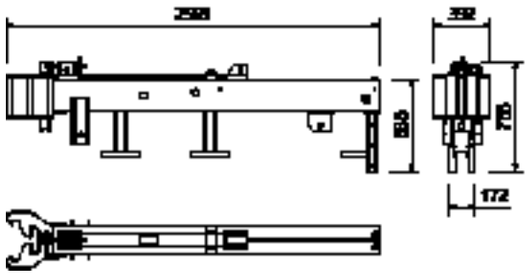
Art no.	Weight [kg]	
051702	293.000	**Main Platf. Beam w.Car./H-Dr.**

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

Notes

Used to connect Strongback 255 or 365 by means of Strongback Adapter 50 or 200.





Consists of

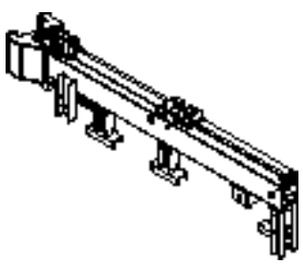
1 pc 051704 Carriage ACS cpl
1 pc 051706 Hydraulic Drive ACS / A-H

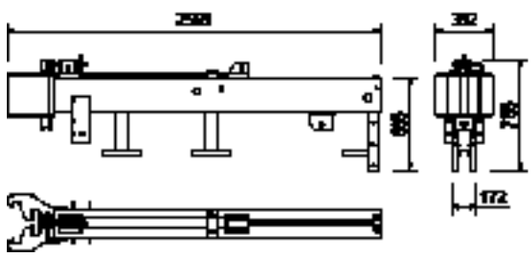
Art no.	Weight [kg]	
051700	259.000	**Main Platform Beam ACS w. Car.**

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

Notes

Used to connect Strongback 255 or 365 by means of Strongback Adapter 50 or 200.



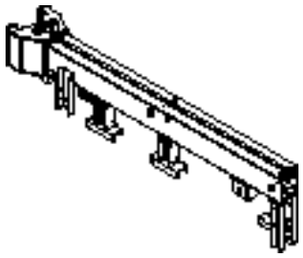


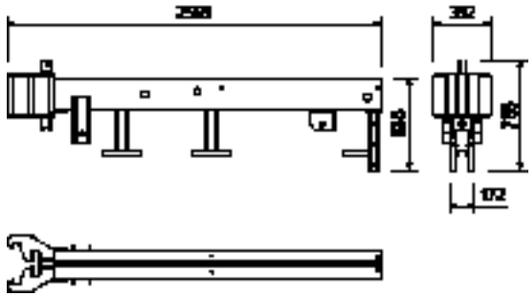
Consists of

1 pc 051704 Carriage ACS cpl

Art no.	Weight [kg]	
051703	204.000	**Main Platform Beam ACS**

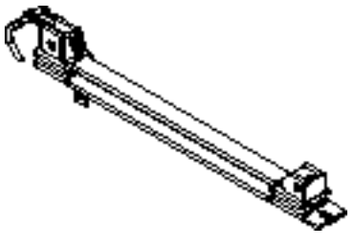
For fixing Decking Supports GT 24 or Beam IPE and Angle Profile L200x100 (special).

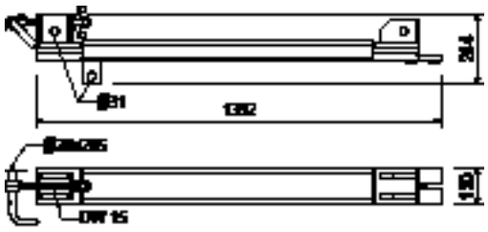




Art no.	Weight [kg]	
051704	51.900	**Carriage ACS cpl**

Serves for retracting the formwork.



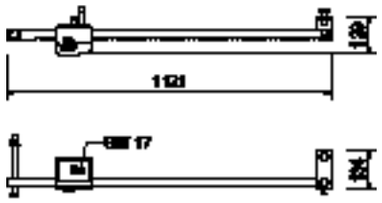


Consists of

1 pc 037160 Pin Ø20x205mm ga
1 pc 037150 Tie Yoke DW15
1 pc 030100 Wingnut DW15 ga
1 pc 018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]	
051705	13.100	**Mechanical Drive ACS / A-M**

Serves as a mechanical drive for the carriage ACS.

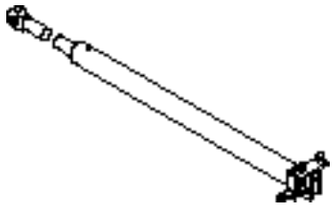


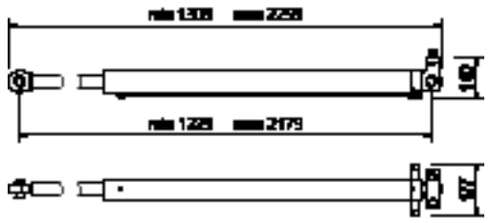
Consists of

2 pc 710225 Screw ISO4017-M16x045-8.8-ga
2 pc 711074 Washer ISO7089-16-200HV-ga
1 pc 706462 Screw ISO4014-M20x200-8.8-ga
1 pc 781053 Hex-Nut ISO7040-M20-8-ga
1 pc 706454 Washer ISO7089-20-200HV-ga
1 pc 710593 Screw ISO4014-M10x080-8.8-ga
1 pc 780356 Hex-Nut ISO7040-M10-8-ga
1 pc 706461 Screw ISO4762-M12x035-8.8-ga
1 pc 780702 Washer ISO7089-12-200HV-ga

Art no.	Weight [kg]	
051706	34.700	**Hydraulic Drive ACS / A-H**

Serves as a hydraulic drive for the Carriage.



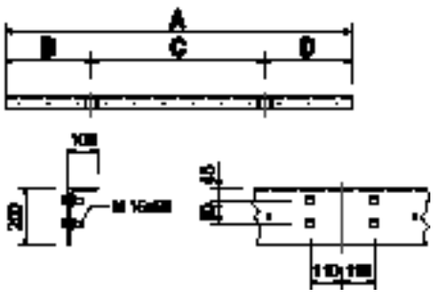


Consists of

2 pc 710225 Screw ISO4017-M16x045-8.8-ga
2 pc 711074 Washer ISO7089-16-200HV-ga
2 pc 706466 Pin Ø30x64mm ACS
4 pc 706465 Spring Washer DIN471-30x1.5
2 pc 706464 Drive Connector ACS

Art no.	Weight [kg]	
051708	24.600	**Spacer Profile ACS 2-Br. 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.

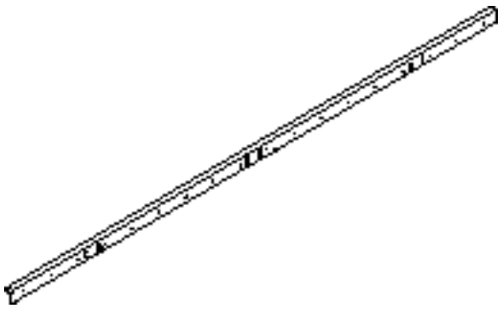


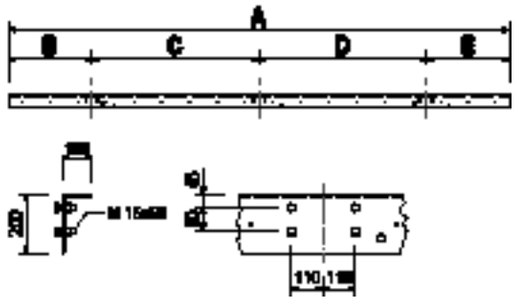
Consists of

8 pc 710299 Screw ISO4014-M16x060-8.8-ga
8 pc 710229 Hex-Nut ISO4032-M16-8-ga
8 pc 711074 Washer ISO7089-16-200HV-ga
8 pc 710880 Washer DIN434-18-ga

Art no.	Weight [kg]	
051709	25.400	**Spacer Profile ACS 3-Br. 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.



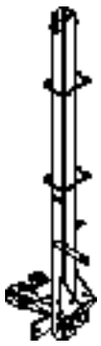


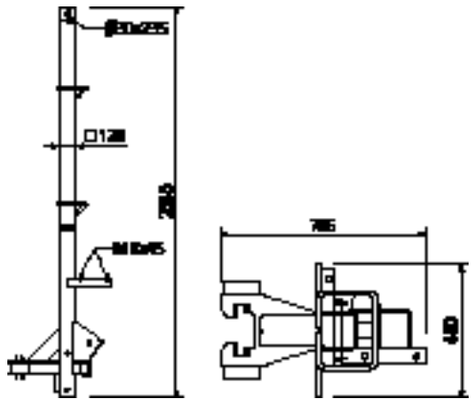
Consists of

12 pc 710299 Screw ISO4014-M16x060-8.8-ga
12 pc 710229 Hex-Nut ISO4032-M16-8-ga
12 pc 711074 Washer ISO7089-16-200HV-ga
12 pc 710880 Washer DIN434-18-ga

Art no.	Weight [kg]	
051710	83.500	**Vertical Strut ACS**

For fixing to Main Platform Beam ACS.





Accessory (not included)

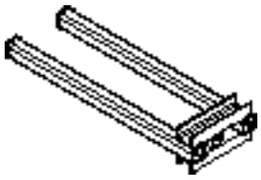
051711	20.800	**Sliding Unit ACS**
051712	4.540	**Compression Spindle ACS cpl**
051713	2.360	**Plywood Platform ACS-R**

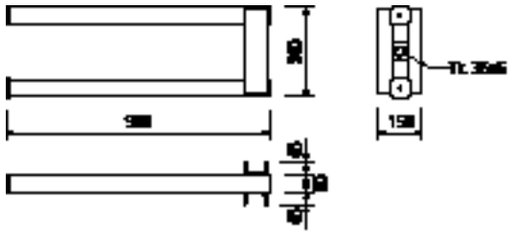
Consists of

1 pc 706372 Pin ACS Ø30x235mm coat
2 pc 022230 Cotter Pin 5/1 ga
3 pc 710295 Screw DIN603-M08x045-4.8-ga-Nu

Art no.	Weight [kg]	
051711	20.800	**Sliding Unit ACS**

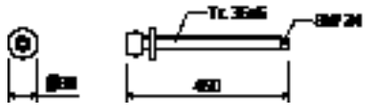
For assembling in Vertical Strut ACS. Adjustable compression point.





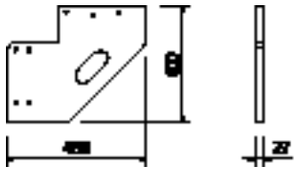
Art no.	Weight [kg]	
051712	4.540	**Compression Spindle ACS cpl**

For adjusting the ACS Sliding Piece, Width across flats Wrench size SW24.



Art no.	Weight [kg]	
051713	2.360	**Plywood Platform ACS-R**

Bonded plywood. For fitting to Vertical Strut.

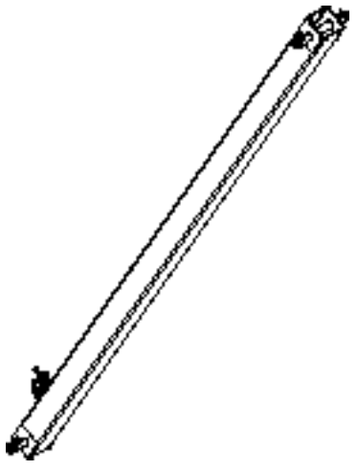


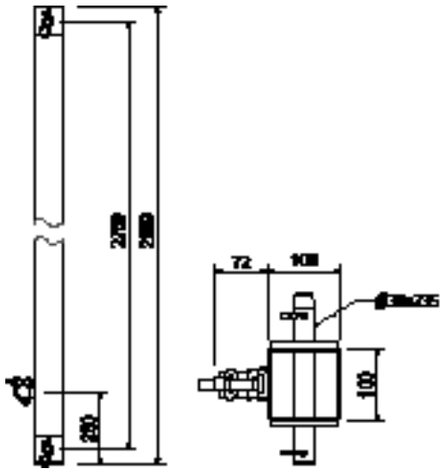
Accessory (not included)

710295	0.028	**Screw DIN603-M08x045-4.8-ga-Nu**

Art no.	Weight [kg]	
051714	38.800	**Compression Strut ACS**

For the bracing of Sliding Units ACS.



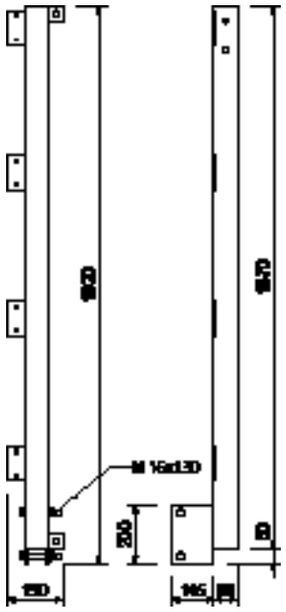


Consists of

2 pc 706372 Pin ACS Ø30x235mm coat
4 pc 022230 Cotter Pin 5/1 ga

Art no.	Weight [kg]	
051707	26.300	**Guardrail Post Main Platf. ACS**

For fixing to Main Platform Beam ACS.



Accessory (not included)

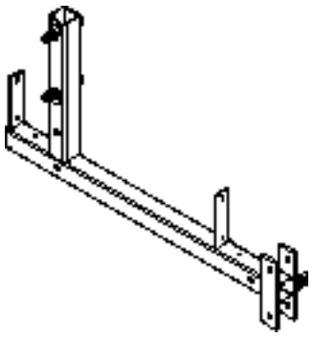
113762	0.884	**Guardrail Conn. Plate ACS/SCS**

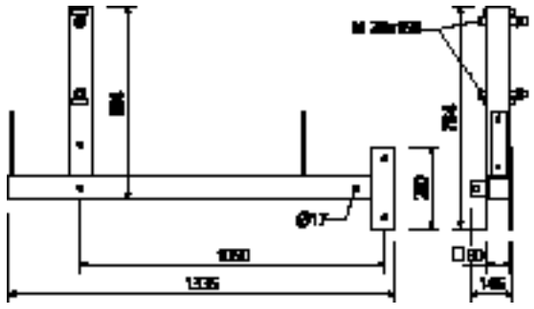
Consists of

2 pc 710232 Screw ISO4014-M16x130-8.8-ga
2 pc 070890 Hex-Nut ISO7040-M16-8-ga
2 pc 711074 Washer ISO7089-16-200HV-ga

Art no.	Weight [kg]	
051716	23.100	**Main Cantilever Beam ACS**

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



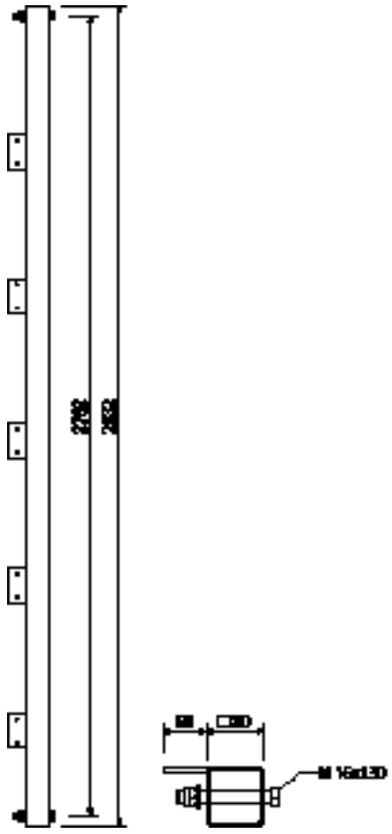


Consists of

2 pc 781054 Screw ISO4014-M20x160-8.8-ga
2 pc 781053 Hex-Nut ISO7040-M20-8-ga
2 pc 706454 Washer ISO7089-20-200HV-ga

Art no.	Weight [kg]	
051715	28.300	**Guardrail Post KB ACS 283**

For Main Cantilever Beam ACS.



Accessory (not included)

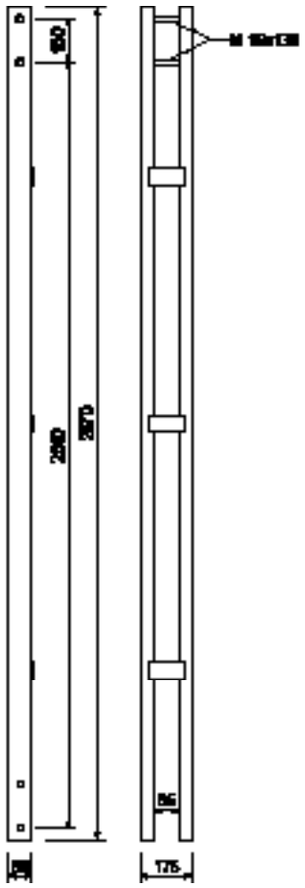
113762	0.884	**Guardrail Conn. Plate ACS/SCS**

Consists of

2 pc 710232 Screw ISO4014-M16x130-8.8-ga
2 pc 070890 Hex-Nut ISO7040-M16-8-ga
2 pc 711074 Washer ISO7089-16-200HV-ga

Art no.	Weight [kg]	
051717	52.800	**Platform Post ACS 500**

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

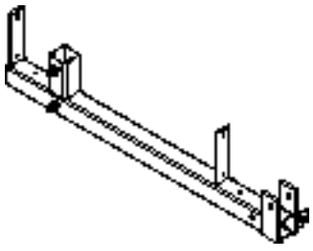


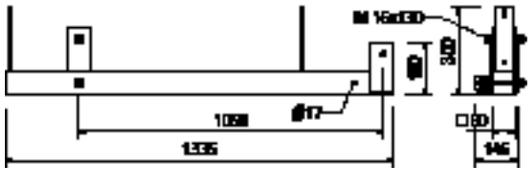
Consists of

2 pc 710232 Screw ISO4014-M16x130-8.8-ga
2 pc 070890 Hex-Nut ISO7040-M16-8-ga
2 pc 711074 Washer ISO7089-16-200HV-ga

Art no.	Weight [kg]	
051720	17.200	**Lower Cantilever Beam ACS**

For fixing Decking Supports GT 24 and Beams IPE.



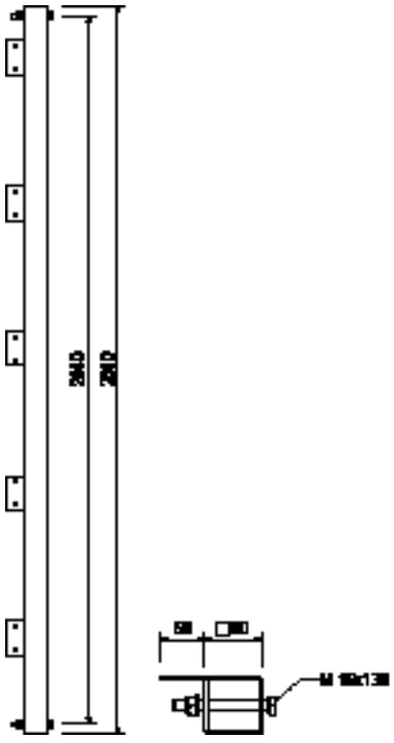


Consists of

2 pc 710232 Screw ISO4014-M16x130-8.8-ga
2 pc 070890 Hex-Nut ISO7040-M16-8-ga
2 pc 711074 Washer ISO7089-16-200HV-ga

Art no.	Weight [kg]	
051718	25.300	**Guardrail Post NB ACS 251**

For fixing between Main Cantilever Beam ACS and Lower Cantilever Beam ACS.



Accessory (not included)

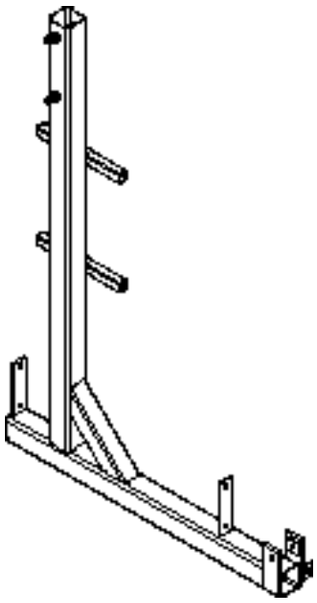
113762	0.884	**Guardrail Conn. Plate ACS/SCS**

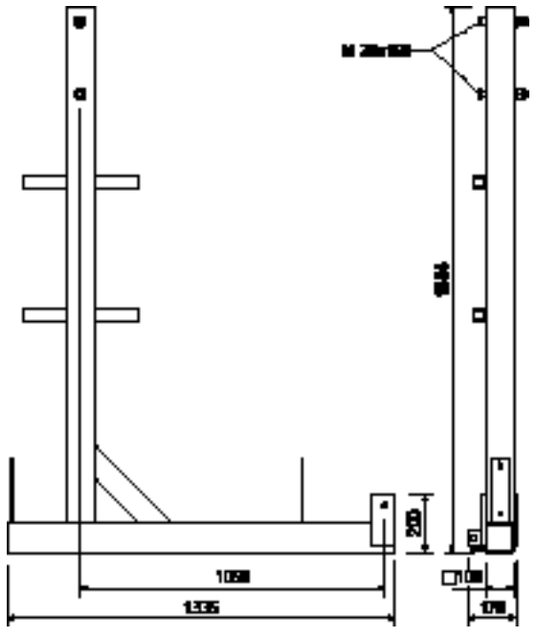
Consists of

2 pc 710232 Screw ISO4014-M16x130-8.8-ga
2 pc 070890 Hex-Nut ISO7040-M16-8-ga
2 pc 711074 Washer ISO7089-16-200HV-ga

Art no.	Weight [kg]	
051721	54.700	**Lower Cantilever Beam ACS 360**

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



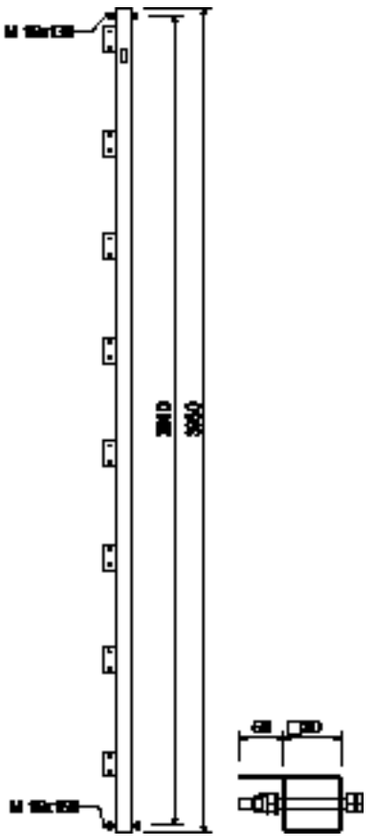


Consists of

2 pc 781054 Screw ISO4014-M20x160-8.8-ga
2 pc 781053 Hex-Nut ISO7040-M20-8-ga
2 pc 706454 Washer ISO7089-20-200HV-ga

Art no.	Weight [kg]	
051719	39.900	**Guardrail Post NB ACS 398**

For fixing between Crossbeam ACS and Lower Cantilever Beam ACS 360.



Accessory (not included)

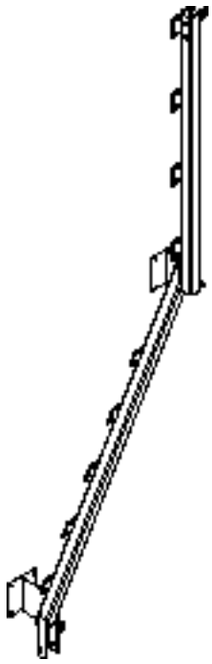
113762	0.884	**Guardrail Conn. Plate ACS/SCS**

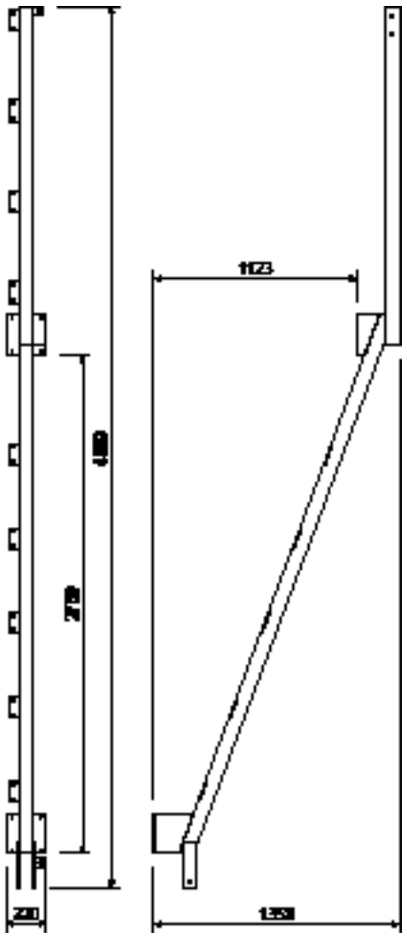
Consists of

1 pc 780155 Screw ISO4014-M16x160-8.8-ga
1 pc 710232 Screw ISO4014-M16x130-8.8-ga
2 pc 070890 Hex-Nut ISO7040-M16-8-ga
2 pc 711074 Washer ISO7089-16-200HV-ga

Art no.	Weight [kg]	
051722	67.800	**Cantilever Post KB ACS**

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



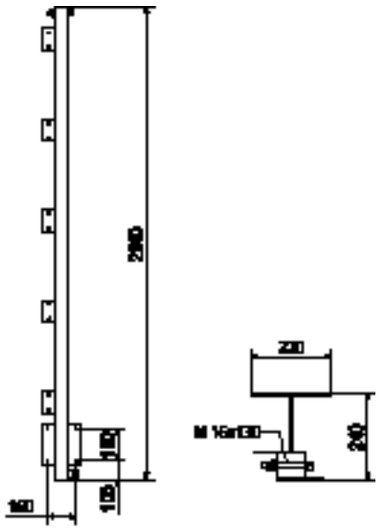


Accessory (not included)

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

Art no.	Weight [kg]	
051723	30.000	**Cantilever Post NB ACS 261**

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



Accessory (not included)

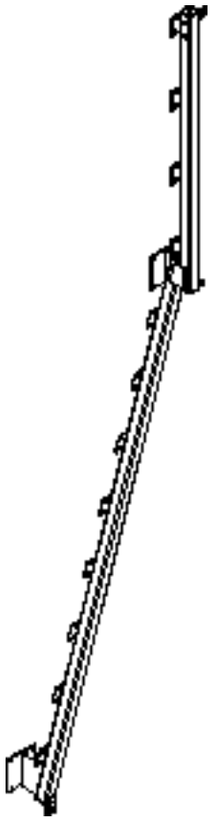
113762	0.884	**Guardrail Conn. Plate ACS/SCS**

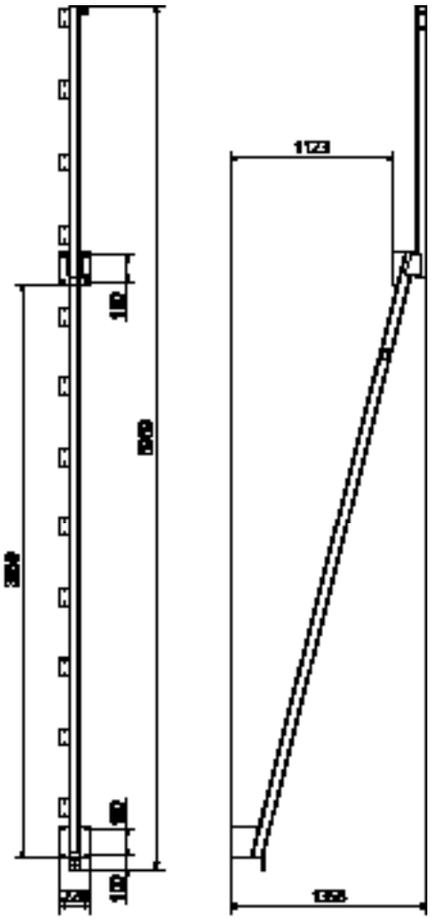
Consists of

1 pc 710232 Screw ISO4014-M16x130-8.8-ga
1 pc 070890 Hex-Nut ISO7040-M16-8-ga
1 pc 711074 Washer ISO7089-16-200HV-ga

Art no.	Weight [kg]	
051724	80.800	**Cantilever Post NB ACS long**

Additional guardrail post for fixing to the Decking Supports of the Main and Trailing Platform at Lower Cantilever Beam 360.



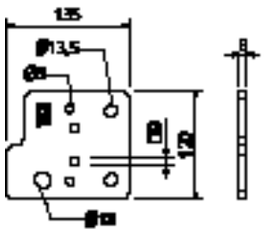


Accessory (not included)

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

Art no.	Weight [kg]	
113762	0.884	**Guardrail Conn. Plate ACS/SCS**

For assembling Scaffold Tubes Ø48 or Ø60 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 Ø8.

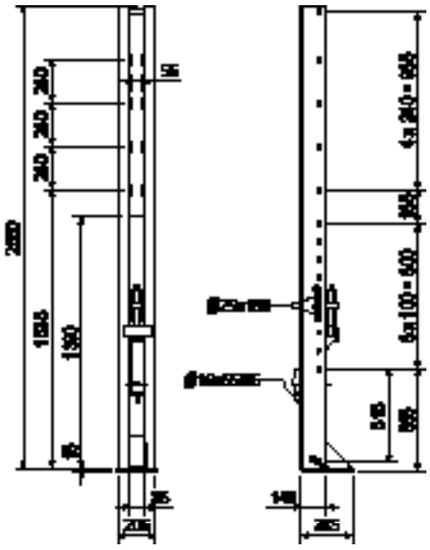


Accessory (not included)

110296	0.220	**Clamp A64 DIN3570-M12-ga**
710330	0.017	**Hex-Nut ISO4032-M12-8-ga**

Art no.	Weight [kg]	
057097	107.000	**Strongback ACS 255**

For connecting the formwork to the Carriage ACS. Standard formwork height upt to 3.3m.



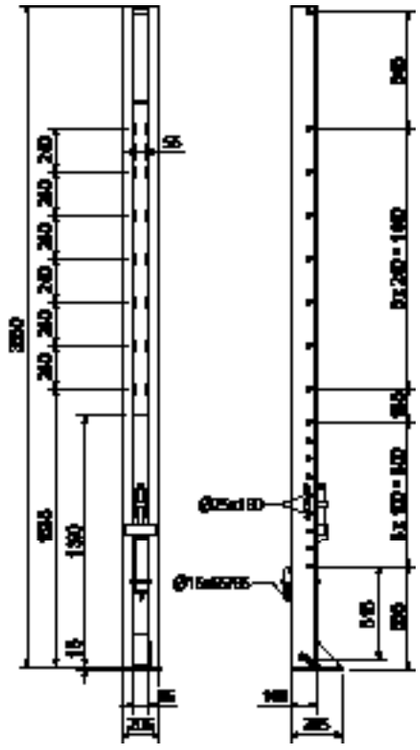
		Accessory (not included)
057327	11.000	**Strongback Adaptor 50 cpl**
057332	15.700	**Strongback Adaptor 200 cpl**
057099	17.300	**Adjust. Spindle Connect. ACS-P**
037150	0.641	**Tie Yoke DW15**
722137	0.849	**Cross Strap 2 coat**
110055	0.861	**Cross Strap coat**
030100	0.439	**Wingnut DW15 ga**
030440	0.686	**Sperical Nut DW15 ga**

Consists of

1 pc 057081 Adjustable Spindle ACS cpl
1 pc 057307 Adjust. Nut ACR TR36x6mm coat
1 pc 057313 Ledger Bracket ACS coat
1 pc 057315 Counterholder ACS coat
3 pc 715936 Pin with Clamping Sleeve
1 pc 018050 Pin Ø16x65/86mm ga
3 pc 022230 Cotter Pin 5/1 ga
1 pc 018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]	
057098	145.000	**Strongback ACS 365**

For connecting the formwork to the Carriage ACS. Standard formwork height upt to 5.1m.



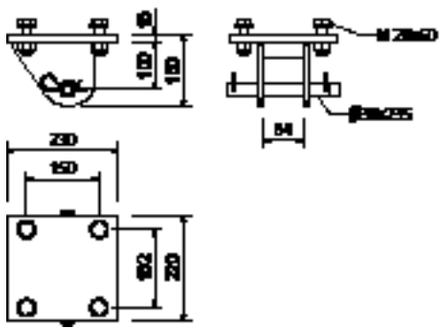
		Accessory (not included)
057327	11.000	**Strongback Adaptor 50 cpl**
057332	15.700	**Strongback Adaptor 200 cpl**
057099	17.300	**Adjust. Spindle Connect. ACS-P**
037150	0.641	**Tie Yoke DW15**
722137	0.849	**Cross Strap 2 coat**
110055	0.861	**Cross Strap coat**
030100	0.439	**Wingnut DW15 ga**
030440	0.686	**Sperical Nut DW15 ga**

Consists of

1 pc 057081 Adjustable Spindle ACS cpl
1 pc 057307 Adjust. Nut ACR TR36x6mm coat
1 pc 057313 Ledger Bracket ACS coat
1 pc 057315 Counterholder ACS coat
3 pc 715936 Pin with Clamping Sleeve
1 pc 018050 Pin Ø16x65/86mm ga
3 pc 022230 Cotter Pin 5/1 ga
1 pc 018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]	
057327	11.000	**Strongback Adaptor 50 cpl**

For connecting Strongback ACS to the Carriage ACS with wall offsets 0-50mm.



Accessory (not included)

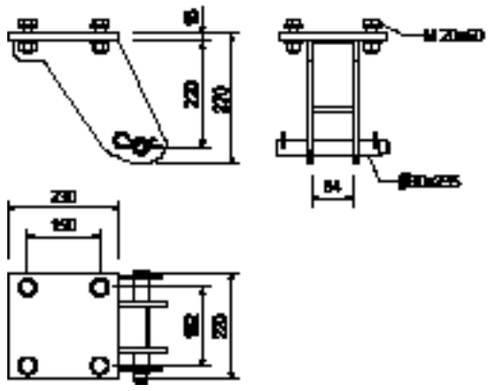
057336	1.270	**Tie Yoke ACS 465**

Consists of

1 pc 706372 Pin ACS Ø30x235mm coat
2 pc 022230 Cotter Pin 5/1 ga
4 pc 057139 Screw ISO4017-M20x060-8.8-ga
4 pc 710334 Hex-Nut ISO4032-M20-8-ga-left
8 pc 706454 Washer ISO7089-20-200HV-ga

Art no.	Weight [kg]	
057332	15.700	**Strongback Adaptor 200 cpl**

For connecting Strongback ACS to the Carriage ACS with wall offsets up to 200mm.



Accessory (not included)

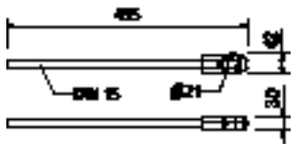
057336	1.270	**Tie Yoke ACS 465**

Consists of

1 pc 706372 Pin ACS Ø30x235mm coat
2 pc 022230 Cotter Pin 5/1 ga
4 pc 057139 Screw ISO4017-M20x060-8.8-ga
4 pc 710334 Hex-Nut ISO4032-M20-8-ga
8 pc 706454 Washer ISO7089-20-200HV-ga

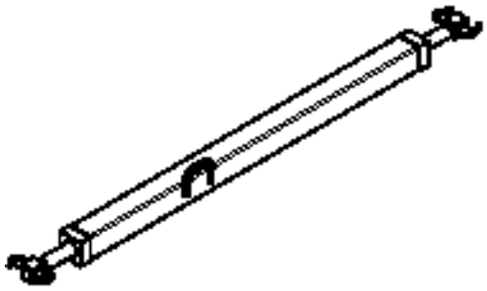
Art no.	Weight [kg]	
057336	1.270	**Tie Yoke ACS 465**

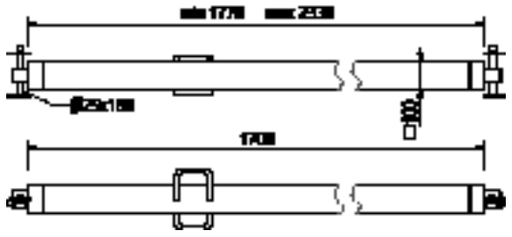
For securing the ACS Carriage with wall offsets.



Art no.	Weight [kg]	
057427	40.100	**Compress. Spindle ACS 177-233**

For supporting Strongback ACS 255.



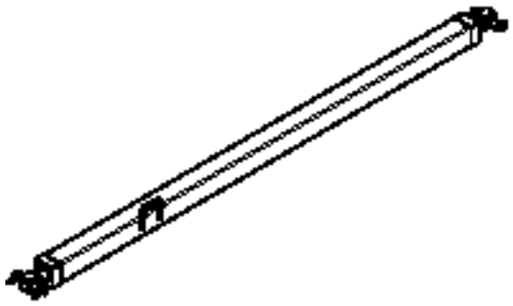


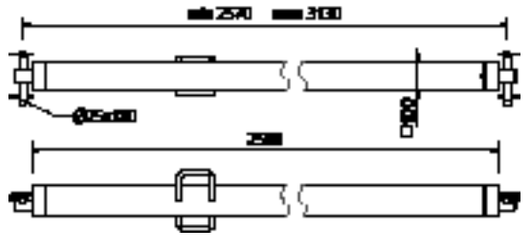
Consists of

2 pc 710894 Pin Ø25x180mm coat
4 pc 018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]	
057430	49.500	**Compress. Spindle ACS 257-313**

For supporting Strongback ACS 365.





Consists of

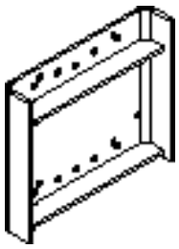
2 pc 710894 Pin Ø25x180mm coat
4 pc 018060 Cotter Pin 4/1 ga

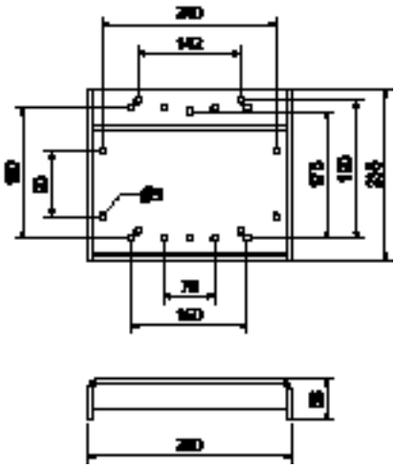
Art no.	Weight [kg]	
057096	4.260	**Connector IPE ACS**

For fixing Platform Supports IPE 180 to IPE 240 at
- Main Platform Beam ACS
- Main Cantilever Beams ACS
- Lower Cantilever Beams ACS
- Lower Cantilever Beam ACS 360

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

to Platform Girders IPE 180 to IPE 240.

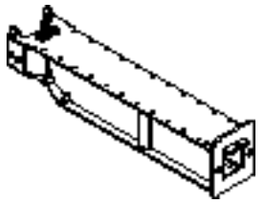


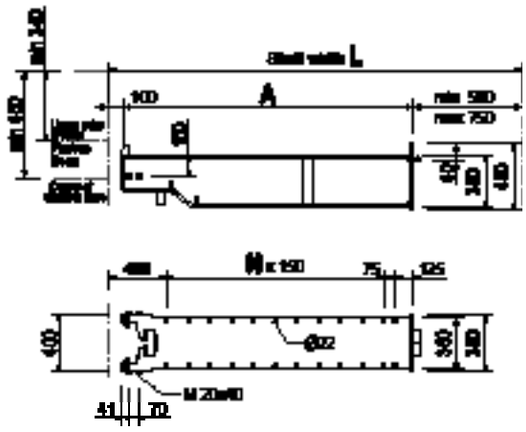


Self-climbing System ACS-P / ACS-G

Art no.	Weight [kg]		A [mm]	min. L [mm]	max. L [mm]	X [mm]	Y [mm]
		Main Platf. Beams ACS-P s.					
057000	263.000	**Main Platf. Beam ACS-P 140 s.**	1400	2000	2250	2000	2250
057001	286.000	**Main Platf. Beam ACS-P 155 s.**	1550	2150	2400	2150	2400
057002	308.000	**Main Platf. Beam ACS-P 170 s.**	1700	2300	2550	2300	2550
057003	331.000	**Main Platf. Beam ACS-P 185 s.**	1850	2450	2700	2450	2700
057004	354.000	**Main Platf. Beam ACS-P 200 s.**	2000	2600	2850	2600	2850
057005	376.000	**Main Platf. Beam ACS-P 215 s.**	2150	2750	3000	2750	3000
057006	400.000	**Main Platf. Beam ACS-P 230 s.**	2300	2900	3150	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 of 2-3.15m.





Accessory (not included)

057013	147.000	**Main Platf. Beam Head ACS-P**

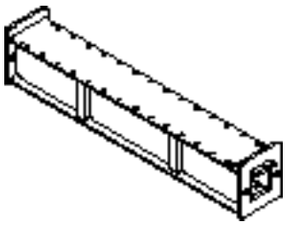
Consists of

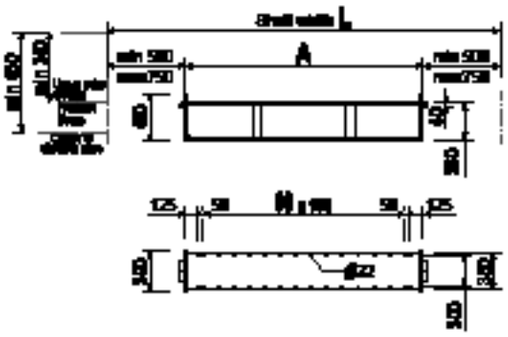
4 pc 706454 Washer ISO7089-20-200HV-ga
4 pc 706458 Screw ISO4017-M20x040-8.8-ga

Self-climbing System ACS-P / ACS-G

Art no.	Weight [kg]		A [mm]	min. L [mm]	max. L [mm]	X [mm]	Y [mm]
		Main Platf. Beams ACS-P do.					
057007	384.000	**Main Platf. Beam ACS-P 200 do.**	2000	3000	3500	3000	3500
057008	430.000	**Main Platf. Beam ACS-P 230 do.**	2300	3300	3800	3300	3800
057009	476.000	**Main Platf. Beam ACS-P 260 do.**	2600	3600	4100	3600	4100
057010	522.000	**Main Platf. Beam ACS-P 290 do.**	2900	3900	4400	3900	4400
057011	567.000	**Main Platf. Beam ACS-P 320 do.**	3200	4200	4700	4200	4700
057012	613.000	**Main Platf. Beam ACS-P 350 do.**	3500	4500	5000	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 3-5m.





Accessory (not included)

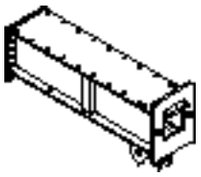
057013	147.000	**Main Platf. Beam Head ACS-P**
057014	4.160	**Beam Head Fixing ACS-P**

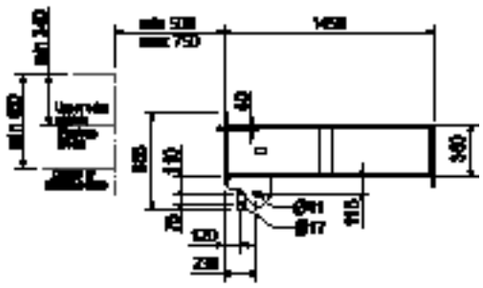
Art no.	Weight [kg]	
057060	298.000	**Main Platf.Beam End Pie. ACS-P**

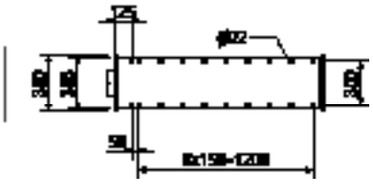
For supporting Self-Climbing Platforms ACS-P in building cores with intermediate piece (special).
For shaft widths over 5m.
2 per Main Platform Beam.

Notes

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





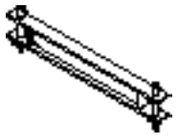


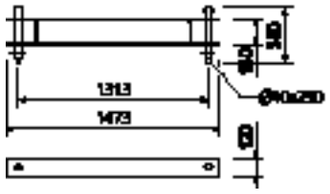
Accessory (not included)

057021	0.370	**HV-Set M20x75-10.9**

Art no.	Weight [kg]	
057061	49.200	**Diagonal Strut ACS-P 147.3**

For use in connection with the Main Platform End Piece ACS-P and Vertical Strut ACS-P 121 when Main Beam is tensioned.



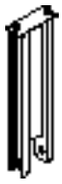


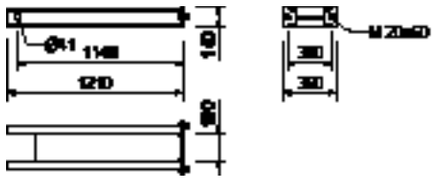
Consists of

2 pc 057135 Pin Ø40x290mm coat
2 pc 770012 Sleeve ISO8752-08.0x060-coat
2 pc 022230 Cotter Pin 5/1 ga

Art no.	Weight [kg]	
057062	45.600	**Vertical Strut ACS-P 121**

For use in connection with the Main Platform End Piece ACS-P and Diagonal Strut 147.3 ACS-P.



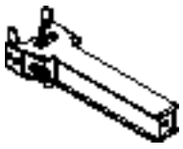


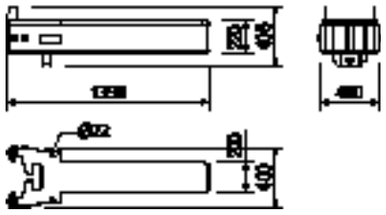
Consists of

2 pc 057139 Screw ISO4017-M20x060-8.8-ga
2 pc 781053 Hex-Nut ISO7040-M20-8-ga
4 pc 706454 Washer ISO7089-20-200HV-ga

Art no.	Weight [kg]	
057013	147.000	**Main Platf. Beam Head ACS-P**

As telescopable component in Main Platform Beam ACS-P.





Accessory (not included)

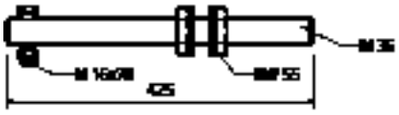
057014	4.160	**Beam Head Fixing ACS-P**

Consists of

4 pc 706458 Screw ISO4017-M20x040-8.8-ga
4 pc 706454 Washer ISO7089-20-200HV-ga

Art 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.

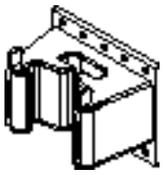


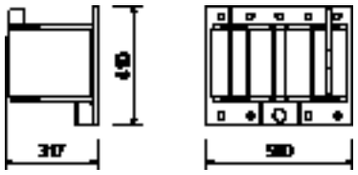
Consists of

2 pc 114792 Hex-Nut ISO4035-M36-5-ga
2 pc 114784 Washer ISO7089-36-200HV-ga
1 pc 714093 Screw ISO4014-M16x070-8.8-ga
1 pc 070890 Hex-Nut ISO7040-M16-8-ga

Art no.	Weight [kg]	
057391	73.600	**Head Adaptor ACS-P screwable**

Fixation to Connection Beam ACS-P 215 or ACS-P 235.



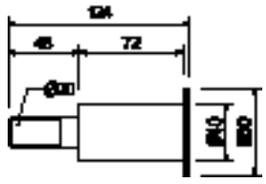


Accessory (not included)

057021	0.370	**HV-Set M20x75-10.9**
706454	0.017	**Washer ISO7089-20-200HV-ga**
123803	0.913	**Head Bolt Ø40x124mm**

Art no.	Weight [kg]	
123803	0.913	**Head Bolt Ø40x124mm**

For the fixation of Climbing Unit ACS 100 to the Head Adapter.

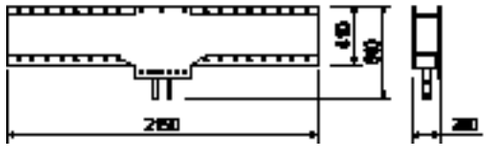


Accessory (not included)

781053	0.065	**Hex-Nut ISO7040-M20-8-ga**
706454	0.017	**Washer ISO7089-20-200HV-ga**

Art no.	Weight [kg]	
057393	319.000	**Connection Beam ACS-P 215**

For supporting Main Platform Beam ACS-P with 2 climbing units.

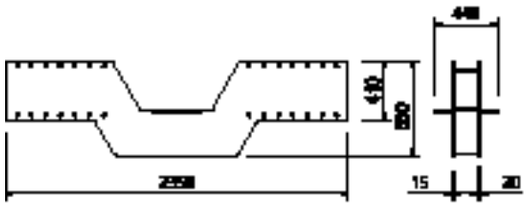


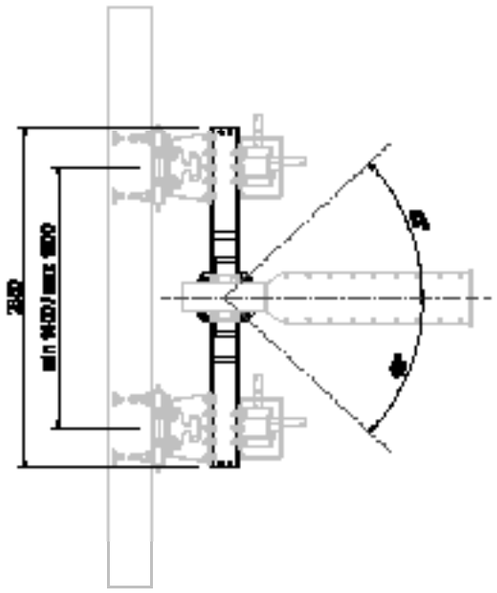
Accessory (not included)

057391	73.600	**Head Adaptor ACS-P screwable**

Art no.	Weight [kg]	
057395	403.000	**Connection Beam ACS-P 235**

For articulated support of the End Pieces ACS-P 200 with 2 climbing units on straight and sloping walls. Angle range max. ±43°.

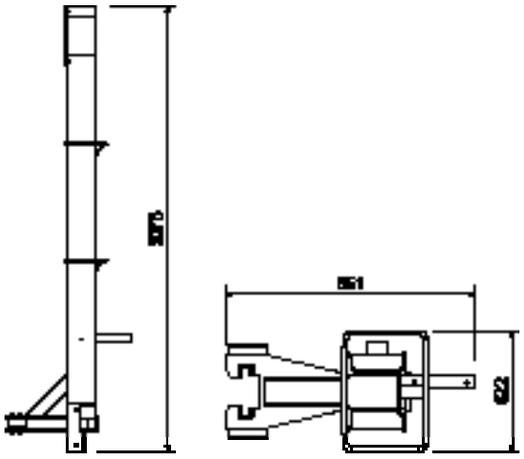




		Accessory (not included)
057391	73.600	**Head Adaptor ACS-P screwable**
057400	207.000	**Vertical Strut ACS-P 307.5**
057409	23.800	**Slide Bearing Plate ACS-P**
057413	14.800	**Fixed Bearing Plate ACS-P**

Art no.	Weight [kg]	
057400	207.000	**Vertical Strut ACS-P 307.5**

For the fixation to Connection Beam ACS-P 215 or 235.



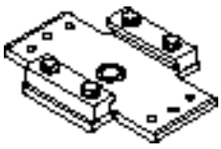
		Accessory (not included)
051711	20.800	**Sliding Unit ACS**
051712	4.540	**Compression Spindle ACS cpl**
051713	2.360	**Plywood Platform ACS-R**
057021	0.370	**HV-Set M20x75-10.9**
123839	0.440	**HV-Set M20x90-10.9**
123845	0.057	**U-Washer DIN6918-21-ga**
710295	0.028	**Screw DIN603-M08x045-4.8-ga**

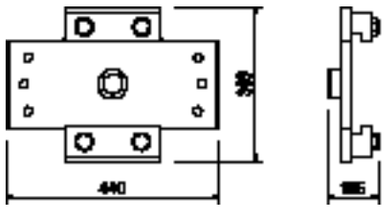
Consists of

1 pc 057397 Lan. Plat. Supp. coat
1 pc 710225 Screw ISO4017-M16x045-8.8-ga
1 pc 070890 Hex-Nut ISO7040-M16-8-ga
2 pc 711074 Washer ISO7089-16-200HV-ga

Art no.	Weight [kg]	
057409	23.800	**Slide Bearing Plate ACS-P**

Sliding connection of End Piece ACS-P 200 to the Connection Beam ACS-P 235.

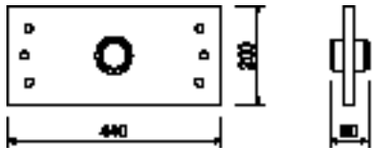




		Accessory (not included)
123844	0.130	**Screw ISO4017-M20x035-8.8-ga**
706454	0.017	**Washer ISO7089-20-200HV-ga**

Art no.	Weight [kg]	
057413	14.800	**Fixed Bearing Plate ACS-P**

For the connection of End Piece ACS-P 200 to the Connection Beam ACS-P 235.

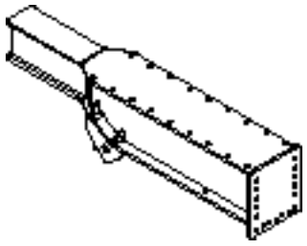


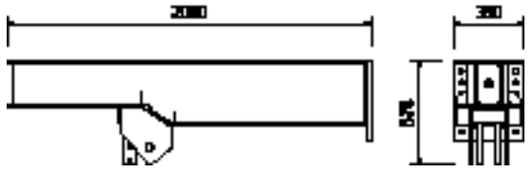
Accessory (not included)

123844	0.130	**Screw ISO4017-M20x035-8.8-ga**
706454	0.017	**Washer ISO7089-20-200HV-ga**

Art no.	Weight [kg]	
057402	330.000	**End Piece ACS-P 200**

For the support of Self-climbing Platforms ACS-P in diagonal building cores with intermediate piece (special).





Accessory (not included)

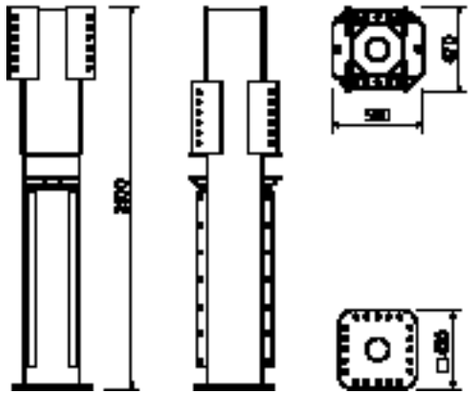
057021	0.370	**HV-Set M20x75-10.9**
057061	49.200	**Diagonal Strut ACS-P 147.3**
057062	45.600	**Vertical Strut ACS-P 121**
057409	23.800	**Slide Bearing Plate ACS-P**
057413	14.800	**Fixed Bearing Plate ACS-P**

Art no.	Weight [kg]	
057016	305.000	**Vertical Post Top ACS 210**

For the fixation on Vertical Post Base ACS 207.5 or Vertical Post Intermediate to support girder grid level +1.

Notes

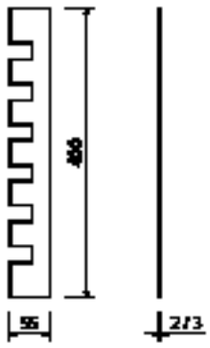
Creation of the production drawing - compression strut ACS Cross Bracing - is made on a project-specific basis.



		Accessory (not included)
057085	0.281	**Distance Plate ACS 55x400x2mm**
057086	0.422	**Distance Plate ACS 55x400x3mm**
024900	0.255	**Screw ISO4014-M20x080-8.8-ga**
781053	0.065	**Hex-Nut ISO7040-M20-8-ga**
706454	0.017	**Washer ISO7089-20-200HV-ga**

Art no.	Weight [kg]	
		Distance Plates ACS
057085	0.281	**Distance Plate ACS 55x400x2mm**
057086	0.422	**Distance Plate ACS 55x400x3mm**

For compensating the tolerance between Vertical Post Top ACS 210 and Main Beam ACS-P or Gallow ACS-G 143 and Gallow ACS-G 332.5.



Art no.	Weight [kg]		L [mm]
		Vertical Posts Intermed ACS	
057067	179.000	**Vertic. Post Intermed ACS 120**	1200
057019	74.800	**Vertical Post Intermed ACS 30**	300
057018	110.000	**Vertical Post Intermed ACS 60**	600
057017	144.000	**Vertical Post Intermed ACS 90**	900

Assembly between Vertical Post Top ACS 210 and Vertical Post Base ACS 207.5 as height adjustment.

Accessory (not included)

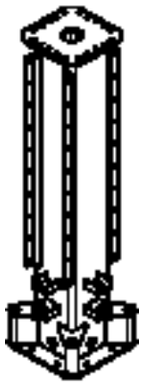
057021	0.370	**HV-Set M20x75-10.9**

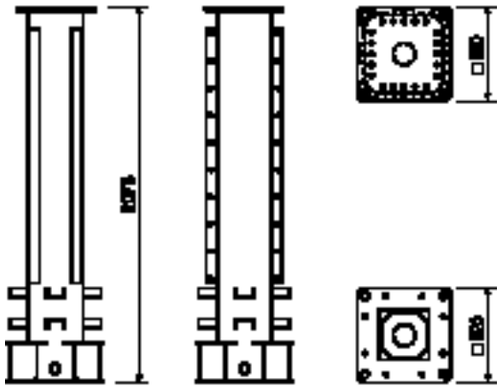
Art no.	Weight [kg]	
057020	309.000	**Vertical Post Base ACS 207.5**

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

Notes

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



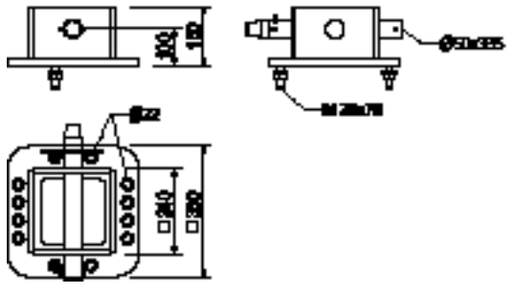


Accessory (not included)

057021	0.370	**HV-Set M20x75-10.9**
057022	33.500	**Vertic.Post Conn. ACS-P artic.**
057023	22.800	**Distance Plate ACS-P 36x52**
057025	19.300	**Yoke ACS-P 43**
057026	9.410	**Clamping Bolt ACS-P M36x1000mm**

Art no.	Weight [kg]	
057022	33.500	**Vertic.Post Conn. ACS-P artic.**

For articulated connection of Vertical Post Base ACS 207.5 to Main Platform Beam ACS-P.

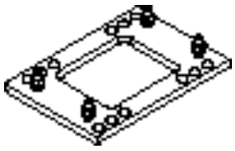


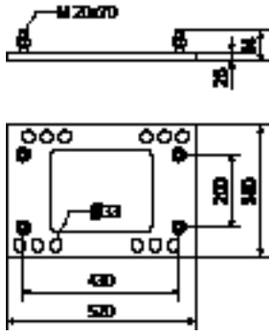
Consists of

1 pc 057120 Pin Ø50x335mm coat
1 pc 722457 Sleeve ISO8752-10.0x070-coat
1 pc 710618 Cotter Pin 8/1 coat
2 pc 057121 Screw DIN6912-M20x70-8.8-ga
2 pc 710334 Hex-Nut ISO4032-M20-8-ga
2 pc 706454 Washer ISO7089-20-200HV-ga

Art no.	Weight [kg]	
057023	22.800	**Distance Plate ACS-P 36x52**

Is fixed below on the Vertical Post Base ACS 207.5 for a stiff connection.





Accessory (not included)

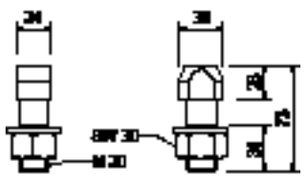
057024	0.308	**Centering Pin ACS-P 30**

Consists of

4 pc 057121 Screw DIN6912-M20x70-8.8-ga
4 pc 710334 Hex-Nut ISO4032-M20-8-ga
4 pc 706454 Washer ISO7089-20-200HV-ga

Art no.	Weight [kg]	
057024	0.308	**Centering Pin ACS-P 30**

For positioning the Vertical Post Base ACS-P 36x52 on the Main Platform Beam ACS-P for a stiff connection.
2 for each connection.

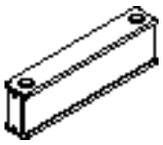


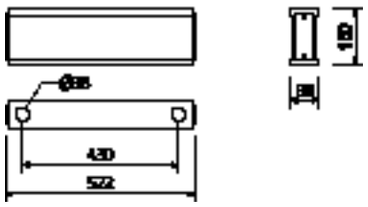
Consists of

1 pc 710334 Hex-Nut ISO4032-M20-8-ga-left
1 pc 706454 Washer ISO7089-20-200HV-ga

Art no.	Weight [kg]	
057025	19.300	**Yoke ACS-P 43**

For a stiff connection of the Vertical Post Base ACS 207.5 to the Main Platform Beam ACS-P.
2 for each connection.



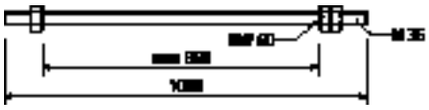


Accessory (not included)

057026	9.410	**Clamping Bolt ACS-P M36x1000mm**

Art no.	Weight [kg]	
057026	9.410	**Clamping Bolt ACS-P M36x1000mm**

For a stiff connection of Vertical Post Base ACS 207.5 to the Main Platform Beam ACS-P.
4 for each connection.

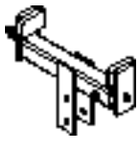


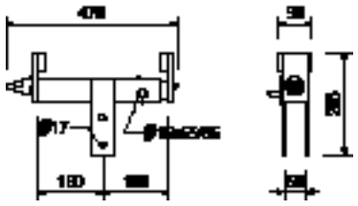
Consists of

3 pc 057126 Nut EN14399-4-M36-10-HV-geo
2 pc 057127 Washer EN14399-6-36-coat

Art no.	Weight [kg]	
057027	9.190	**FP Post Conn. ACS-P Main-Plat.**

For fixing the Platform Post ACS 299.5 to the Main Platform Beam ACS-P.





Accessory (not included)

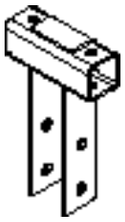
057029	17.900	**FP Post ACS 299.5**
057030	14.900	**Post Extension ACS 295.5**
057031	8.090	**Girder Support ACS**

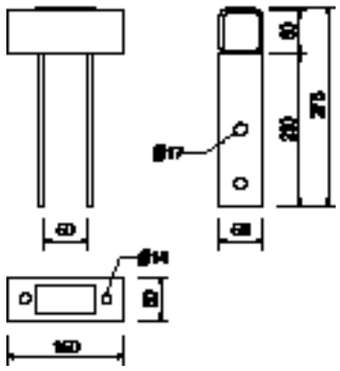
Consists of

1 pc 030130 Cam Nut DW15 coat
1 pc 018050 Pin Ø16x65/86mm ga
1 pc 018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]	
057065	2.550	**FP Post Conn. ACS VT 20-GT 24**

For fixing the Platform Post ACS 299.5 to the VT 20K or GT 24 Girders





Accessory (not included)

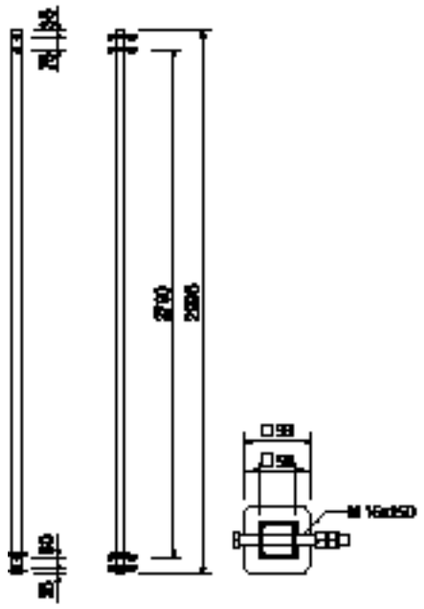
057794	0.912	**Tension Strap cpl**
057029	17.900	**FP Post ACS 299.5**
057030	14.900	**Post Extension ACS 295.5**
057031	8.090	**Girder Support ACS**

Art no.	Weight [kg]	
057029	17.900	**FP Post ACS 299.5**

For suspending finishing platforms.

Notes

Extension of FP Post with Post Extension ACS 295,5.



Accessory (not included)

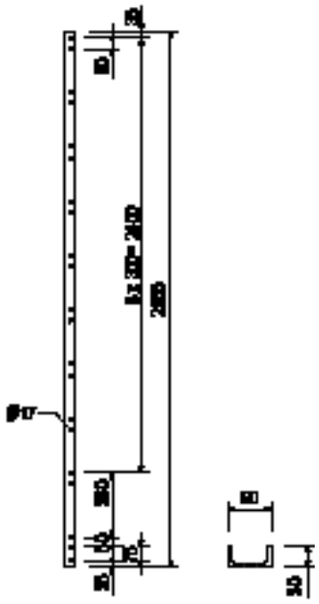
057030	14.900	**Post Extension ACS 295.5**
057031	8.090	**Girder Support ACS**

Consists of

4 pc 710049 Screw ISO4014-M16x150-8.8-ga
8 pc 710229 Hex-Nut ISO4032-M16-8-ga

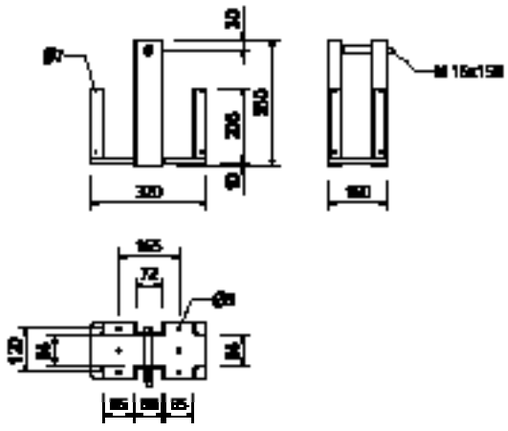
Art no.	Weight [kg]	
057030	14.900	**Post Extension ACS 295.5**

For suspending finishing platforms.



Art no.	Weight [kg]	
057031	8.090	**Girder Support ACS**

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

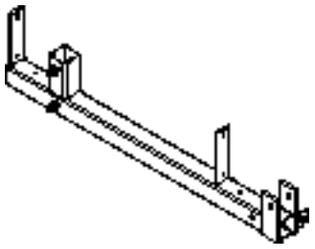


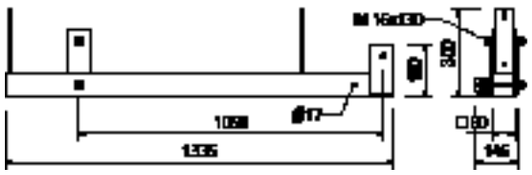
Consists of

1 pc 710049 Screw ISO4014-M16x150-8.8-ga
2 pc 710229 Hex-Nut ISO4032-M16-8-ga

Art no.	Weight [kg]	
051720	17.200	**Lower Cantilever Beam ACS**

For fixing Decking Supports GT 24 and Beams IPE.



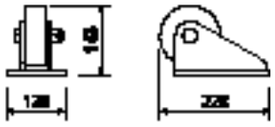


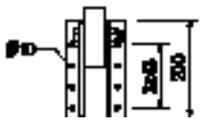
Consists of

2 pc 710232 Screw ISO4014-M16x130-8.8-ga
2 pc 070890 Hex-Nut ISO7040-M16-8-ga
2 pc 711074 Washer ISO7089-16-200HV-ga

Art no.	Weight [kg]	
126208	3.800	**Platform Guiding Roller ACS-C**

As guiding for working platforms at the building wall. Fixation with screws 8x65 for planking 40mm.





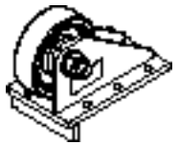
		Accessory (not included)
724553	0.034	**Screw ISO4014-M08x065-8.8-ga**
780354	0.002	**Washer ISO7089-08-200HV-ga**
710342	0.007	**Washer ISo7093-1-08-200HV-ga**
711071	0.004	**Hex-Nut ISO7040-M08-8-ga**
710709	0.036	**Screw DIN603-M08-065-4.8-ga**

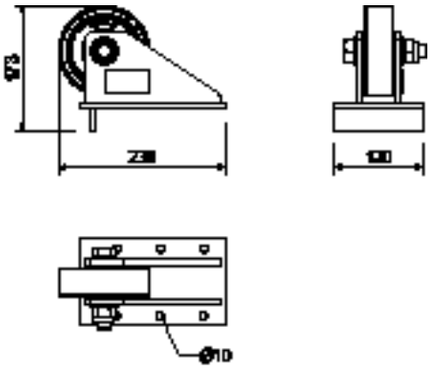
Consists of

1 pc 710226 Screw ISO4014-M20x090-8.8-ga
1 pc 781053 Hex-Nut ISO7040-M20-8-ga
1 pc 057414 Polyamide Wheel SPO 125/20G

Art no.	Weight [kg]	
057417	4.080	**Supporting Roller ACS**

As guiding for working platforms at the building wall. Fixation with screws 8x65 for planking 40mm.

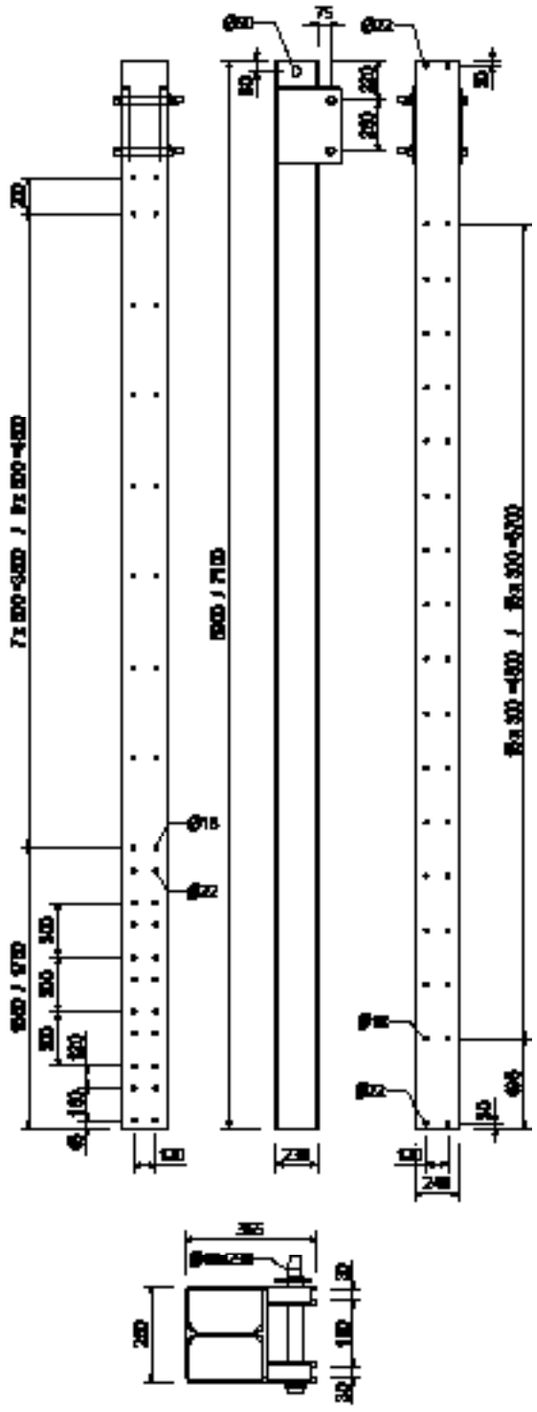




		Accessory (not included)
724553	0.034	**Screw ISO4014-M08x065-8.8-ga**
780354	0.002	**Washer ISO7089-08-200HV-ga**
710342	0.007	**Washer ISo7093-1-08-200HV-ga**
711071	0.004	**Hex-Nut ISO7040-M08-8-ga**
710709	0.036	**Screw DIN603-M08-065-4.8-ga**

Art no.	Weight [kg]	
		Platform Posts ACS IPBL
057032	398.000	**Platform Post ACS IPBL 24x590**
057070	470.000	**Platform Post ACS IPBL 24x710**

For fixing to girder grid level +1 as suspension of the external platform.
Platform Post ACS IPBL 24x590 for concreting heights up to approx. 4.2m.
Platform Post ACS IPBL 24x710 for concreting heights up to approx. 5.4m.



Accessory (not included)

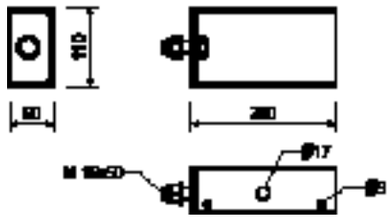
057039	2.390	**Railing Adaptor ACS VT 20**

Consists of

2 pc 057135 Pin Ø40x290mm coat
2 pc 770012 Sleeve ISO8752-08.0x060-coat
2 pc 022230 Cotter Pin 5/1 ga

Art no.	Weight [kg]	
057039	2.390	**Railing Aaptor ACS VT 20**

For fixing horizontal VT 20K Girders as railing to: Bracket ACS-G, Finishing Platform Post ACS-G 330, Vertical Post ACS, Platform Posts ACS IPBL 24.

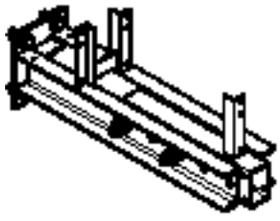


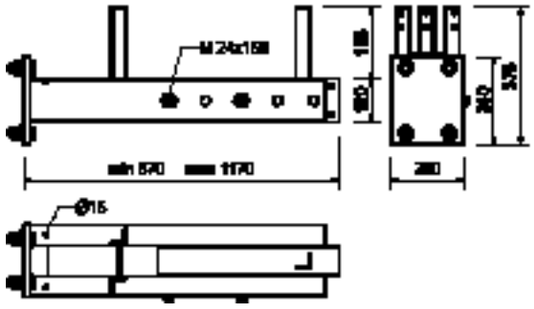
Consists of

1 pc 710252 Screw ISO4017-M16x050-8.8-ga
1 pc 070890 Hex-Nut ISO7040-M16-8-ga
1 pc 711074 Washer ISO7089-16-200HV-ga

Art no.	Weight [kg]	
057072	39.700	**Platform Beam ACS 87-117**

For supporting the external platform. Telescopable 300mm.





Accessory (not included)

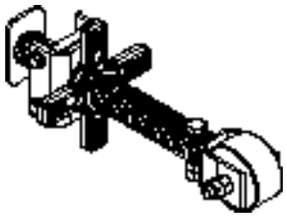
057034	7.120	**Supporting Spindle ACS**

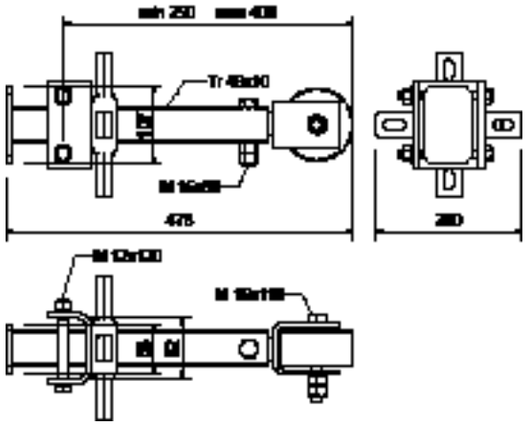
Consists of

1 pc 057196 Sliding Beam 50 coat
2 pc 057138 Screw ISO4014-M24x160-8.8-ga
4 pc 022250 Hex-Nut ISO4032-M24-8-ga
4 pc 057139 Screw ISO4017-M20x060-8.8-ga
4 pc 781053 Hex-Nut ISO7040-M20-8-ga
8 pc 706454 Washer ISO7089-20-200HV-ga

Art no.	Weight [kg]	
057034	7.120	**Supporting Spindle ACS**

For fixing to Cantilever Platform Beam ACS 57-87 and Cantilever Platform Beam ACS 87-117 if support from the structure is necessary.



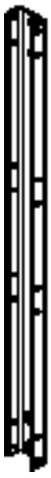


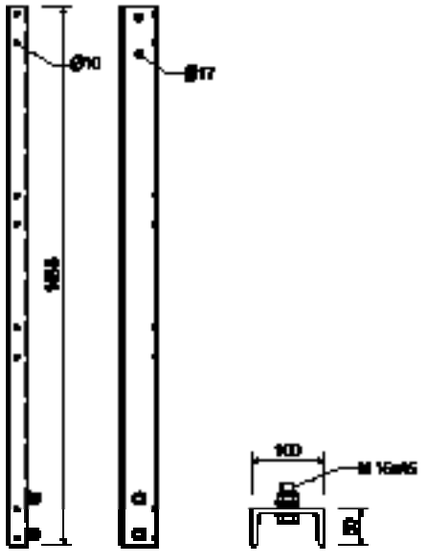
Consists of

1 pc 070100 Screw ISO4016-M12x120-4.6-ga-N
1 pc 780702 Washer ISO7089-12-200HV-ga
1 pc 057177 Roller Ø100mm 50mm
1 pc 710233 Screw ISO4014-M16x110-8.8-ga
1 pc 710222 Screw ISO4014-m16x080-8.8-ga

Art no.	Weight [kg]	
057036	16.000	**Guardrail Post ACS 148.5**

For the fixation to girder grid level +1.



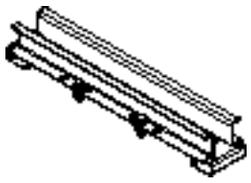


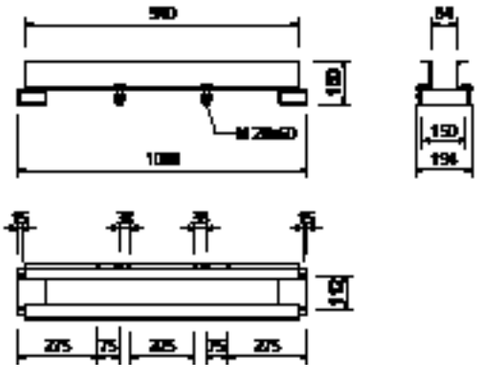
Consists of

2 pc 710225 Screw ISO4017-M16x045-8.8-ga
2 pc 070890 Hex-Nut ISO7040-M16-8-ga
2 pc 711074 Washer ISO7089-16-200HV-ga

Art 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, Gallow ACS-G 332.5 or Gallow ACS-G 143, Finishing Platform Beam ACS-G 136.5.





Accessory (not included)

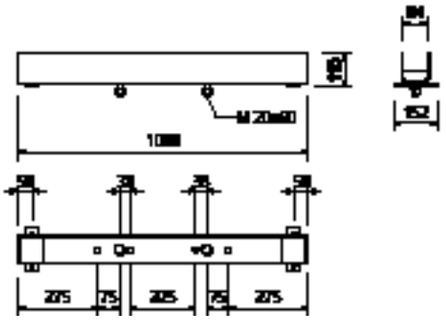
057794	0.912	**Tension Strap cpl**

Consists of

4 pc 057139 Screw ISO4017-M20x060-8.8-ga
4 pc 781053 Hex-Nut ISO7040-M20-8-ga
8 pc 706454 Washer ISO7089-20-200HV-ga

Art no.	Weight [kg]	
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.



Accessory (not included)

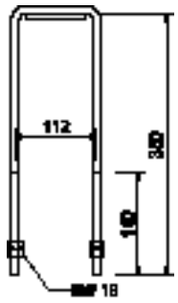
057794	0.912	**Tension Strap cpl**

Consists of

2 pc 057139 Screw ISO4017-M20x060-8.8-ga
2 pc 781053 Hex-Nut ISO7040-M20-8-ga
4 pc 706454 Washer ISO7089-20-200HV-ga

Art no.	Weight [kg]	
057794	0.912	**Tension Strap cpl**

For clamping Girders GT 24.



Consists of

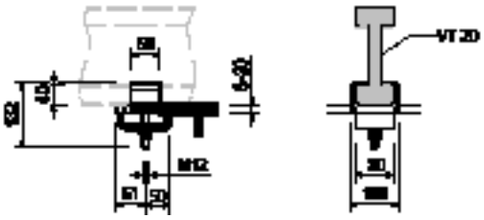
4 pc 710330 Hex-Nut ISO4032-M12-8-ga

Art no.	Weight [kg]	
057037	1.800	**Clamp ACS VT 20**

Connection of VT 20K Formwork Girder with the steel profile.

Notes

Flange thickness t = 8-20

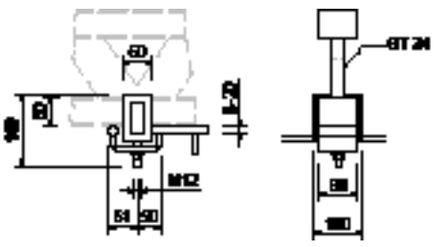


Art no.	Weight [kg]	
057038	1.950	**Clamp ACS GT 24**

Connection of GT 24 Formwork Girder with the steel profile.

Notes

Flange thickness t = 8-20

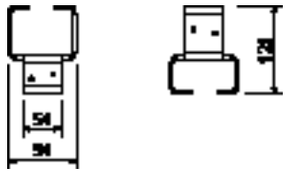


Consists of

1 pc 710330 Hex-Nut ISO4032-M12-8-ga
1 pc 109112 Spherical Washer 13 DIN6319-C
1 pc 109113 Ball Cup 14.2 DIN6319-D

Art no.	Weight [kg]	
129722	0.746	**Cross Connector GT 24/VT 20**

For connecting a Girder GT 24 to a crossing Girder VT 20.

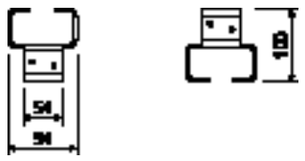


Accessory (not included)

024540	0.005	**Wood-Screw 6x40 SK-TX30 HPI**
024470	0.008	**Wood-Screw 6x60 SK-TX30 HPI**

Art no.	Weight [kg]	
129817	0.675	**Cross Connector VT 20/VT 20**

For the connection of crossing Girders VT 20.

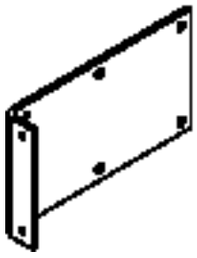


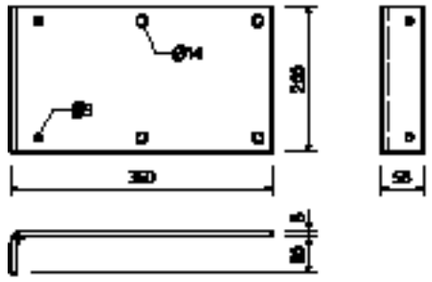
Accessory (not included)

024540	0.005	**Wood-Screw 6x40 SK-TX30 HPI**
024470	0.008	**Wood-Screw 6x60 SK-TX30 HPI**

Art no.	Weight [kg]	
057075	5.010	**Adaptor ACS VT 20 Bottom**

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



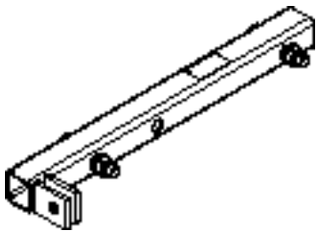


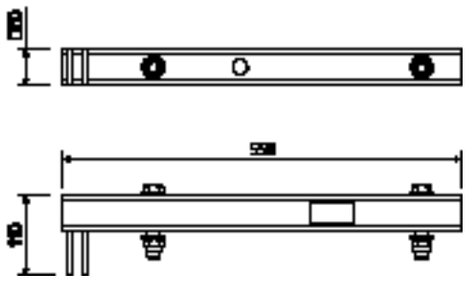
Accessory (not included)

070030	0.015	**Plate Conn. Ø50/12mm single**
070100	0.132	**Screw ISO4016-M12x120-4.6-ga-N**
750350	0.027	**Washer ISO7093-1-12-200HV-ga**

Art no.	Weight [kg]	
057051	3.640	**Connector ACS AV**

For connecting the Kicker for panel suspension to:
Bracket ACS-G, Vertical Posts ACS, Platform Post ACS IPBL 24x590 and Platform Beam ACS IPBL 24x7100.



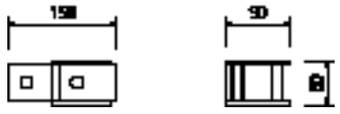


Consists of

2 pc 721729 Screw ISO4014-M16x090-8.8-ga
2 pc 070890 Hex-Nut ISO7040-M16-8-ga
4 pc 706454 Washer ISO7089-20-200HV-ga

Art no.	Weight [kg]	
057052	0.955	**Offset Connector ACS AV**

For connecting the second Kicker to the Connector ACS AV.

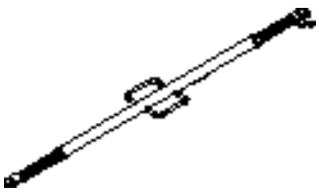


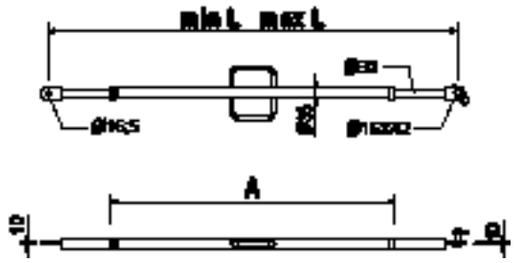
Art no.	Weight [kg]		min. L [mm]	max. L [mm]
		Kickers AV		
057087	3.510	**Kicker AV 82**	500	820
057088	4.200	**Kicker AV 111**	790	1110
028110	4.850	**Kicker AV 140**	1080	1400

For aligning PERI Formwork Systems.

Notes

Permissible load see PERI Design Tables.





Consists of

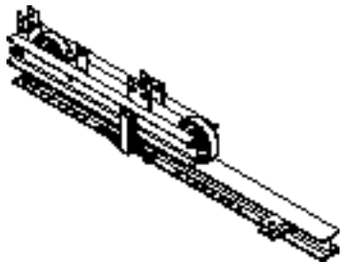
1 pc 027170 Pin Ø16x42mm ga
1 pc 018060 Cotter Pin 4/1 ga

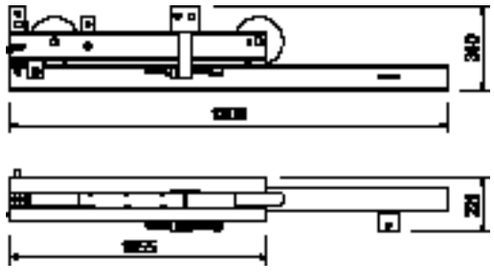
Art no.	Weight [kg]	
057015	77.200	**Carriage ACS-P**

Clampable carriage on platforms to retract the formwork.

Notes

For use with Tilt Carrier ACS 255, Tilt Carrier ACS 365, Tilt Carrier CB 270 and Tilt Carrier CB 380.



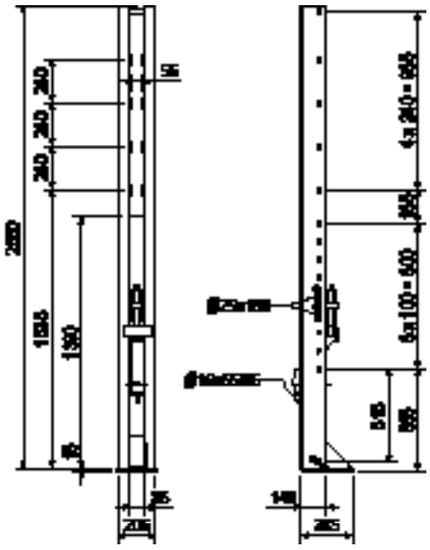


Consists of

1 pc 037150 Tie Yoke DW15
1 pc 030130 Cam Nut DW15 coat
1 pc 037160 Pin Ø20x205mm ga
2 pc 710225 Screw ISO4017-M16x045-8.8-ga
2 pc 070890 Hex-Nut ISO7040-M16-8-ga
2 pc 057164 Heavy-duty Wheel SPO 201/20K

Art no.	Weight [kg]	
057097	107.000	**Strongback ACS 255**

For connecting the formwork to the Carriage ACS. Standard formwork height upt to 3.3m.



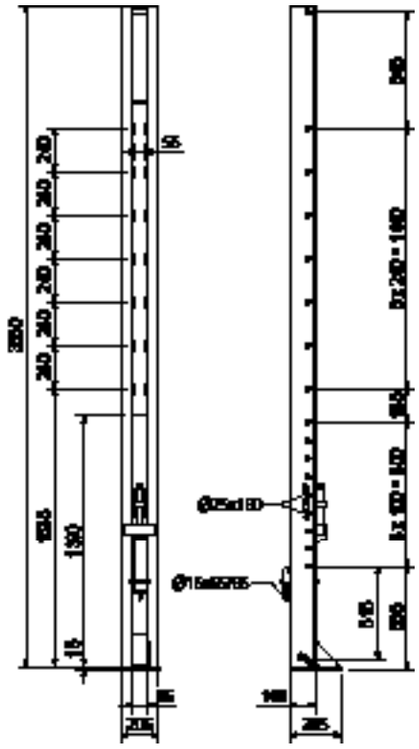
		Accessory (not included)
057327	11.000	**Strongback Adaptor 50 cpl**
057332	15.700	**Strongback Adaptor 200 cpl**
057099	17.300	**Adjust. Spindle Connect. ACS-P**
037150	0.641	**Tie Yoke DW15**
722137	0.849	**Cross Strap 2 coat**
110055	0.861	**Cross Strap coat**
030100	0.439	**Wingnut DW15 ga**
030440	0.686	**Sperical Nut DW15 ga**

Consists of

1 pc 057081 Adjustable Spindle ACS cpl
1 pc 057307 Adjust. Nut ACR TR36x6mm coat
1 pc 057313 Ledger Bracket ACS coat
1 pc 057315 Counterholder ACS coat
3 pc 715936 Pin with Clamping Sleeve
1 pc 018050 Pin Ø16x65/86mm ga
3 pc 022230 Cotter Pin 5/1 ga
1 pc 018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]	
057098	145.000	**Strongback ACS 365**

For connecting the formwork to the Carriage ACS. Standard formwork height upt to 5.1m.



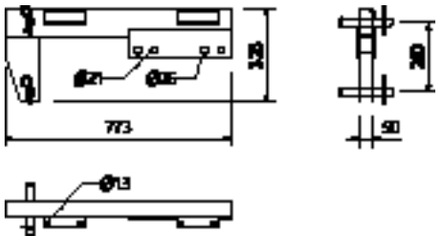
		Accessory (not included)
057327	11.000	**Strongback Adaptor 50 cpl**
057332	15.700	**Strongback Adaptor 200 cpl**
057099	17.300	**Adjust. Spindle Connect. ACS-P**
037150	0.641	**Tie Yoke DW15**
722137	0.849	**Cross Strap 2 coat**
110055	0.861	**Cross Strap coat**
030100	0.439	**Wingnut DW15 ga**
030440	0.686	**Sperical Nut DW15 ga**

Consists of

1 pc 057081 Adjustable Spindle ACS cpl
1 pc 057307 Adjust. Nut ACR TR36x6mm coat
1 pc 057313 Ledger Bracket ACS coat
1 pc 057315 Counterholder ACS coat
3 pc 715936 Pin with Clamping Sleeve
1 pc 018050 Pin Ø16x65/86mm ga
3 pc 022230 Cotter Pin 5/1 ga
1 pc 018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]	
057099	17.300	**Adjust. Spindle Connect. ACS-P**

For the connection of Adjustable Brace CB 164-224 or Heavy-Duty Spindle SLS 140/240 to the Strongback.



Accessory (not included)

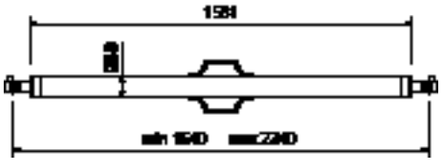
101776	24.900	**Heavy Duty Spindle SLS 140/240**
051110	25.300	**Adjustable Brace CB 164-224**

Consists of

2 pc 715936 Pin with Clamping Sleeve
2 pc 022230 Cotter Pin 5/1 ga

Art no.	Weight [kg]	
051110	25.300	**Adjustable Brace CB 164-224**

For aligning the Strongback CB.



Consists of

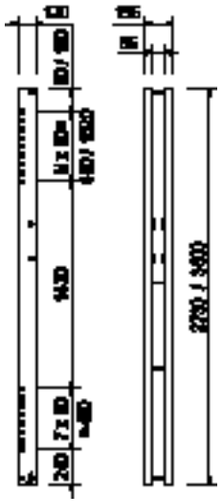
2 pc 715936 Pin with Clamping Sleeve
2 pc 018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]	
		Strongbacks CB
051060	73.400	**Strongback CB 270**
051150	103.000	**Strongback CB 380**

For assembling system formwork on Climbing Brackets CB 240 and 160. For formwork heights up to 5.4m.

Notes

Permissible load-bearing point capacity 1.9t.



Accessory (not included)

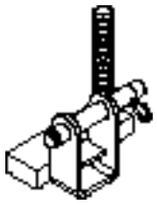
051030	5.530	**Height Adjusting Unit CB, SCS**

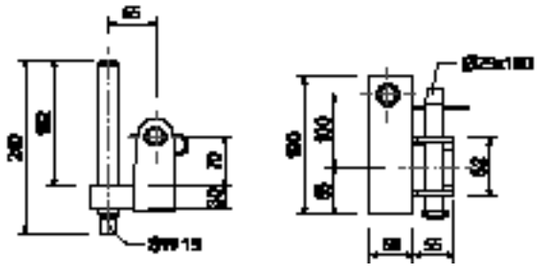
Consists of

1 pc 715936 Pin with Clamping Sleeve
1 pc 018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]	
051030	5.530	**Height Adjusting Unit CB, SCS**

For height adjustment of VARIO GT 24 Panels on the Strongbacks CB and SCS.





Consists of

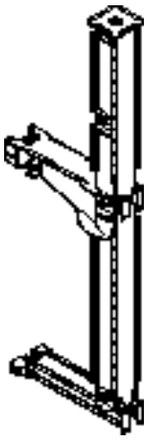
1 pc 715936 Pin with Clamping Sleeve
1 pc 018060 Cotter Pin 4/1 ga

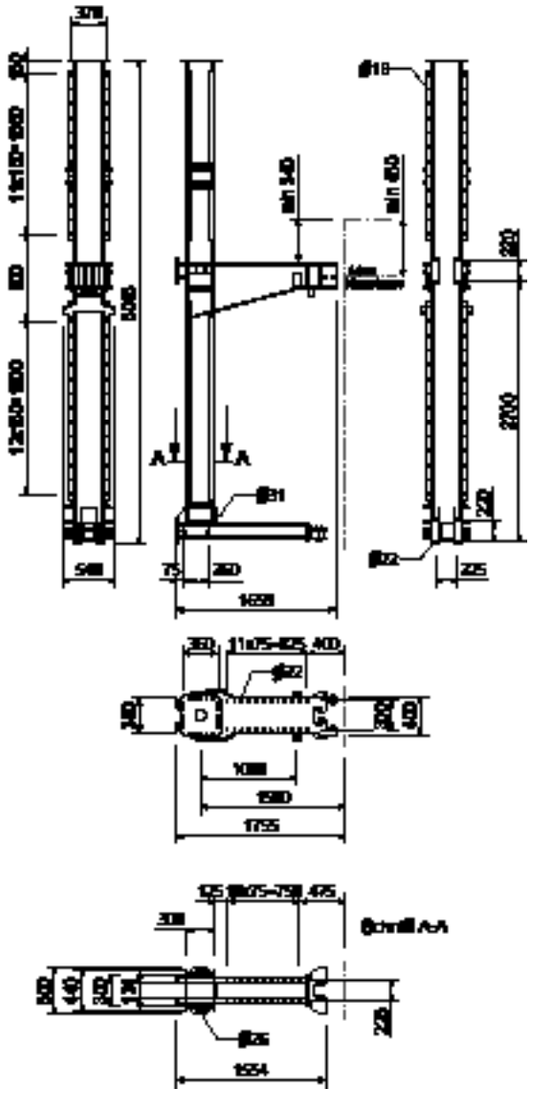
Art no.	Weight [kg]	
057053	863.000	**Bracket ACS-G**

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

Notes

Creation of the production drawing - Compression Strut ACS Cross Bracing - is made on a projectspecific basis.





Accessory (not included)

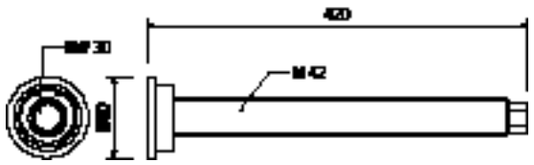
057054	5.110	**Compression Spindle ACS M42**

Consists of

1 pc 057211 Press. Pt Guide Pc coat
4 pc 706458 Screw ISO4017-M20x040-8.8-ga
4 pc 706454 Washer ISO7089-20-200HV-ga

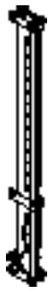
Art no.	Weight [kg]	
057054	5.110	**Compression Spindle ACS M42**

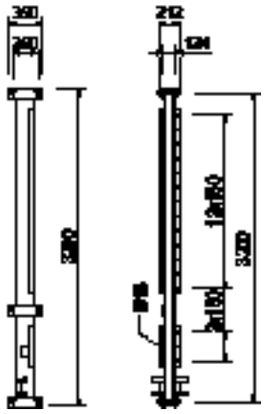
2 for each Brackets ACS-G



Art no.	Weight [kg]	
057056	148.000	**FP Post ACS-G 330**

For the fixation to Bracket ACS-G.
For concreting heights up to 5.1m.





Accessory (not included)

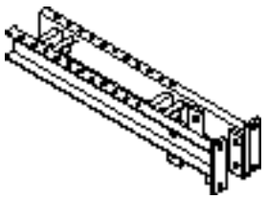
057039	2.390	**Railing Adaptor ACS VT 20**

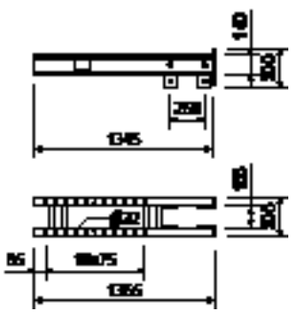
Consists of

4 pc 706372 Pin ACS Ø30x235mm coat
8 pc 022230 Cotter Pin 5/1 ga

Art no.	Weight [kg]	
057057	59.500	**FP Post ACS-G 136.5**

For the fixation to Finishing Platform Post ACS-G 330.



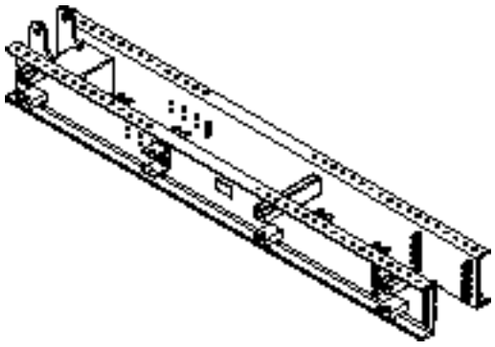


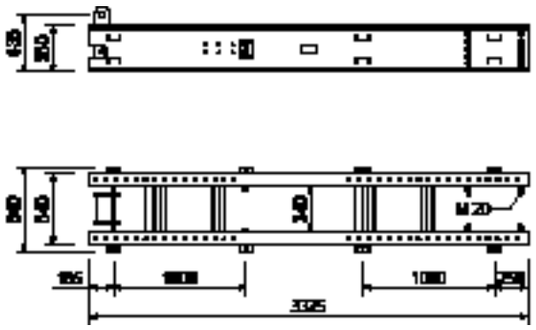
Art no.	Weight [kg]	
057058	481.000	**Gallow ACS-G 332.5**

For the suspension of the retracted formwork on both sides. Fixation of the Vertical Post Top ACS 210.

Notes

Creation of the production drawing - compression strut ACS cross bracing - is made on a projectspecific basis.





Consists of

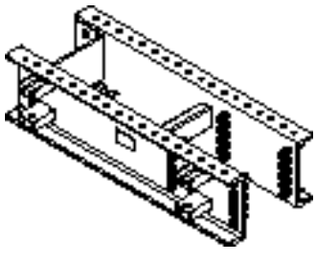
20 pc 024900 Screw ISO4014-M20x080-8.8-ga
4 pc 780357 Screw ISO4017-M20x050-8.8-ga
24 pc 781053 Hex-Nut ISO7040-M20-8-ga
48 pc 706454 Washer ISO7089-20-200HV-ga

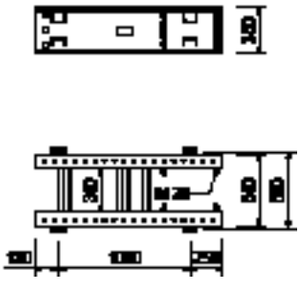
Art no.	Weight [kg]	
057059	214.000	**Gallow ACS-G 143**

For the suspension of the one-sided retracted formwork. Fixation of the Vertical Post Top ACS 210.

Notes

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





Consists of

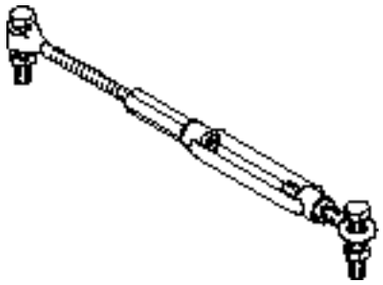
20 pc 024900 Screw ISO4014-M20x080-8.8-ga
20 pc 781053 Hex-Nut ISO7040-M20-8-ga
40 pc 706454 Washer ISO7089-20-200HV-ga

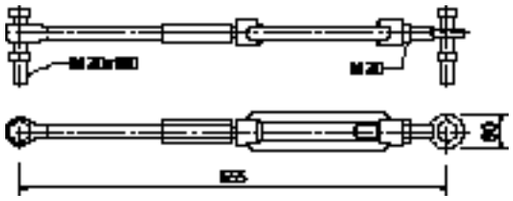
Art no.	Weight [kg]	
057083	3.820	**Bracing ACS DW15**

For bracing scaffolds. For bracing large VARIO GT 24 Elements.

Notes

Tie Rod DW15 must be ordered seperately. Transport dimension 655.





Accessory (not included)

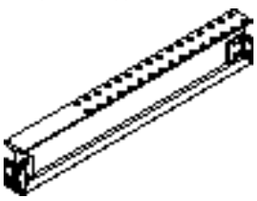
030030	1.440	**Tie Rod DW15 spec. Length**
030050	0.000	**Cutting Cost DW15/B15**

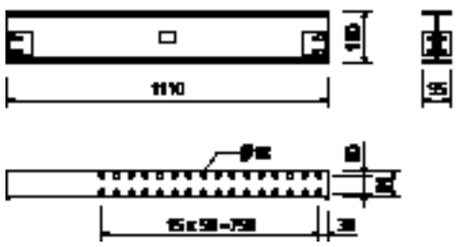
Consists of

1 pc 037150 Tie Yoke DW15
1 pc 030090 Hex Nut DW15 SW30/108 ga
1 pc 701335 Tie Rod DW15 0.1m
1 pc 711059 Turnbuckle CB coat
1 pc 711060 Eyebolt M20 left coat
1 pc 057263 Hex-Nut ISO4032-M20-8-left-ga
2 pc 024910 Screw ISO4014-M20x080-8.8-ga
2 pc 710334 Hex-Nut ISO4032-M20-8-ga-left

Art no.	Weight [kg]	
057040	21.900	**Panel Carrier Beam ACS 111**

Traveling rail for Trolley HTP Type A.





Accessory (not included)

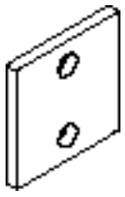
057073	0.745	**Counterplate ACS 100x100x10mm**

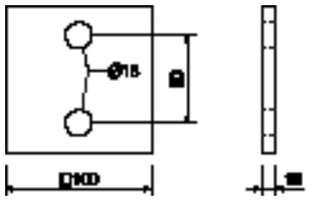
Consists of

4 pc 057082 Trolley Stopper
4 pc 057264 Screw ISO4017-M10x025-8.8-ga
4 pc 710234 Hex-Nut ISO4032-M10-8-ga

Art no.	Weight [kg]	
057073	0.745	**Counterplate ACS 100x100x10mm**

For fixing Panel Carrier Beam ACS 111 to Yoke Beams ACS-P and Gallow ACS-G. 2 for each panel carrier beam.



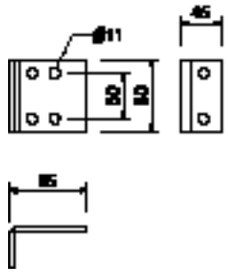


Accessory (not included)

710233	0.200	**Screw ISO4014-M16x110-8.8-ga**
070890	0.030	**Hex-Nut ISO7040-M16-8-ga**
711074	0.011	**Washer ISO7089-16-200HV-ga**

Art no.	Weight [kg]	
057082	0.359	**Trolley Stopper**

End stop for Trolley HTP.
Used for beam flange width of 90mm to 200mm. Used in pairs.

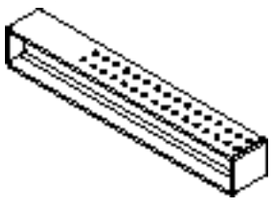


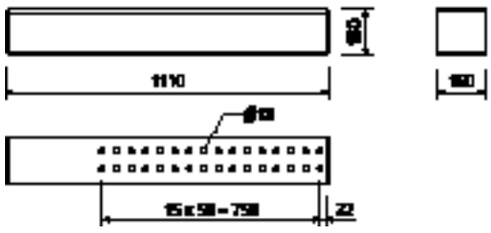
Accessory (not included)

057264	0.026	**Screw ISO4017-M10x025-8.8-ga**
710234	0.010	**Hex-Nut ISO4032-M10-8-ga**

Art no.	Weight [kg]	
057389	48.700	**Panel Car. Beam ACS IPB 16x111**

Travelling rail for Trolley HTP Type A and Type B.

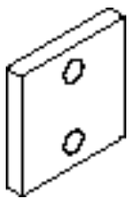


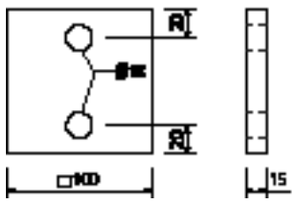


Accessory (not included)

057387	1.120	**Counter Plate ACS 100x100x15mm**

Art no.	Weight [kg]	
057387	1.120	**Counter Plate ACS 100x100x15mm**





Accessory (not included)

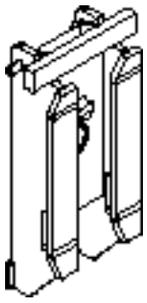
105402	0.200	**Screw ISO4014-M16x120-8.8-ga**
070890	0.030	**Hex-Nut ISO7040-M16-8-ga**
711074	0.011	**Washer ISO7089-16-200HV-ga**

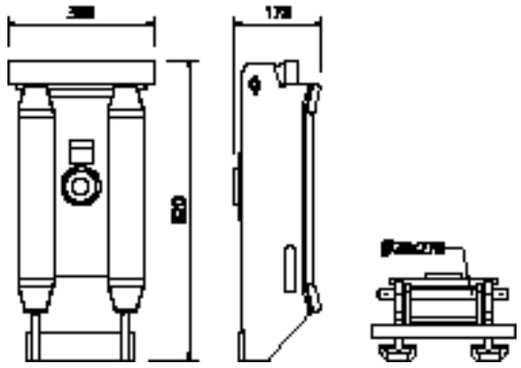
Art no.	Weight [kg]	
051725	38.600	**Climbing Shoe I ACS**

For use on Climbing Cone-2 M30/DW20.

Notes

Permissible load-bearing capacity see PERI Design Information (on request).





Accessory (not included)

051728	0.800	**Screw ISO4762-M30x110-10.9**

Consists of

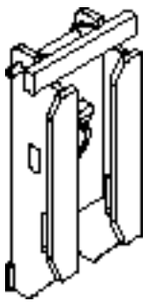
4 pc 706454 Washer ISO7089-20-200HV-ga
1 pc 706455 Pin ACS Ø20x270mm coat
2 pc 711063 Sleeve ISO8752-05.0x035-coat

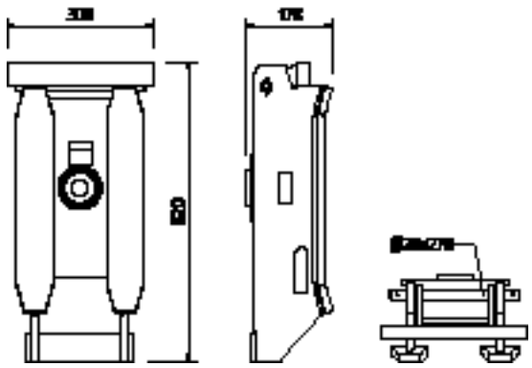
Art no.	Weight [kg]	
057875	39.300	**Climbing Shoe-2 I ACS single**

For anchoring the ACS Self-Climbing System to the structure and as a replacement for the Climbing Shoe I ACS (yellow).

Notes

Red color version.
Permissible load capacity see Design Information (on request).





Accessory (not included)

051728	0.800	**Screw ISO4762-M30x110-10.9**

Consists of

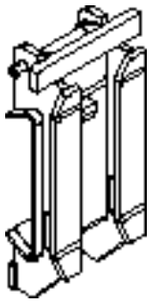
1 pc 706455 Pin ACS Ø20x270mm coat
4 pc 706454 Washer ISO7089-20-200HV-ga
2 pc 711063 Sleeve ISO8752-05.0x035-coat

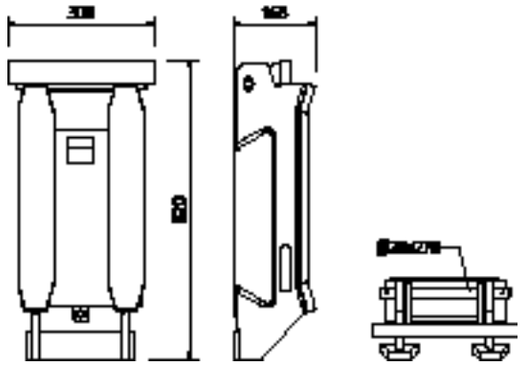
Art no.	Weight [kg]	
051726	33.300	**Climbing Shoe II ACS**

For anchoring on Double Anchor Support right or left.

Notes

Permissible load-bearing capacity see PERI Design Information (on request).





Accessory (not included)

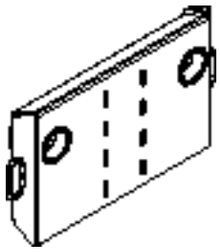
051727	30.200	**Double Anchor Support ACS right**
051774	30.100	**Double Anchor Support ACS left**

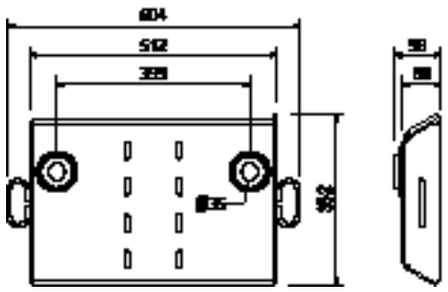
Consists of

4 pc 706454 Washer ISO7089-20-200HV-ga
1 pc 706455 Pin ACS Ø20x270mm coat
2 pc 711063 Sleeve ISO8752-05.0x035-coat

Art no.	Weight [kg]	
051727	30.200	**Double Anchor Suppor ACS right**

For anchoring on two Climbing-Cones-2 M30/DW20.
Double Anchor Supports right and left must always be used in pairs.



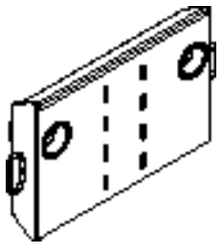


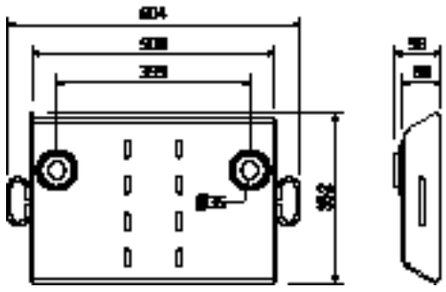
Accessory (not included)

051728	0.800	**Screw ISO4762-M30x110-10.9**

Art no.	Weight [kg]	
051774	30.100	**Double Anchor Support ACS left**

For anchoring on two Climbing-Cones-2 M30/DW20.
Double Anchor Supports right and left must always be used in pairs.



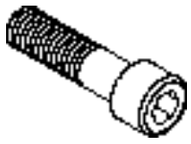


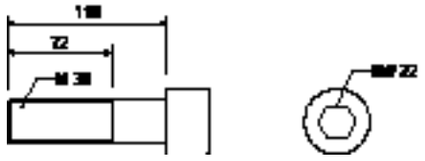
Accessory (not included)

051728	0.800	**Screw ISO4762-M30x110-10.9**

Art no.	Weight [kg]	
051728	0.800	**Screw ISO4762-M30x110-10.9**

For attaching Climbing Shoe ACS, Climbing Shoe-2 ACS and Anchor Tube ACS right or left to Climbing Cone-2 M30/DW20 or Screw-On Cone M30/DW26



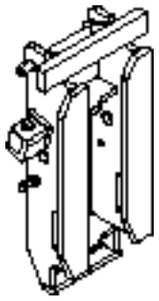


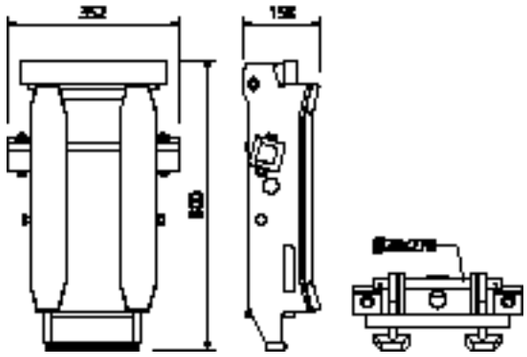
Art no.	Weight [kg]	
057568	33.600	**Climbing Shoe IV ACS**

Pivotable anchoring in horizontal and vertical axis.

Notes

Permissible load-bearing capacity see PERI Design Information (on request).





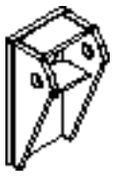
		Accessory (not included)
057566	13.200	**Anchor Shoe H ACS**
057567	17.200	**Anchor Shoe V ACS**

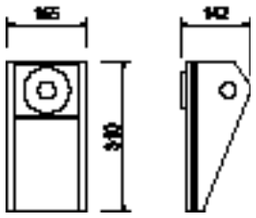
Consists of

1 pc 706455 Pin ACS Ø20x270mm coat
4 pc 706454 Washer ISO7089-20-200HV-ga
2 pc 711063 Sleeve ISO8752-05.0x035-coat
2 pc 057594 Spacer 60x60x50mm coat
2 pc 710220 Screw ISO4014-M12x080-8.8-ga
2 pc 710710 Screw ISO4017-M12x055-8.8-ga
4 pc 710330 Hex-Nut ISO4032-M12-8-ga
4 pc 780702 Washer ISO7089-12-200HV-ga

Art no.	Weight [kg]	
057566	13.200	**Anchor Shoe H ACS**

Pivotable anchoring in vertical axis with Climbing Shoe IV ACS.

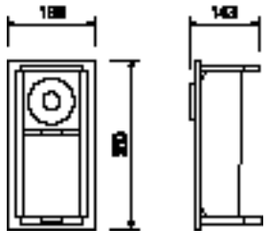




		Accessory (not included)
123843	0.623	**Screw ISO4017 M30x80-10.9**
057569	1.510	**Pin ACS Ø30x280mm**

Art no.	Weight [kg]	
057567	17.200	**Anchor Shoe V ACS**

Pivotable anchoring in horizontal axis with Climbing Shoe IV ACS.

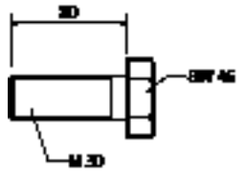


Accessory (not included)

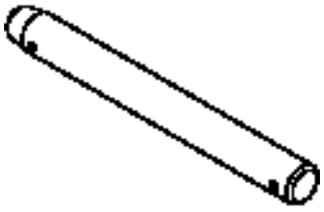
123843	0.623	**Screw ISO4017-M30x80-10.9**
057570	4.080	**Pin ACS Ø35x525mm**

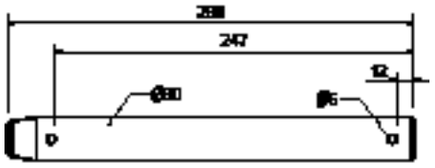
Art no.	Weight [kg]	
123843	0.623	**Screw ISO4017-M30x80-10.9**

For attaching Anchor Shoe H ACS and Anchor Shoe V ACS to Climbing Cone-2 M30/DW20 or Screw-On Cone M30/DW26.



Art no.	Weight [kg]	
057569	1.510	**Pin ACS Ø30x280mm**

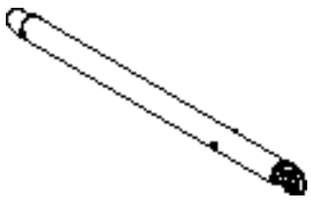


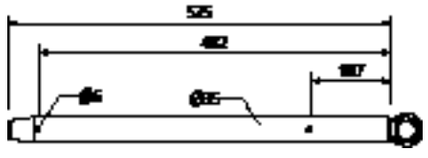


Accessory (not included)

022230	0.033	**Cotter Pin 5/1 ga**

Art no.	Weight [kg]	
057570	4.080	**Pin ACS Ø35x525mm**





Accessory (not included)

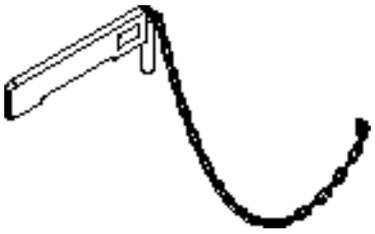
022230	0.033	**Cotter Pin 5/1 ga**

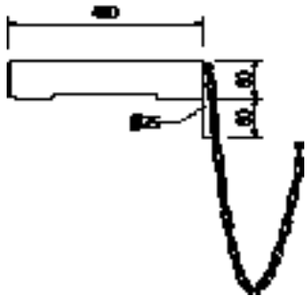
Consists of

1 pc 710914 Sleeve ISO8752-08.0x045-coat
1 pc 722802 Eye Bolt DIN580-M10-ga

Art no.	Weight [kg]	
051729	5.160	**Locking Bar ACS**

For supporting the Climbing Bracket ACS in the Climbing Shoe ACS.





Consists of

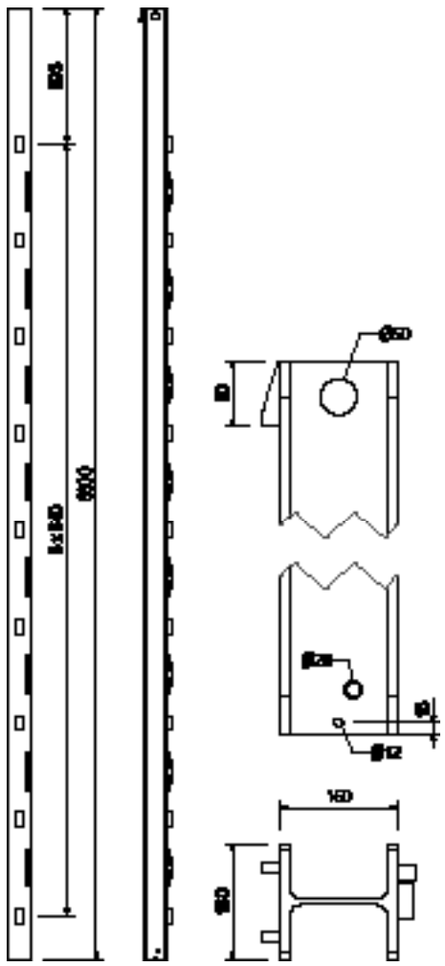
1 pc 706452 Chain DIN5685-G-05x35-lfm-ga
1 pc 706451 Curved Shackle 1/4 coat

Art no.	Weight [kg]		L [mm]
051731	282.000	**Climbing Rail ACS 630**	6300

Guiding rail for Self-Climbing System ACS with Hydraulic Climbing Mechanism ACS 100.

Notes

Corresponding concrete heights see Product Information (on request).



Accessory (not included)

051736	3.910	**Distance Piece cpl**

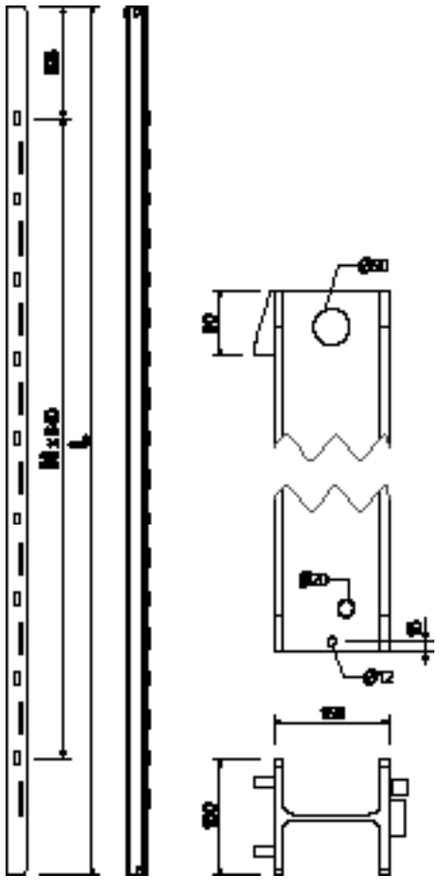
Accessories ACS

Art no.	Weight [kg]	
		Climbing Rails ACS
057213	311.000	**Climbing Rail ACS 694**
051732	340.000	**Climbing Rail ACS 758**
057215	368.000	**Climbing Rail ACS 822**
051733	45.100	**Climbing Rail sp. Length / m**

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

Notes

Corresponding concrete heights see Product Information (on request).

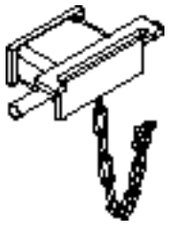


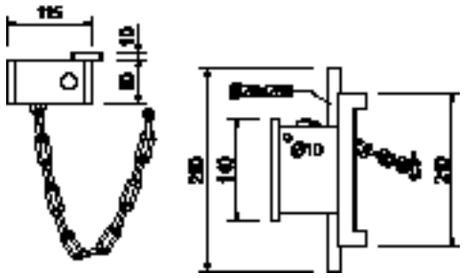
Accessory (not included)

051736	3.910	**Distance Piece cpl**

Art no.	Weight [kg]	
051736	3.910	**Distance Piece cpl**

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





Accessory (not included)

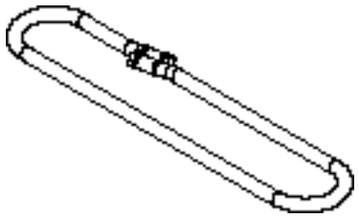
051737	0.050	**Expander ACS**

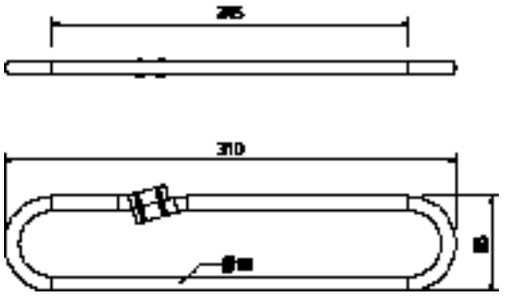
Consists of

1 pc 706452 Chain DIN5685-G-05x35-lfm-ga
1 pc 706451 Curved Shackle 1/4 coat

Art no.	Weight [kg]	
051737	0.050	**Expander ACS**

For Distance Piece ACS.



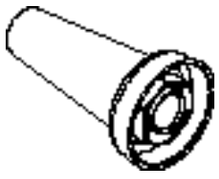


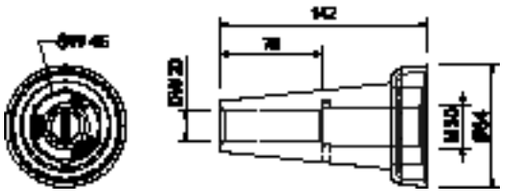
Art no.	Weight [kg]	
030920	1.650	**Climbing Cone-2 M30/DW20 ga**

Anchor System M30. For anchoring climbing systems.

Notes

Separate Design Information on request.





Accessory (not included)

030860	0.792	**Threaded Anchor Plate DW20**
030700	2.560	**Tie Rod DW20 spec. Length**
030745	2.600	**Tie Rod B20 spec. Length**

Art no.	Weight [kg]	
		Tie Rod DW20
030800	0.000	**Cutting Costs DW20/B20**
030700	2.560	**Tie Rod DW20 spec. Length**

Notes

Non-weldable! Observe the permissions! Permissible tension force 150 kN.

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

Notes

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

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

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

Notes

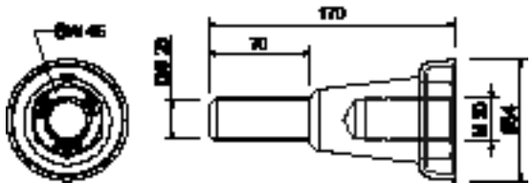
Lost anchor part.

Art no.	Weight [kg]	
057257	1.810	**Screw-On Cone M30/DW26**

Anchor System M30. For anchoring climbing systems.

Notes

Separate dimensioning information on request.



Accessory (not included)

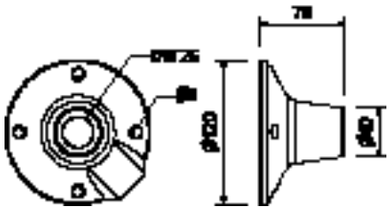
030870	1.260	**Threaded Anchor Plate DW26**

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

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

Notes

Lost anchor part.

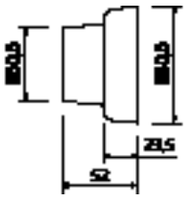


Art no.	Weight [kg]	
031653	0.364	**Concr. Cone KK M30 Ø80x52mm**

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

Notes

Delivery Unit 50 pieces.

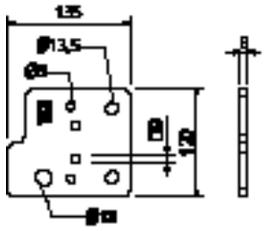


Accessory (not included)

131709	9.980	**Sealing Adhesive-3 6 Cans-Set**

Art no.	Weight [kg]	
113762	0.884	**Guardrail Conn. Plate ACS/SCS**

For assembling Scaffold Tubes Ø48 or Ø60 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 Ø8.



Accessory (not included)

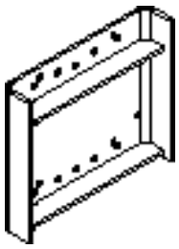
110296	0.220	**Clamp A64 DIN3570-M12-ga**
710330	0.017	**Hex-Nut ISO4032-M12-8-ga**

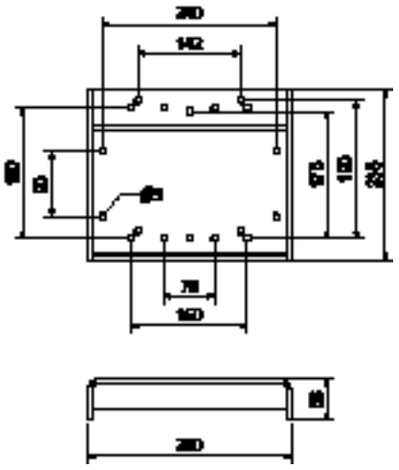
Art no.	Weight [kg]	
057096	4.260	**Connector IPE ACS**

For fixing Platform Supports IPE 180 to IPE 240 at
- Main Platform Beam ACS
- Main Cantilever Beams ACS
- Lower Cantilever Beams ACS
- Lower Cantilever Beam ACS 360

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

to Platform Girders IPE 180 to IPE 240.





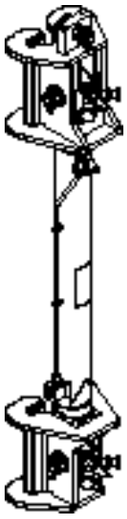
Hydraulics ACS

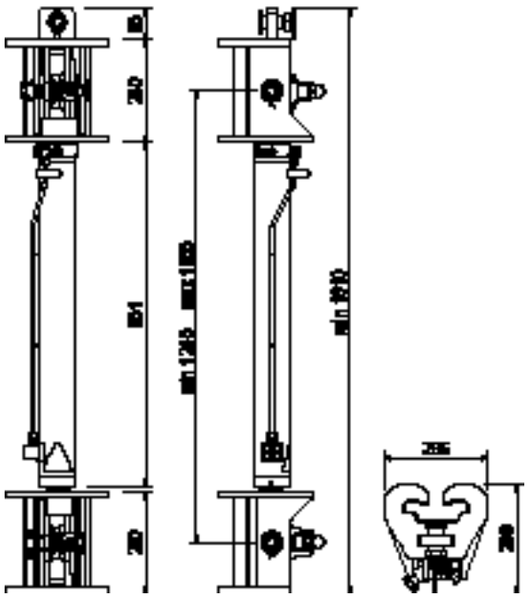
Art no.	Weight [kg]	
051738	111.000	**Hydr.Climb. Mech. ACS 100 cpl**

For hydraulic climbing of Self-Climbing Systems ACS.

Notes

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





Consists of

1 pc 706475 Cotter Pin ISO1234-06.3x060-ST
1 pc 706468 Head Bolt ACS Ø40x75mm
1 pc 706476 Castle-Nut DIN979-M30-05-ga

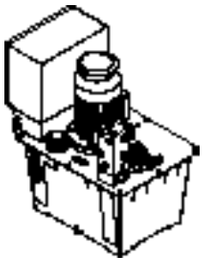
Hydraulics ACS

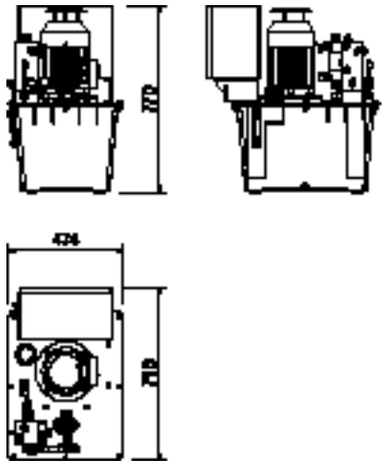
Art no.	Weight [kg]	
		Hydr.Pumps ACS 2-fold
051739	93.000	**Hydr.Pump ACS 2x210/400V**
051762	93.000	**Hydr.Pump ACS 2x210/460V**
057637	93.000	**Hydr.Pump ACS 2x240/400V**
057638	93.000	**Hydr.Pump ACS 2x240/460V**
057766	93.000	**Hydr.Pump ACS 2x240/460V CSA**

Hydraulic Pumps for the connection of two Hydraulic Climbing Mechanisms ACS 100 cpl. Different versions concerning power supply, operating pressure, delivery rate and certification.

Notes

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 Controler with 12m cable included!
Delivered without oil!





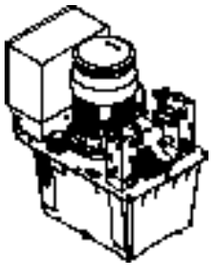
Hydraulics ACS

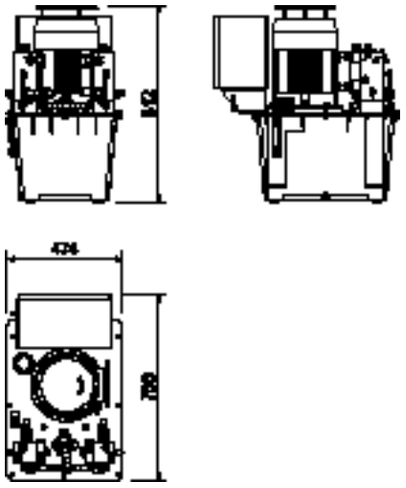
Art no.	Weight [kg]	
		Hydr.Pumps ACS 4-fold
051740	135.000	**Hydr.Pump ACS 4x210/400V**
051741	135.000	**Hydr.Pump ACS 4x210/460V**
057639	135.000	**Hydr.Pump ACS 4x240/400V**
057640	135.000	**Hydr.Pump ACS 4x240/460V**
057767	135.000	**Hydr.Pump ACS 4x240/460V CSA**

Hydraulic Pumps for the connection of four Hydraulic Climbing Mechanisms ACS 100 cpl. Different versions concerning power supply, operating pressure, delivery rate and certification.

Notes

Manuf. item-no. 964.003C-050
Manuf. item-no. 964.003C-060
Manuf. item-no. 964-003C-4,0-050
Manuf. item-no. 964-003C-4,0-060
Manuf. item-no. 964-003C-4,0-060-CSA
Follow Assembly Instruction!
Remote Controler with 12m cable included!
Delivered without oil!





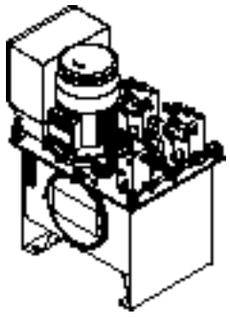
Hydraulics ACS

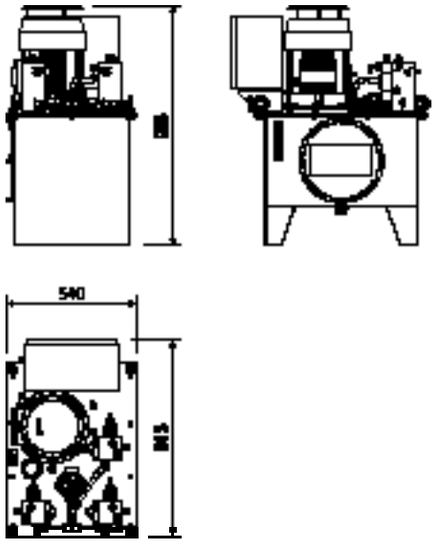
Art no.	Weight [kg]	
		Hydr.Pumps ACS 6-fold
051742	204.000	**Hydr.Pump ACS 6x210/400V**
051743	204.000	**Hydr.Pump ACS 6x210/460V**
057641	204.000	**Hydr.Pump ACS 6x240/400V**
057642	204.000	**Hydr.Pump ACS 6x240/460V**
057768	204.000	**Hydr.Pump ACS 6x240/460V CSA**

Hydraulic Pumps for the connection of six Hydraulic Climbing Mechanisms ACS 100 cpl. Different versions concerning power supply, operating pressure, delivery rate and certification.

Notes

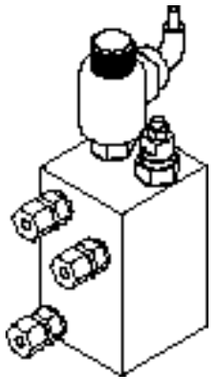
Manuf. item-no. 964.009C-050
Manuf. item-no. 964.009C-060
Manuf. item-no. 964-009C-4,0-050
Manuf. item-no. 964-009C-4,0-060
Manuf. item-no. 964-009C-4,0-060-CSA
Follow Assembly Instruction!
Remote Controler with 12m cable included!
Delivered without oil!

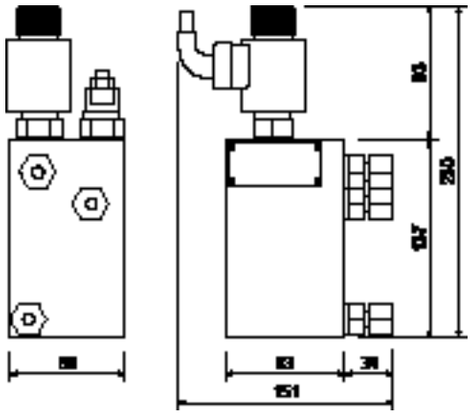




Art no.	Weight [kg]	
		Control Blocks 3
057358	10.000	**Control Block 3. 50HZ**
057359	10.000	**Control Block 3. 60HZ**

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.





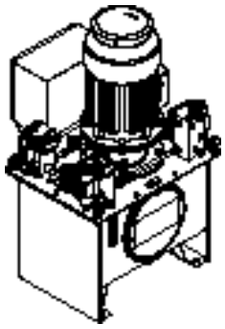
Hydraulics ACS

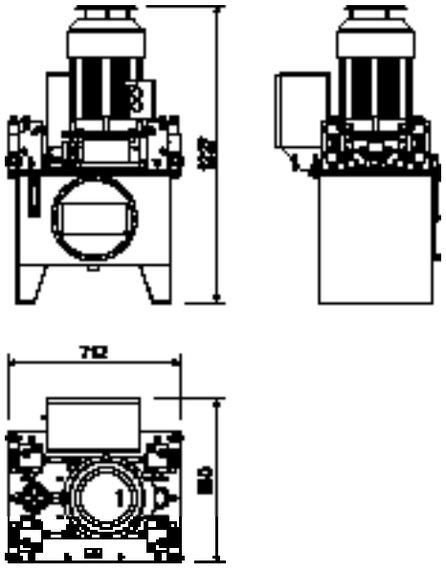
Art no.	Weight [kg]	
		Hydr.Pumps ACS 8-fold
051746	267.000	**Hydr.Pump ACS 8x210/400V**
051747	267.000	**Hydr.Pump ACS 8x210/460V**
057518	267.000	**Hydr.Pump ACS 8x240/400V**
057643	267.000	**Hydr.Pump ACS 8x240/460V**
057769	267.000	**Hydr.Pump ACS 8x240/460V CSA**

Hydraulic Pumps for the connection of eight Hydraulic Climbing Mechanisms ACS 100 cpl. Different versions concerning power supply, operating pressure, delivery rate and certification.

Notes

Manuf. item-no. 964.010C-050
Manuf. item-no. 964.010C-060
Manuf. item-no. 964-010C-4,0-050
Manuf. item-no. 964-010C-4,0-060
Manuf. item-no. 964-010C-4,0-060-CSA
Follow Assembly Instruction!
Remote Controler with 12m cable included!
Delivered without oil!





Art no.	Weight [kg]	
057375	5.000	**Hydr.Contr.Unit with Endpl.-3**

When using Mechanical Drive ACS for the operation of the carriage. Fixation at the guardrail post of platform level 0.

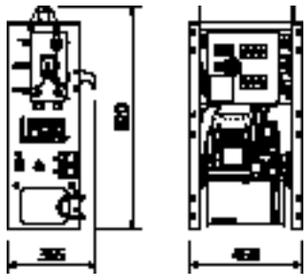
Hydraulics ACS

Art no.	Weight [kg]	
135500	47.000	**Hydr.P. RCS MAX 2x210/380-460V**

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.

Notes

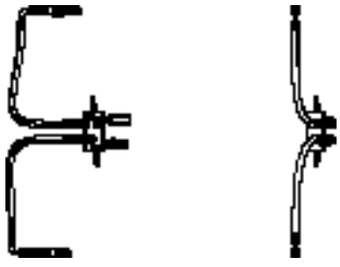
Follow Assembly Instructions of the manufacturer!
See PERI Product Information.
Only use original PERI Hydraulic Oil.



Accessory (not included)

135606	0.100	**Return Filter RCS MAX**
135607	0.100	**Tank Breather Filter RCS MAX**
137281	14.000	**Hydr.Oil Filter Pump CE**
137282	1.000	**Hydr.Oil Filterelement 500**
137283	1.000	**Suction-/Pressure Hose 250**

Art no.	Weight [kg]	
136533	3.400	**Conv. Set Climbing Device ACS**



Art no.	Weight [kg]	
057362	5.000	**Rem.Contr. 2-fold Hydr.Pump**

Notes

Manuf. item-no. K039.049
Cable length = 12m

Art no.	Weight [kg]	
057363	5.000	**Rem.Contr. 4-fold Hydr.Pump**

Notes

Manuf. item-no. K039.027
Cable length = 12m.

Art no.	Weight [kg]	
057364	5.000	**Rem.Contr. 6-fold Hydr.Pump**

Notes

Manuf. item-no. K039.037
Cable length = 12m.

Art no.	Weight [kg]	
057366	5.000	**Rem.Contr. 8-fold Hydr.Pump**

Notes

Manuf. item-no. K039.076
Cable length = 12m.

Art no.	Weight [kg]	
		Remote Control ACS 2 Pumps
123833	8.000	**Remote Control ACS 2 Pumps**
128303	8.000	**Remote Control ACS CSA 2 Pumps**

Remote control for the simultaneous operation of 2 Hydraulic Pumps ACS.

Notes

Manuf. item-no. K039.103
Manuf. item-no. K039.321
Follow Instructions for Use!
Incl. two connecting cables, each 12m length.

		Accessory (not included)
123834	4.000	**Extension Cable 18m 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**

Art no.	Weight [kg]	
123834	4.000	**Extension Cable ACS 18m**

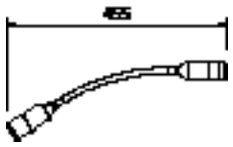
Notes

Manuf. item-no. K039.104
Only for Remote Controlers for 2 Pumps item-no 123833 and 128303.

Art no.	Weight [kg]	
		Adapter Cables ACS
123836	0.300	**Adapter Cable ACS 2-fold 3/07C**
123835	0.300	**Adapter Cable ACS 4-fold 2/03C**
123837	0.300	**Adapter Cable ACS 6-fold 1/09C**
123838	0.300	**Adapter Cable ACS 8-fold 5/10C**

Notes

Manuf. item-no. K039.106
Manuf. item-no. K039.105
Manuf. item-no. K039.107
Manuf. item-no. K039.108

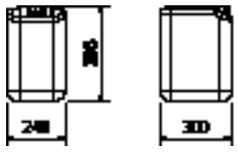


Art no.	Weight [kg]	
		Hydr.Oils ISO11158 in canister
131270	17.900	**Hydr.Oil ISO11158 HM10 20l**
131274	18.300	**Hydr.Oil ISO11158 HVI22 20l**
137373	18.300	**Hydr.Oil ISO11158 HVI32 20l**
057376	18.300	**Hydr.Oil ISO11158 HVI46 20l**

High-quality synthetic hydraulic oils for PERI Hydraulic Power Units with different viscosity suitable for certain temperature ranges.

Notes

Filter with filter pump before filling the aggregates.
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.



Art no.	Weight [kg]	
		Hydr.Oils ISO11158 in drum
131273	200.000	**Hydr.Oil ISO11158 HM10 210l**
131275	200.000	**Hydr.Oil ISO11158 HVI22 210l**
137374	201.000	**Hydr.Oil ISO11158 HVI32 210l**
131277	201.000	**Hydr.Oil ISO11158 HVI46 210l**

High-quality synthetic hydraulic oils for PERI Hydraulic Power Units with different viscosity suitable for certain temperature ranges.

Notes

Filter with filter pump before filling the aggregates.
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.

Art no.	Weight [kg]	
137281	14.000	**Hydr.Oil Filter Pump CE**

Filter pump for quick and clean transfer of hydraulic oil with simultaneous filtration.

Notes

Follow Instructions for Use!
Power connection 220V/50Hz, plug CEE 7/7

Accessory (not included)

137282	1.000	**Hydr.Oil Filterelement 500**
137283	1.000	**Suction-/Pressure Hose 250**

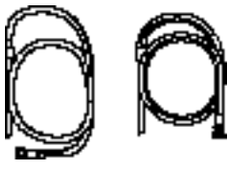
Art no.	Weight [kg]	
137282	1.000	**Hydr.Oil Filterelement 500**

Wear part of the hydr.Oil Filter Pump CE.

Notes

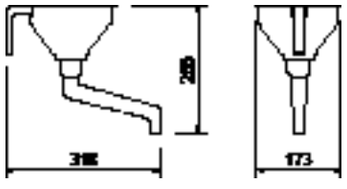
Follow Instruction for use!
Observe the maintenance instructions in the technical documentation for the oil filter pump!
Observe disposal instructions!

Art no.	Weight [kg]	
137283	1.000	**Suction-/Pressure Hose 250**

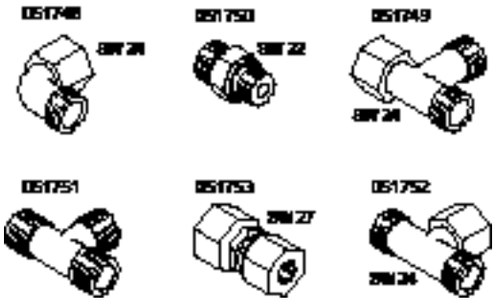


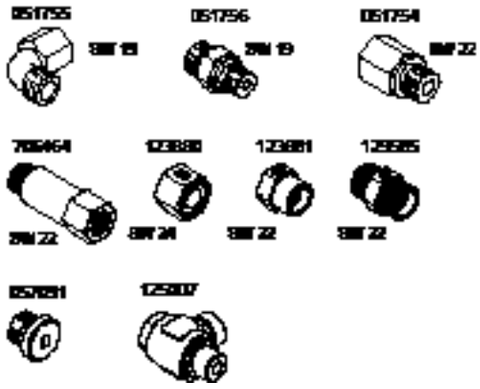
Art no.	Weight [kg]	
130685	0.225	**Universal Funnel**

For easy filling of hydraulic pumps with oil.

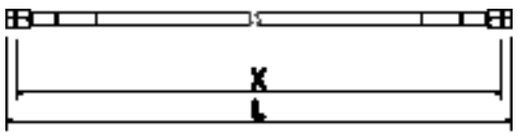


Art no.	Weight [kg]	
		Connections
706464	0.144	**Drive Connector ACS**
051755	0.080	**Elbow Stud X-EVW 8PS**
051748	0.140	**Elbow Stud X-EVW 12PS**
129585	0.060	**Hydr.Hose Coupling G12S**
051749	0.200	**L-Stud X-EVL 12PS**
051756	0.080	**Male Stud Coupl. X-GE8-PSR-ED**
051750	0.060	**Male Stud Coupl. X-GE12PSR-ED**
051753	0.150	**Reducing Coupler KOR15PL/12PS**
051754	0.070	**Reducing Stud RI 3/8x1/4**
125007	0.190	**Swivel Fitting WH12SRKDSOMD**
051751	0.280	**T-Connector X-T 12PS**
051752	0.140	**T-Stud X-EVT 12PS**
123880	0.055	**Threaded Plug VKAM 12S VIT**
057091	0.027	**Threaded Plug VSTI R 3/8-ED**
123881	0.050	**Tube Screw Plug ROV12SX**





Art no.	Weight [kg]		L [mm]	X [mm]
		Hydr.Hoses EN853-2SN-DN08		
129587	0.260	**Hydr.Hose EN853-2SN-DN08 0.3m**	326	300
129592	0.349	**Hydr.Hose EN853-2SN-DN08 0.5m**	526	500
129593	0.656	**Hydr.Hose EN853-2SN-DN08 1m**	1026	1000
129594	1.090	**Hydr.Hose EN853-2SN-DN08 2m**	2026	2000
129595	2.350	**Hydr.Hose EN853-2SN-DN08 5m**	5026	5000
129596	4.560	**Hydr.Hose EN853-2SN-DN08 10m**	10026	10000
129597	6.780	**Hydr.Hose EN853-2SN-DN08 15m**	15026	15000
129598	8.990	**Hydr.Hose EN853-2SN-DN08 20m**	20026	20000



Consists of

2 pc 123881 Tube Screw Plug ROV12SX

Art no.	Weight [kg]	
129424	0.440	**FF-Coupling Pair X-GE12PSR-ED+**

Spare parts set for PERI Hydraulic Components with quick couplings X-GE 12PSR-ED+.

Notes

For assembling on hydraulic hoses EN853-2SN-DN08.

Consists of

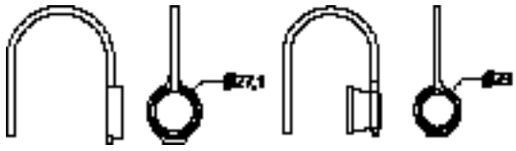
1 pc 128992 Pin ISO16028 DN10 R3/8IG
1 pc 128993 Sleeve ISO16028 DN10 R3/8IG
2 pc 051750 Male Stud Coupl. X-GE12PSR-ED

Art no.	Weight [kg]	
125632	0.050	**Prot. Covers Climb. Device RCS**

Spare part.
To protect unplugged quick couplings against dirt and damage.

Notes

Use with hydraulic hoses with FF couplings possible.
1 set for 1 Climbing Device RCS 50 (2x bushing and 2x nipple each).

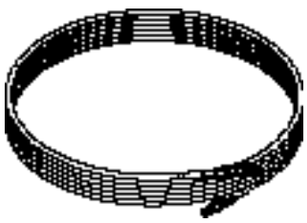


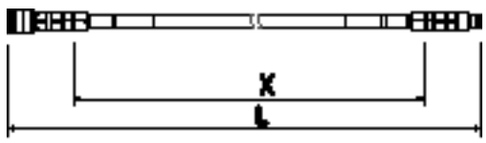
Art no.	Weight [kg]		L [mm]	X [mm]
		Hydr.Hoses 853-2SN-DN08-FF		
129035	0.996	**Hydr.Hose 853-2SN-DN08-FF 1m**	1169	1000
129036	1.430	**Hydr.Hose 853-2SN-DN08-FF 2m**	2169	2000
129419	2.690	**Hydr.Hose 853-2SN-DN08-FF 5m**	5170	5000
129420	4.900	**Hydr.Hose 853-2SN-DN08-FF 10m**	10170	10000
129421	7.120	**Hydr.Hose 853-2SN-DN08-FF 15m**	15170	15000
129422	9.330	**Hydr.Hose 853-2SN-DN08-FF 20m**	20170	20000

Hydraulic hoses with quick couplings and nominal diameter 8mm.

Notes

Follow applicable Safety Regulations for the installation and maintenance of hydraulic lines!

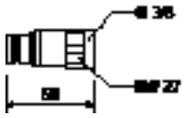




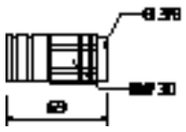
Consists of

1 pc 128992 Pin ISO16028 DN10 R3/8IG
1 pc 128993 Sleeve ISO16028 DN10 R3/8IG
2 pc 051750 Male Stud Coupl. X-GE12PSR-ED

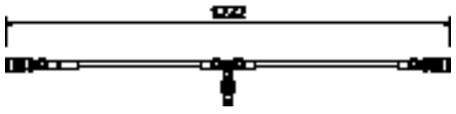
Art no.	Weight [kg]	
		Quick Coupler Connectors
128992	0.140	**Pin ISO16028 DN10 R3/8IG**
110823	0.171	**Quick Coupler Nipple RCS**



Art no.	Weight [kg]	
		Quick Coupler Bushings
110822	0.297	**Quick Coupler Bushing RCS**
128993	0.280	**Sleeve ISO16028 DN10 R3/8IG**



Art no.	Weight [kg]	
129423	1.370	**Hydr.T-Piece 2SN-DN08-FF**



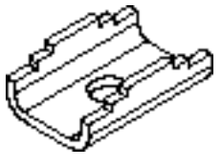
Consists of

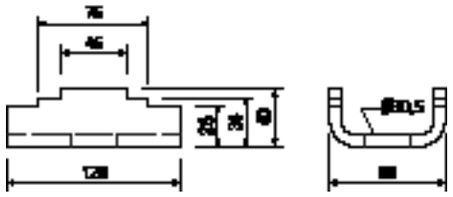
1 pc 128992 Pin ISO16028 DN10 R3/8IG
2 pc 128993 Sleeve ISO16028 DN10 R3/8IG
3 pc 051750 Male Stud Coupl. X-GE12PSR-ED

Art no.	Weight [kg]	
		Connectors
051760	0.004	**Cable Binder NT-240H**
051758	0.100	**Clip Unit 319 PA**
051759	0.050	**Screw ISO1207-M06x030-4.8-ga**
051775	0.010	**Washer US**

Art no.	Weight [kg]	
110055	0.861	**Cross Strap coat**

For fixing formwork at the Strongbacks by means of Tie Yokes DW15.



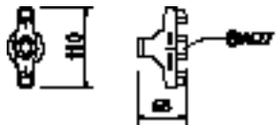


Accessory (not included)

030440	0.686	**Sperical Nut DW15 ga**

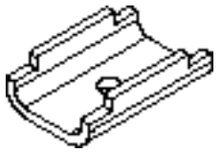
Art no.	Weight [kg]	
030440	0.686	**Sperical Nut DW15 ga**

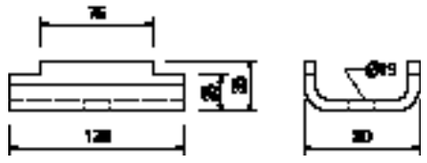
For pivotable anchoring with Tie Rod DW15 and B15.



Art no.	Weight [kg]	
722137	0.849	**Cross Strap 2 coat**

For fixing formwork at the Strongbacks by means of Tie Yokes DW15.





Accessory (not included)

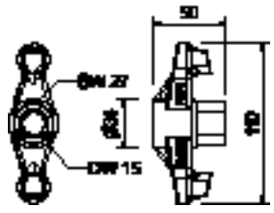
030100	0.439	**Wingnut DW15 ga**

Art no.	Weight [kg]	
030100	0.439	**Wingnut DW15 ga**

For anchoring with Tie Rod DW15 and B15.

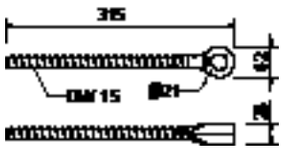
Notes

Permissible load 90 kN.



Art no.	Weight [kg]	
037150	0.641	**Tie Yoke DW15**

For fixing SRZ Steel Walers to the strongback.

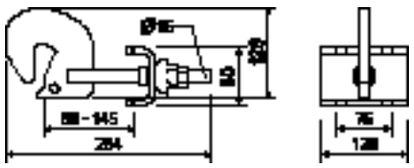


Accessory (not included)

037160	0.736	**Pin Ø20x205mm ga**
781053	0.065	**Hex-Nut ISO7040-M20-8-ga**
710226	0.340	**Screw ISO4014-M20x090-8.8-ga**

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

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

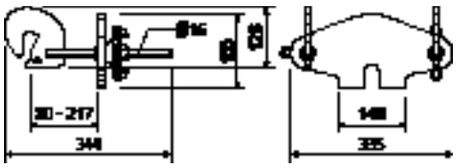


Consists of

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

Art no.	Weight [kg]	
129720	8.040	**Waler Fixation U100/U120 doub.**

For fixing VARIO GT 24 Panels to Strongbacks CB, SCS, Steel Waler SRU if anchoring is done through the strongback.



Consists of

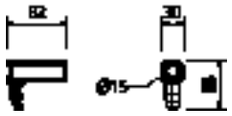
2 pc 118260 Spherical Nut RD16 coat

Art no.	Weight [kg]	
023820	0.375	**Hook Tie Head DW15 ga**

For connecting accessories to MAXIMO and TRIO Panels. DW15 thread.

Notes

Permissible tension force 20.0 kN.

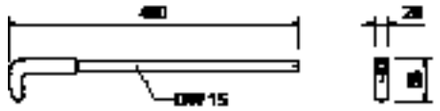


Art no.	Weight [kg]	
023650	0.769	**Hook Tie DW15x400mm ga**

For connecting accessories to MAXIMO and TRIO Panels. DW15 thread.

Notes

Permissible tension force 20.0 kN.

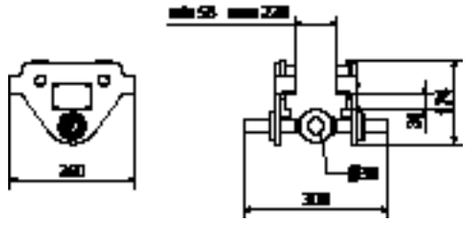


Art no.	Weight [kg]	
057043	9.000	**Trolley HTP 1000kg Type A**

For the movable suspension of the formwork on Steel Profiles HEB, IPE or similar.
Width = 58-220mm.

Notes

Follow Instructions for Use!

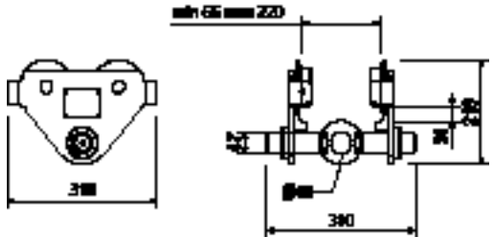


Art no.	Weight [kg]	
057045	16.000	**Trolley HTP 2000kg Type A**

For the movable suspension of the formwork on Steel Profiles HEB, IPE or similar.
Width = 66-220mm.

Notes

Follow Instructions for Use!

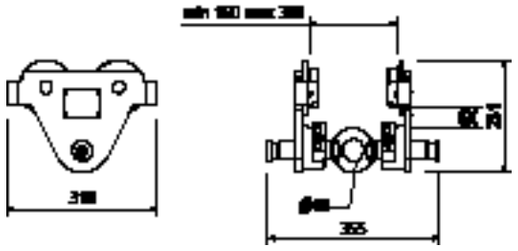


Art no.	Weight [kg]	
057046	19.300	**Trolley HTP 2000kg Type B**

For the movable suspension of the formwork on Steel Profiles HEB, IPE or similar.
Width = 160-300mm.

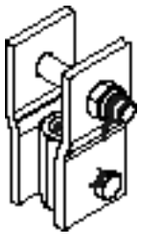
Notes

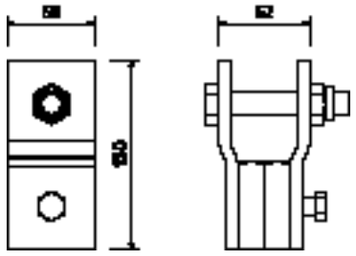
Follow Instructions for Use.



Art no.	Weight [kg]	
057049	2.570	**Panel Suspens.Adaptor ACS DW20**

Connecting Betomax 20 with Trolley HTP.





Consists of

1 pc 721729 Screw ISO4014-M16x090-8.8-ga
1 pc 070890 Hex-Nut ISO7040-M16-8-ga
1 pc 710266 Screw ISO4017-M12x025-8.8-ga

Art no.	Weight [kg]	
030580	0.371	**Hex-Nut DW20 SW36 60mm weldab.**

For anchoring with Tie Rod DW20 and B20.

Notes

Weldable! Permissible load 150 kN.

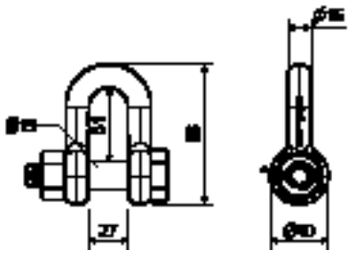
Art no.	Weight [kg]	
030745	2.600	**Tie Rod B20 spec. Length**

Notes

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

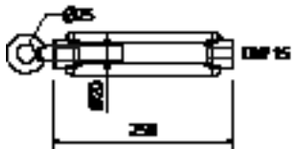
Art no.	Weight [kg]	
130616	0.670	**Shackle Ø16/Ø19mm 3.25t Hex-N.**

For attaching loads or mounting formwork elements, Trolleys HTP 2000kg by means of Turnbuckle CB M20/DW15.



Art no.	Weight [kg]	
116807	1.850	**Turnbuckle CB Ø25-M20/DW15**

For tensioning of Tie Rod DW15.



Consists of

1 pc 711059 Turnbuckle CB coat
1 pc 711060 Eyebolt M20 left coat

Art no.	Weight [kg]	
030070	0.222	**Hex-Nut DW15 SW30 50mm ga**

For anchoring with Tie Rod DW15 and B15.

Notes

Weldable!

Art no.	Weight [kg]	
030740	1.550	**Tie Rod B15 spec. Length**

Notes

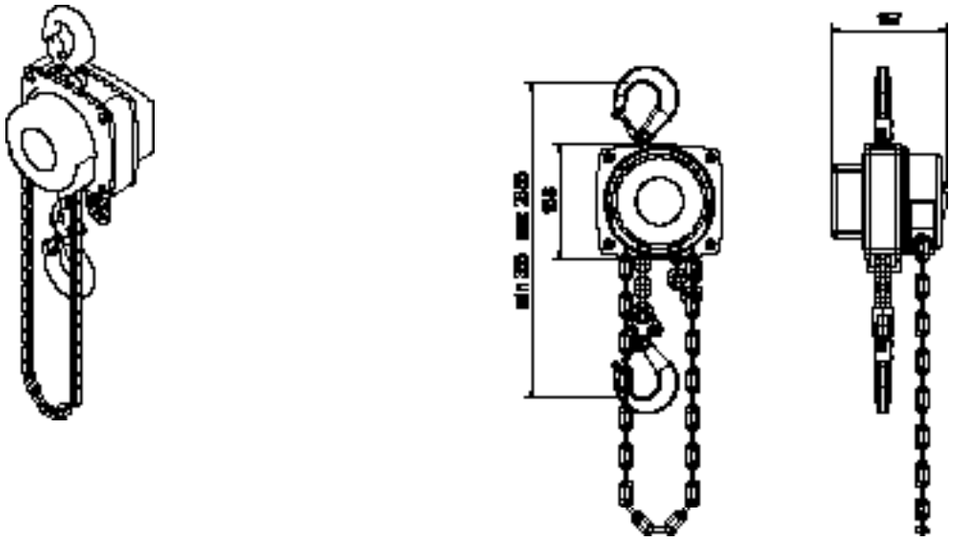
Weldable! Observe the permissions! Permissible tension force 85 kN.

Art no.	Weight [kg]	
057517	13.000	**WInch 1.0t**

For the height-adjustable suspension of the formwork or for lifting and lowering loads.

Notes

Follow Instructions for Use!
Lifting height 2m.
Hand chain 3m.

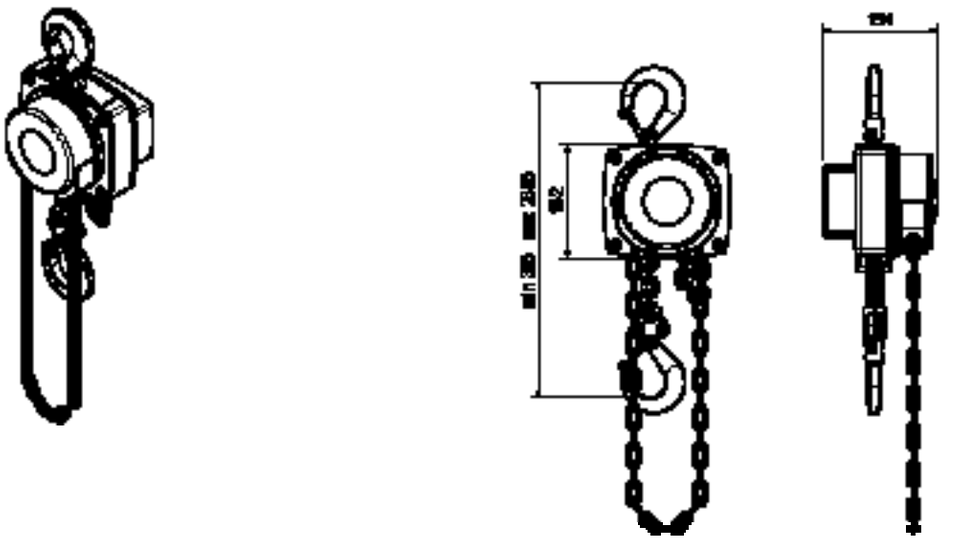


Art no.	Weight [kg]	
129981	20.000	**WInch 2.0t**

For the height-adjustable suspension of the formwork or for lifting and lowering loads.

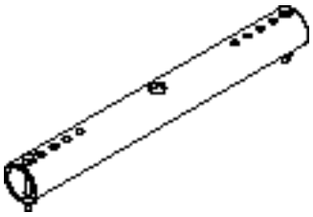
Notes

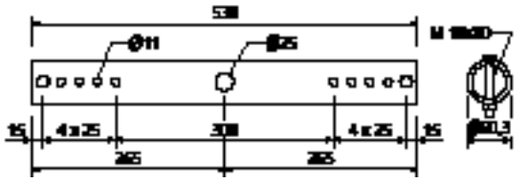
Follow Instructions for Use!
Lifting height 2m.
Hand chain 3m.



Art no.	Weight [kg]	
057050	4.450	**Panel Suspens. Tube VARIO 53**

For attaching VARIO GT 24 Elements.





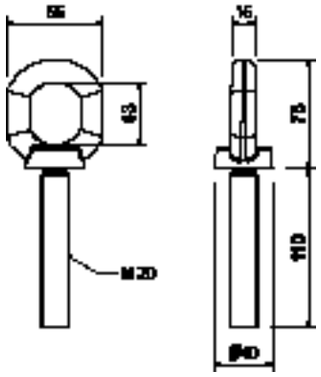
Accessory (not included)

057095	0.902	**Pywood Insert GT 24 ACS**
125823	2.170	**Formwork Suspension VARIO Ø60**
724812	0.656	**Eyebolt M20/110 coat**

Consists of

2 pc 710593 Screw ISO4014-M10x080-8.8-ga
2 pc 710234 Hex-Nut ISO4032-M10-8-ga

Art no.	Weight [kg]	
724812	0.656	**Eyebolt M20x110mm coat**



Accessory (not included)

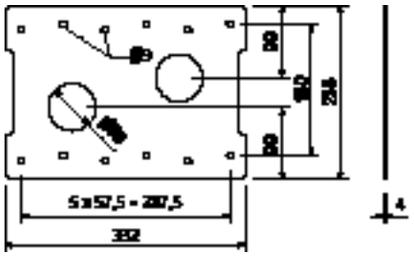
781053	0.065	**Hex-Nut ISO7040-M20-8-ga**
113350	0.174	**Washer ISO7094-20 100HV-ga.**

Art no.	Weight [kg]	
125823	2.170	**Formwork Suspension VARIO Ø60**

For connecting the Suspension Tube VARIO 53 to Formwork Girders GT 24.

Notes

Permissible load-bearing capacity see PERI Design Information (on request).
At least 2 pieces per fixing point.



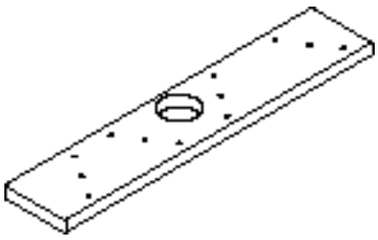
		Accessory (not included)
024540	0.005	**Wood-Screw 6x40 SK-TX30 HPI**
024470	0.008	**Wood-Screw 6x60 SK-TX30 HPI**

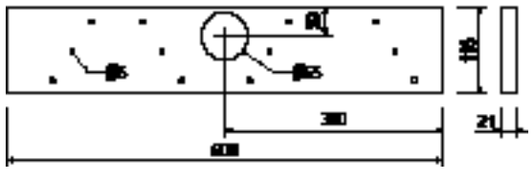
Art no.	Weight [kg]	
057095	0.902	**Pywood Insert GT 24 ACS**

Of 21mm Finply.
For panel suspension. Fixed with Wood-Screw 6x60 SK-TX30 HPI both sides on the struts of the GT 24.

Notes

Permissible load-bearing capacity see PERI Design Information (on request).
At least 4 pieces per fixing point.





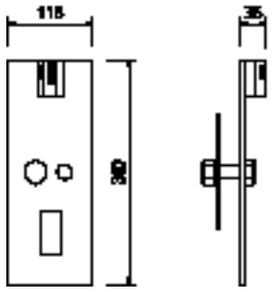
		Accessory (not included)
024470	0.008	**Wood-Screw 6x60 SK-TX30 HPI**

Art no.	Weight [kg]	
057076	3.060	**Suspens. f. Corner Element ACS**

For the suspension of VARIO GT 24 Corner Elements.

Notes

Permissible load-bearing capacity see PERI Design Information (on request).

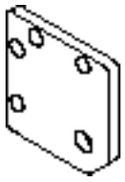


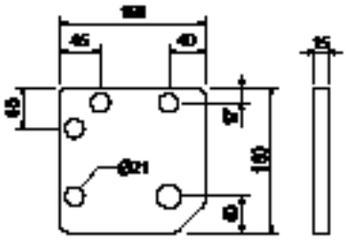
Consists of

1 pc 057139 Screw ISO4017-M20x060-8.8-ga
1 pc 710334 Hex-Nut ISO4032-M20-8-ga

Art no.	Weight [kg]	
125475	2.730	**Suspens. Plate ACS/TRIO 16x16**

For the suspension of TRIO Formwork Elements



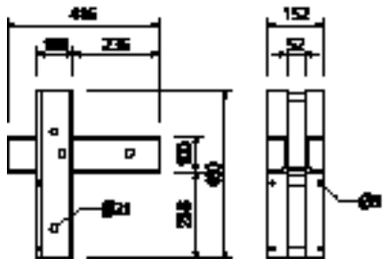


Accessory (not included)

024910	0.303	**Screw ISO4014-M20x100-8.8-ga**
781053	0.065	**Hex-Nut ISO7040-M20-8-ga**
706454	0.017	**Washer ISO7089-20-200HV-ga**

Art no.	Weight [kg]	
057077	16.800	**Steel Corn. Waler ESRZ 46/41.6**

For VARIO GT 24 Corner Elements.

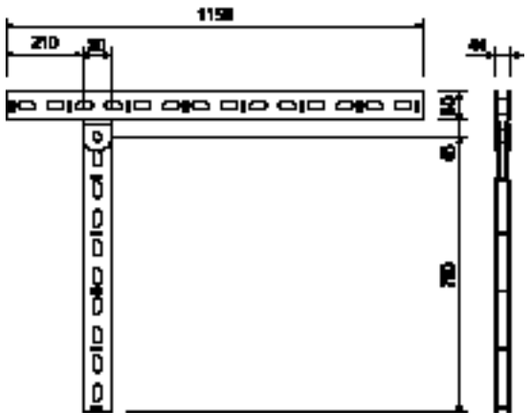


Accessory (not included)

057078	18.300	**T-Shaped Artic. Coupl. 115-76**

Art no.	Weight [kg]	
057078	18.300	**T-Shaped Artic. Coupl. 115-76**

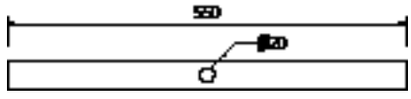
For connecting VARIO GT 24 Corner Elements.



		Accessory (not included)
037160	0.736	**Pin Ø20x205mm ga**
024240	0.805	**Wedge KZ tensionproof**

Art no.	Weight [kg]	
123806	2.320	**Tube 40x40x4mm 55**

For clamping compensation plates.

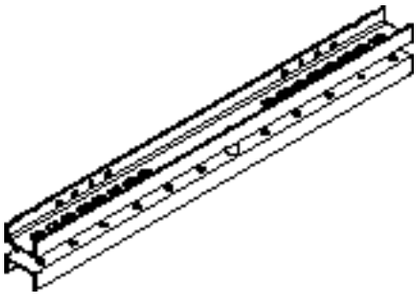


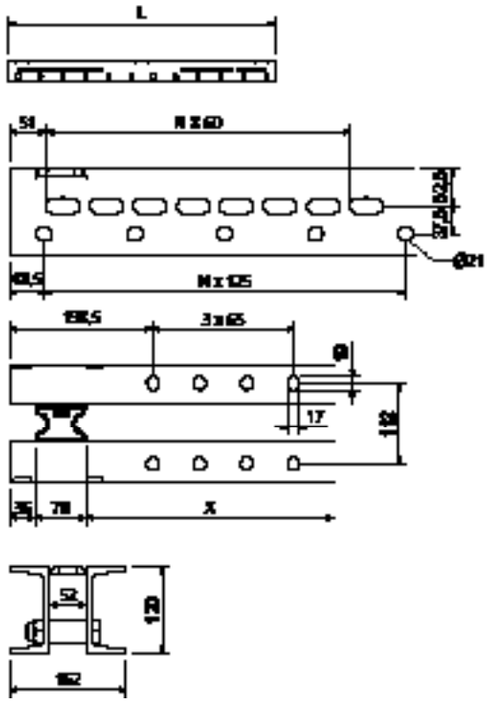
Art no.	Weight [kg]		L [mm]
		Steel Walers SRU U120	
103868	18.100	**Steel Waler SRU 72 U120**	722
103871	24.200	**Steel Waler SRU 97 U120**	972
103874	30.900	**Steel Waler SRU 122 U120**	1222
103877	38.100	**Steel Waler SRU 147 U120**	1472
103886	44.700	**Steel Waler SRU 172 U120**	1722
103889	52.000	**Steel Waler SRU 197 U120**	1972
103898	58.600	**Steel Waler SRU 222 U120**	2222
103892	65.600	**Steel Waler SRU 247 U120**	2472
103929	72.000	**Steel Waler SRU 272 U120**	2722
103903	81.000	**Steel Waler SRU 297 U120**	2972
103906	92.600	**Steel Waler SRU 347 U120**	3472
103915	106.000	**Steel Waler SRU 397 U120**	3972
103918	119.000	**Steel Waler SRU 447 U120**	4472
103922	135.000	**Steel Waler SRU 497 U120**	4972
103925	146.000	**Steel Waler SRU 547 U120**	5472
103928	159.000	**Steel Waler SRU 597 U120**	5972

Universal Steel Waler Profile U120 used as waling for girder wall formwork and for diverse special applications. With adjustable spacers.

Notes

Permissible load: see PERI Design Tables.
SRU 120 Wy = 121.4 cm³, Iy = 728 cm⁴.
SRU 140 Wy = 172,8 cm³, Iy = 1210 cm⁴.



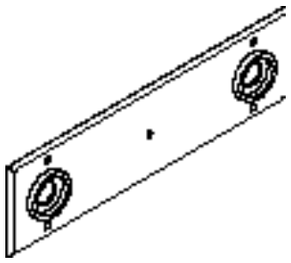


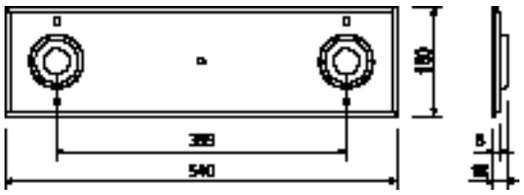
Accessory (not included)

135912	0.067	**Spacer SRU**

Art no.	Weight [kg]	
057869	4.740	**Leading Anchor Plate ACS 399mm**

For the exact installation of the climbing cones for Double Anchor Support left, right. Mounted to the formwork facing the concrete structure.



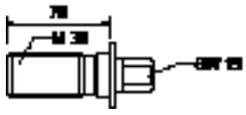


Accessory (not included)

710295	0.028	**Screw DIN603-M08x045-4.8-ga-Nu**
024470	0.008	**Wood-Screw 6x60 SK-TX30 HPI**

Art no.	Weight [kg]	
029450	0.339	**Advancing Screw M30 ga**

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

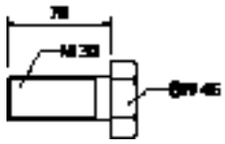


Accessory (not included)

029380	0.184	**Anchor Posit. Plate M30 ga**

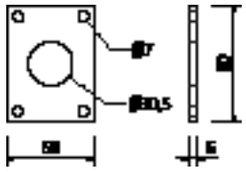
Art no.	Weight [kg]		L [mm]
029420	0.590	**Screw ISO4017-M30x070-8.8-ga**	70

Alternative to Leading Screw M30 galvanized. Item number: 029450



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

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

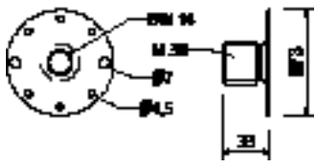


Accessory (not included)

029440	0.005	**Hex-Wood-Screw 6x20 DIN571-ga**

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

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



Accessory (not included)

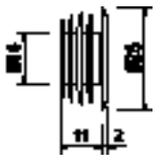
027212	0.445	**Hexag. Recess Wrench SW14 long**
710312	0.005	**Wire Nail 3.0x80mm**

Art no.	Weight [kg]	
030300	0.002	**Plug Ø20/24mm**

For sealing unused tie holes Ø20 to Ø24mm.

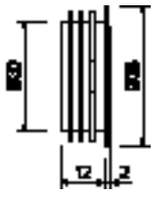
Notes

Delivery unit 250 pieces.



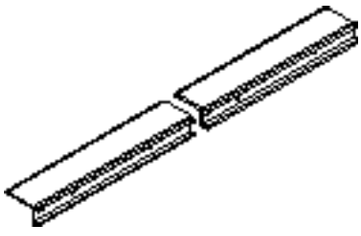
Art no.	Weight [kg]	
057094	0.004	**Plug SFL 38x1-3**

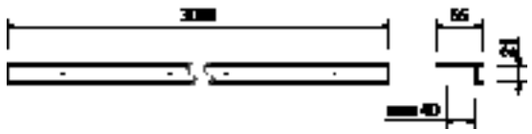
For closing advancing Anchor Holes Ø32 to Ø36mm.



Art no.	Weight [kg]	
101706	1.230	**Formwork Joint 21/40mm 300**

Plastic profile strip for easier striking of shafts.



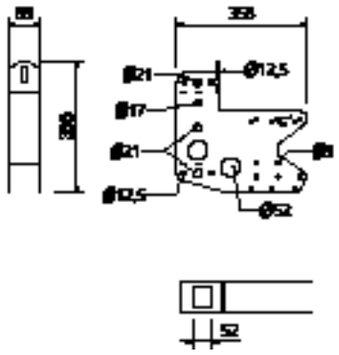


Art no.	Weight [kg]	
126088	4.390	**Guardrail Post Holder Multi**

For fixing of an end guardrail post on Girders GT 24, VT 20 or KH 80/160. Fixing of the guardrail posts by means of Hex. Bolts M20.

Notes

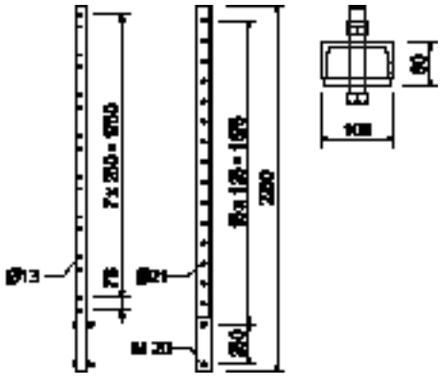
Suitable for
Guardrail Post RCS 226 item no.: 109720
Guardrail Post RCS/SRU 184 item no.: 114328
Vertical scaffold tubes
Special post QR 50x50



		Accessory (not included)
710285	0.050	**Screw ISO4014-M08-100-8.8-ga**
024090	0.005	**Self-cleaning Nut M8 coat**
024470	0.008	**Wood-Screw 6x60 SK-TX30 HPI**

Art no.	Weight [kg]	
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 .



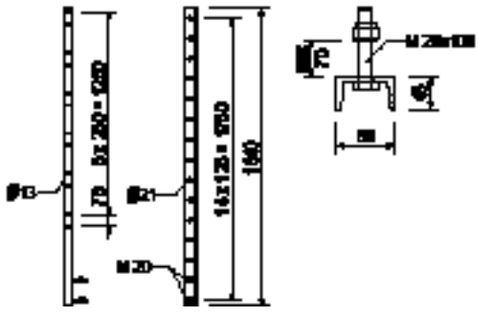
		Accessory (not included)
110296	0.220	**Clamp A64 DIN3570-M12-ga**
710330	0.017	**Hex-Nut ISO4032-M12-8-ga**
710709	0.036	**Screw DIN603-M08-065-4.8-ga**
780354	0.002	**Washer ISO7089-08-200HV-ga**
057345	0.010	**Washer 9mm DIN 434 ga.**

Consists of

2 pc 104477 Screw ISO4014-M20x120-8.8-ga
2 pc 781053 Hex-Nut ISO7040-M20-8-ga

Art no.	Weight [kg]	
114328	16.600	**Guardrail Post RCS/SRU 184**

For assembly of the guardrail on the Platform Beam RCS/SRU or Guardrail Post Holder Multi.



Accessory (not included)

110296	0.220	**Clamp A64 DIN3570-M12-ga**
710330	0.017	**Hex-Nut ISO4032-M12-8-ga**
710709	0.036	**Screw DIN603-M08-065-4.8-ga**
780354	0.002	**Washer ISO7089-08-200HV-ga**
057345	0.010	**Washer 9mm DIN 434 ga.**

Consists of

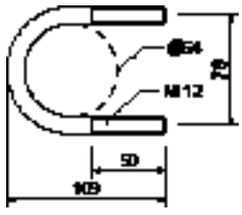
2 pc 114727 Screw ISO4017-M20x100-8-8-ga
2 pc 781053 Hex-Nut ISO7040-M20-8-ga

Art no.	Weight [kg]	
110296	0.220	**Clamp A64 DIN3570-M12-ga**

For assembling Scaffold Tubes on Railing Posts RCS.

Notes

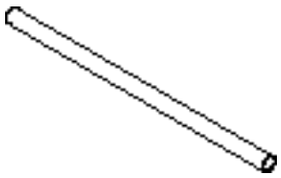
Wrench size SW19.

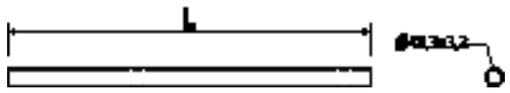


Accessory (not included)

710330	0.017	**Hex-Nut ISO4032-M12-8-ga**

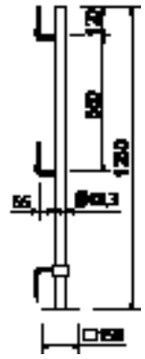
Art no.	Weight [kg]		L [mm]
		Scaff. Tubes 48.3x3.2mm ga	
026417	0.000	**Cutting Costs Scaffold Tube**	1
026411	3.550	**Scaff. Tube 48.3x3.2mm 1m ga**	1000
026412	7.100	**Scaff. Tube 48.3x3.2mm 2m ga**	2000
026413	10.650	**Scaff. Tube 48.3x3.2mm 3m ga**	3000
026414	14.200	**Scaff. Tube 48.3x3.2mm 4m ga**	4000
026419	17.750	**Scaff. Tube 48.3x3.2mm 5m ga**	5000
026418	21.600	**Scaff. Tube 48.3x3.2mm 6m ga**	6000
026415	3.550	**Scaff. Tube 48.3x3.2mm lfm ga**	1000





Art no.	Weight [kg]	
019040	6.480	**Guardrail Post PD8**

As guardrail for different systems. Screwed onto sub-structure.

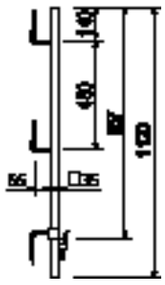


Art no.	Weight [kg]	
117325	4.270	**Post PP**

For the fixation of the Side-Mesh-Barriers.

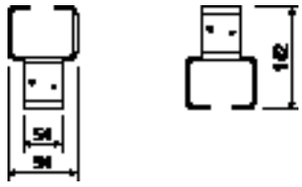
Notes

Maximum distance of posts with Side-Mesh-Barrier: PMB 260 max. 2.4m.



Art no.	Weight [kg]	
129724	0.817	**Cross Connector GT 24/GT 24**

For the connection of crossing GT 24 Formwork Girders.

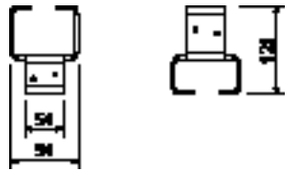


Accessory (not included)

024540	0.005	**Wood-Screw 6x40 SK-TX30 HPI**
024470	0.008	**Wood-Screw 6x60 SK-TX30 HPI**

Art no.	Weight [kg]	
129722	0.746	**Cross Connector GT 24/VT 20**

For connecting a Girder GT 24 to a crossing Girder VT 20.

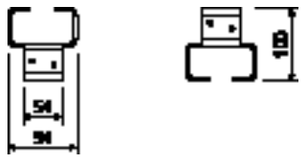


Accessory (not included)

024540	0.005	**Wood-Screw 6x40 SK-TX30 HPI**
024470	0.008	**Wood-Screw 6x60 SK-TX30 HPI**

Art no.	Weight [kg]	
129817	0.675	**Cross Connector VT 20/VT 20**

For the connection of crossing Girders VT 20.



Accessory (not included)

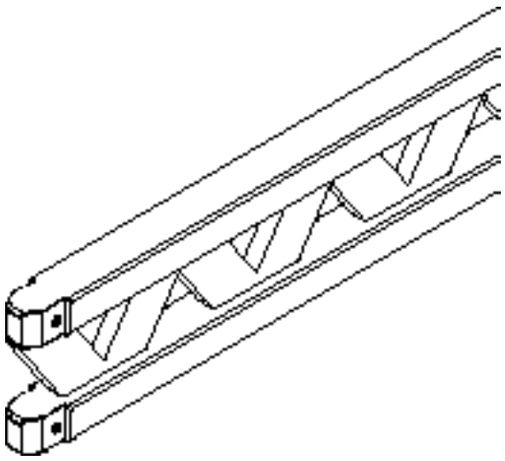
024540	0.005	**Wood-Screw 6x40 SK-TX30 HPI**
024470	0.008	**Wood-Screw 6x60 SK-TX30 HPI**

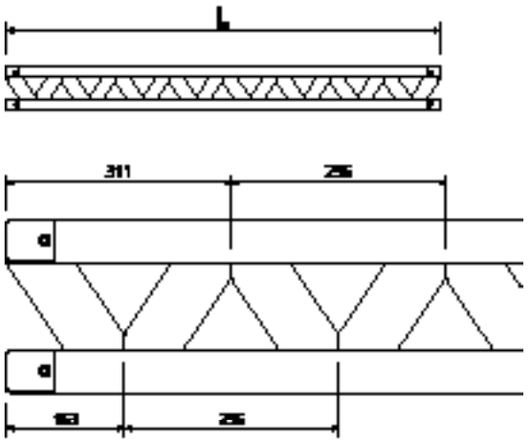
Art no.	Weight [kg]		L [mm]
		Girders GT 24	
075100	5.300	**Girder GT 24 90**	918
075120	7.100	**Girder GT 24 120**	1214
075150	8.900	**Girder GT 24 150**	1510
075180	10.600	**Girder GT 24 180**	1806
075210	12.400	**Girder GT 24 210**	2102
075240	14.200	**Girder GT 24 240**	2398
075270	15.900	**Girder GT 24 270**	2694
075300	17.700	**Girder GT 24 300**	2990
075330	19.500	**Girder GT 24 330**	3286
075360	21.200	**Girder GT 24 360**	3582
075390	23.000	**Girder GT 24 390**	3878
075420	24.800	**Girder GT 24 420**	4174
075450	26.600	**Girder GT 24 450**	4470
075480	28.300	**Girder GT 24 480**	4766
075510	30.100	**Girder GT 24 510**	5062
075540	31.900	**Girder GT 24 540**	5358
075570	33.600	**Girder GT 24 570**	5654
075600	35.400	**Girder GT 24 600**	5950

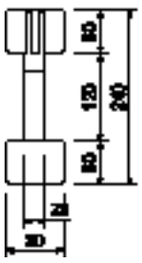
Universal formwork girder made of wood.

Notes

Special lengths over 6m are possible and can be provided on request.

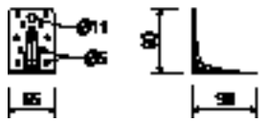






Art no.	Weight [kg]	
123478	0.255	**Angle Connector 90x90x65mm**

For diverse timber connections.

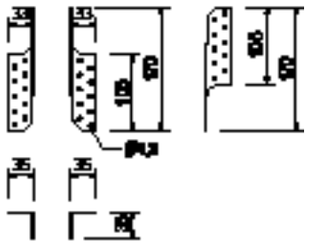


Accessory (not included)

129711	0.010	**Wood Screw 6x20 HRK-TX30 HSX**
024550	0.005	**Wood Screw 8x20 SK-TX30 HSX**

Art no.	Weight [kg]	
018290	0.098	**Framing Clip ga**

For various wood connections.

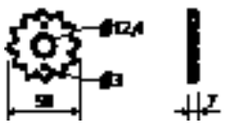


Accessory (not included)

018280	1.000	**Double Head Nail**

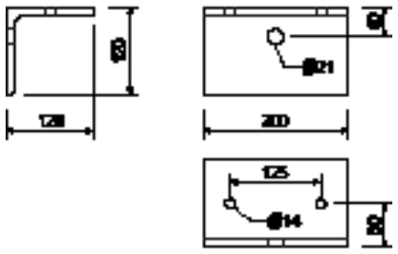
Art no.	Weight [kg]	
070030	0.015	**Plate Conn. Ø50/12mm single**

To strengthen the timber fixation and for other connections of timber with steel.



Art no.	Weight [kg]	
110289	4.260	**L-Angle RCS 120x120x200mm**

For fixing end handrail posts on the decking.



Accessory (not included)

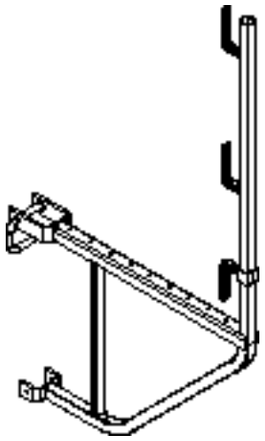
131404	1.080	**Screw-On Cou.-2 HT B Ø48mm M20**

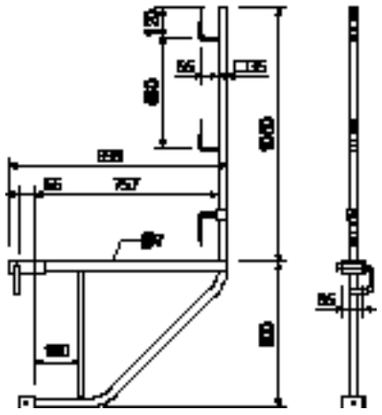
Art no.	Weight [kg]	
027110	11.000	**Scaffold Bracket GB80**

For assembly of a working and concreting scaffold with GT 24 girder.

Notes

Permissible load 150kg/m².
Maximum width of influence 1.25m.



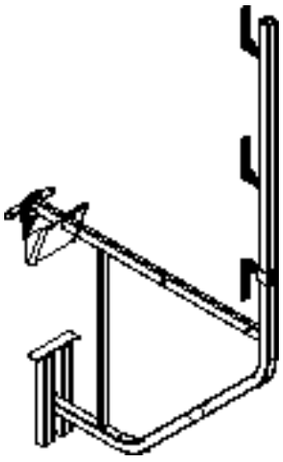


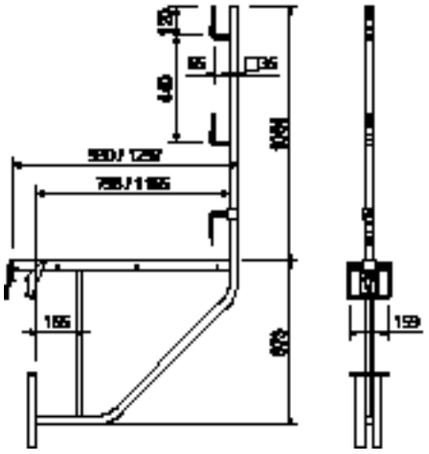
Art no.	Weight [kg]	
		Scaffold Brackets TRG
023670	12.500	**Scaffold Bracket TRG 80**
023680	16.600	**Scaffold Bracket TRG 120**

For assembly of a working and concreting scaffold with MAXIMO and TRIO. Mounted on horizontal and vertical struts.

Notes

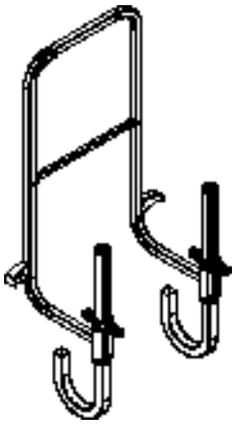
Permissible load 150kg/m² with maximum width of influence 1.35m.

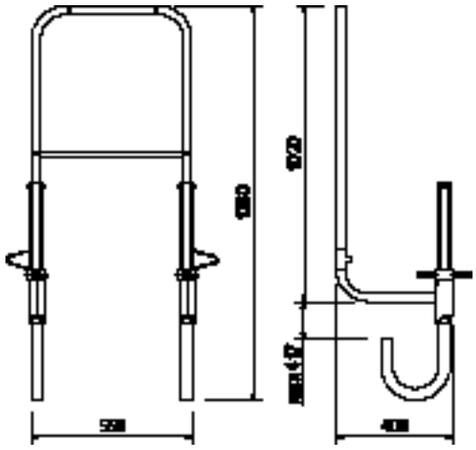




Art no.	Weight [kg]	
065066	14.800	**End Guardrail Frame 55**

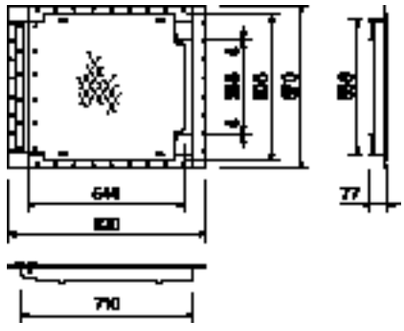
End guardrail for clamping to all PERI scaffold platforms and climbing systems.





Art no.	Weight [kg]	
126431	12.300	**Hatch-2 RCS 55x60 foldable**

Self-closing hatch for ladder access. Clear opening approx. 55x60cm.
Ladder fixation with bolts or by hanging up.



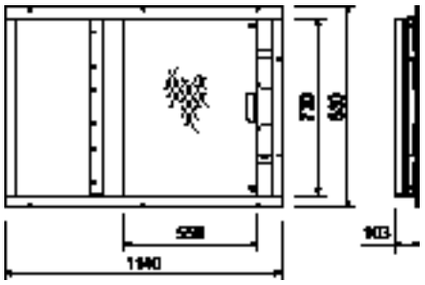
		Accessory (not included)
710224	0.047	**Screw ISO4017-M12x040-8.8-ga**
710381	0.017	**Hex-Nut ISO7040-M12-8-ga**

Consists of

1 pc 126785 Hatch Hinge RCS
12 pc 108647 Rivet ISO15979-5.0x20-ST/ST
2 pc 022230 Cotter Pin 5/1 ga

Art no.	Weight [kg]	
051430	37.900	**Sliding Hatch**

Non self-closing hatch for ladder access. Clear opening approx. 73x55cm. Ladder fixation with bolts.

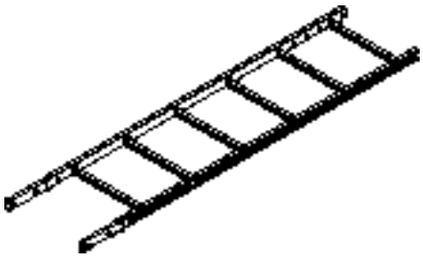


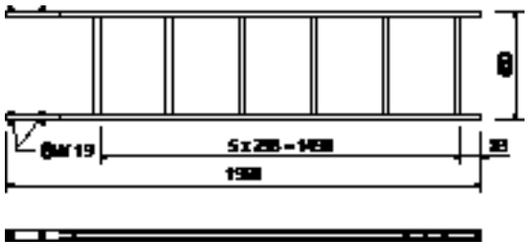
Consists of

4 pc 710266 Screw ISO4017-M12x025-8.8-ga
4 pc 710381 Hex-Nut ISO7040-M12-8-ga

Art no.	Weight [kg]	
051410	11.700	**Ladder 180/6**

For accessing PERI Formwork Systems.



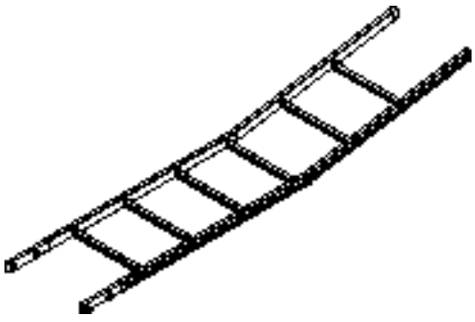


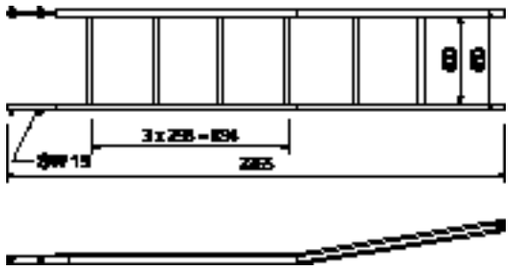
Consists of

4 pc 710224 Screw ISO4017-M12x040-8.8-ga
4 pc 710381 Hex-Nut ISO7040-M12-8-ga

Art no.	Weight [kg]	
051420	12.800	**Ladder 220/6**

As access for PERI Formwork Systems.



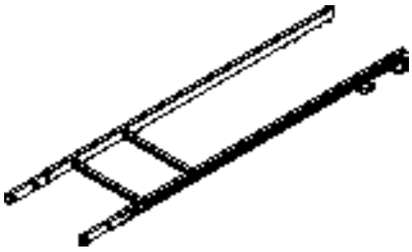


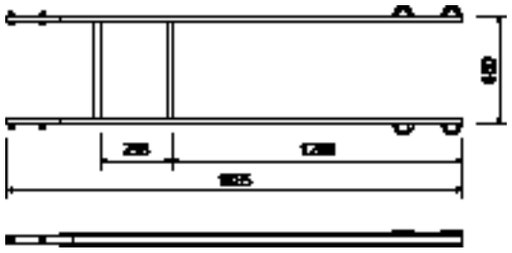
Consists of

4 pc 710224 Screw ISO4017-M12x040-8.8-ga
4 pc 710381 Hex-Nut ISO7040-M12-8-ga

Art no.	Weight [kg]	
103724	10.400	**End Ladder 180/2 cpl**

As access for PERI Formwork Systems.



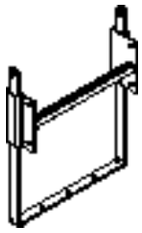


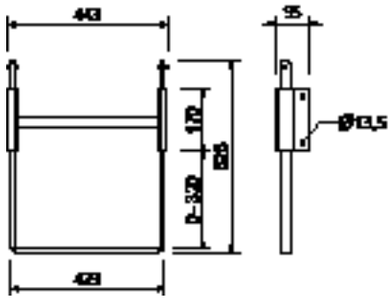
Consists of

4 pc 710224 Screw ISO4017-M12x040-8.8-ga
4 pc 710381 Hex-Nut ISO7040-M12-8-ga

Art no.	Weight [kg]	
109105	5.070	**Ladder Base 30 ga**

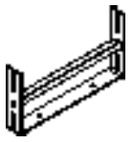
For horizontal fixing of ladders on the platform decking.

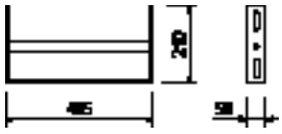




Art no.	Weight [kg]	
051460	2.180	**Ladder Base ga**

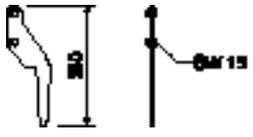
As bottom ladder connection and for securing ladders against sliding on the scaffold decks.





Art no.	Weight [kg]	
103718	0.684	**Ladder Hook**

For adjusting the bottom ladder. Always use in pairs.

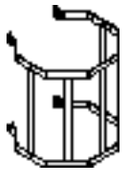


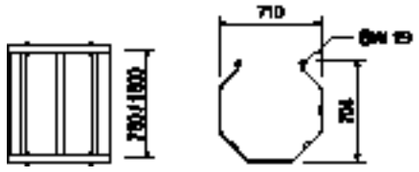
Consists of

2 pc 710266 Screw ISO4017-M12x025-8.8-ga
2 pc 710381 Hex-Nut ISO7040-M12-8-ga

Art no.	Weight [kg]	
		Ladder Safety Cages
104132	15.600	**Ladder Safety Cage 75**
051450	25.200	**Ladder Safety Cage 150**

Ladder cage for PERI ladder access.



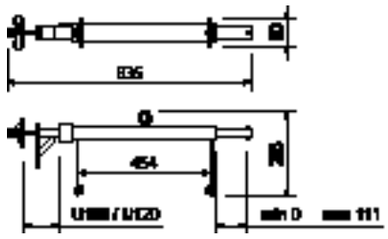


Consists of

4 pc 710266 Screw ISO4017-M12x025-8.8-ga
4 pc 701763 Clamping Plate FL 25x10x90mm

Art no.	Weight [kg]	
111165	6.260	**Ladder Connector VARIO adj.**

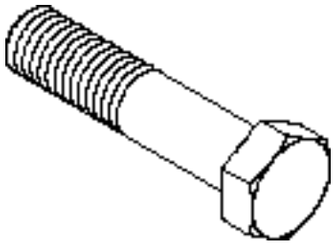
For connecting ladders to Steel Walers SRZ and SRU, Profile U100–U120.

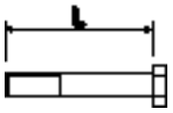


Consists of

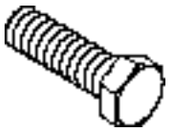
2 pc 710266 Screw ISO4017-M12x025-8.8-ga
2 pc 701763 Clamping Plate FL 25x10x90mm

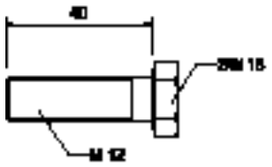
Art no.	Weight [kg]		L [mm]
		Schrews ISO4014-8.8-ga	
710285	0.050	**Screw ISO4014-M08-100-8.8-ga**	100
101949	0.015	**Screw ISO4014-M08x030-8.8-ga**	30
710220	0.087	**Screw ISO4014-M12x080-8.8-ga**	80
711078	0.360	**Screw ISO4014-M20x130-8.8-ga**	130
113766	0.518	**Screw ISO4014-M20x180-8.8-ga**	180





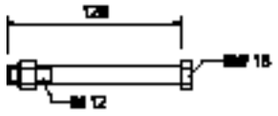
Art no.	Weight [kg]		L [mm]
710224	0.047	**Screw ISO4017-M12x040-8.8-ga**	40



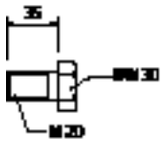


Art no.	Weight [kg]		L [mm]
070100	0.132	**Screw ISO4016-M12x120-4.6-ga-N**	120

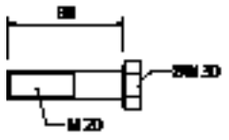
For uses with small loads, including nut.



Art no.	Weight [kg]		L [mm]
123844	0.130	**Screw ISO4017-M20x035-8.8-ga**	35

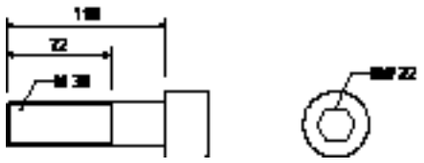


Art no.	Weight [kg]		L [mm]
024900	0.255	**Screw ISO4014-M20x080-8.8-ga**	80



Art no.	Weight [kg]	
051728	0.800	**Screw ISO4762-M30x110-10.9**

For attaching Climbing Shoe ACS, Climbing Shoe-2 ACS and Anchor Tube ACS right or left to Climbing Cone-2 M30/DW20 or Screw-On Cone M30/DW26

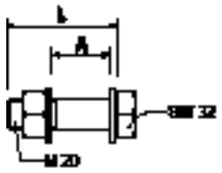


Art no.	Weight [kg]		L [mm]
		HV-Sets M20-10.9	
057021	0.370	**HV-Set M20x75-10.9**	75
123839	0.440	**HV-Set M20x90-10.9**	90

For high-tension bolt connections.

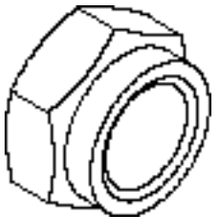
Notes

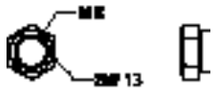
DIN EN 14 399-4.
l = 75: A = 40-45mm
l = 90: A = 55-60mm



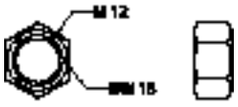
Art no.	Weight [kg]	
711071	0.004	**Hex-Nut ISO7040-M08-8-ga**

Self-locking.



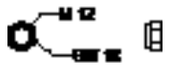


Art no.	Weight [kg]	
104526	0.017	**Hex-Nut ISO4032-M12-8**



Art no.	Weight [kg]	
710381	0.017	**Hex-Nut ISO7040-M12-8-ga**

Self-locking.

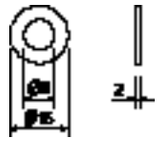


Art no.	Weight [kg]	
781053	0.065	**Hex-Nut ISO7040-M20-8-ga**

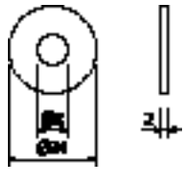
Self-locking.

Art no.	Weight [kg]	
130341	0.063	**Hex-Nut ISO7042-M20-8-ga**

Art no.	Weight [kg]	
780354	0.002	**Washer ISO7089-08-200HV-ga**

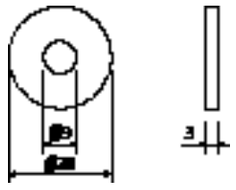


Art no.	Weight [kg]	
710342	0.007	**Washer ISO7093-1-08-200HV-ga**

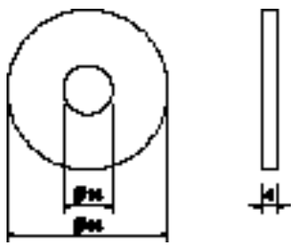


Art no.	Weight [kg]	
722356	0.002	**Washer ISO7090-08-200HV**

Art no.	Weight [kg]	
113347	0.013	**Washer ISO7094-08-100HV-ga**

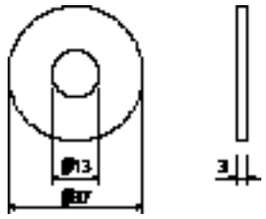


Art no.	Weight [kg]	
113348	0.043	**Washer ISO7094-12-100HV-ga**

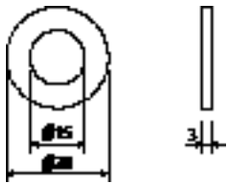


Art no.	Weight [kg]	
750350	0.027	**Washer ISO7093-1-12-200HV-ga**

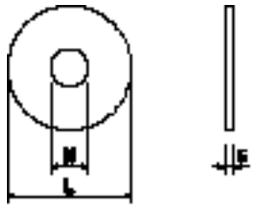
Corresponds to old standard DIN 9021. With large supporting area.



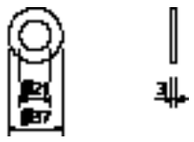
Art no.	Weight [kg]	
725574	0.009	**Washer ISO7089-14-200HV-ga**



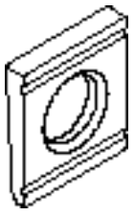
Art no.	Weight [kg]	
129975	0.210	**Washer ISO7094-24-100HV-ga**

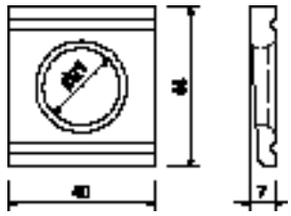


Art no.	Weight [kg]	
706454	0.017	**Washer ISO7089-20-200HV-ga**

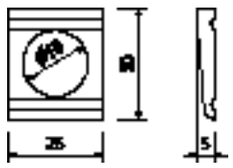


Art no.	Weight [kg]	
123845	0.057	**U-Washer DIN6918-21-ga**

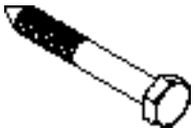


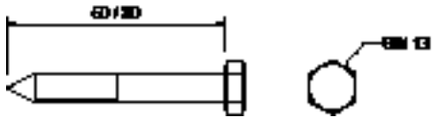


Art no.	Weight [kg]		
710880	0.032	**Washer DIN434-18-ga**	



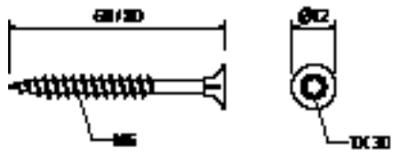
Art no.	Weight [kg]		L [mm]
		Hex-Wood-Screws DIN 571 ga	
029440	0.005	**Hex-Wood-Screw 6x20 DIN571-ga**	20
024270	0.023	**Hex-Wood-Screw 8x60 DIN571 ga**	60





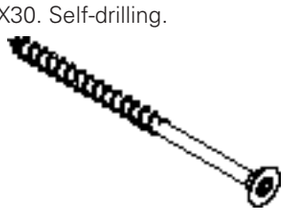
Art no.	Weight [kg]		L [mm]
		Wood-Screws SK-TX30 HPI	
024540	0.005	**Wood-Screw 6x40 SK-TX30 HPI**	40
024470	0.008	**Wood-Screw 6x60 SK-TX30 HPI**	60
024690	0.008	**Wood-Screw 6x80 SK-TX30 HPI**	80

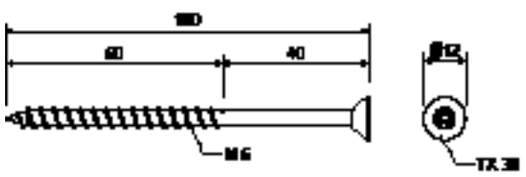
For Torx Bit Points TX30. Self-drilling.



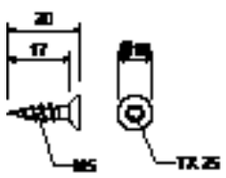
Art no.	Weight [kg]		L [mm]
024950	0.012	**Wood-Screw 6x100 SK-TX30 HSX**	100

For Torx Blade TX30. Self-drilling.



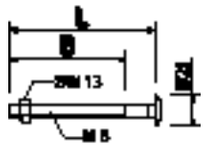


Art no.	Weight [kg]		L [mm]
111437	0.004	**Wood-Screw 5x20 SK-TX25 HSX**	20

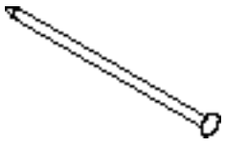


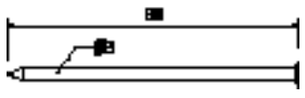
Art no.	Weight [kg]		B [mm]	L [mm]
		Screws DIN603-M08-4.8-ga-Nu		
710709	0.036	**Screw DIN603-M08-065-4.8-ga-Nu**	22	65
710295	0.028	**Screw DIN603-M08x045-4.8-ga-Nu**	22	45
710326	0.030	**Screw DIN603-M08x060-4.8-ga-Nu**	22	60
024140	0.033	**Screw DIN603-M08x070-4.8-ga-Nu**	58	70
710240	0.050	**Screw DIN603-M08x100-4.8-ga-Nu**	80	100
024390	0.090	**Screw DIN603-M08x200-4.8-ga-Nu**	150	200

With nut.



Art no.	Weight [kg]	
710312	0.005	**Wire Nail 3.0x80mm**

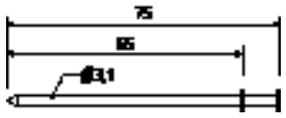




Art no.	Weight [kg]	
018280	1.000	**Double Head Nail**

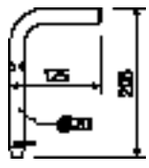
Notes

Delivery unit: carton with 1000 pieces.



Art no.	Weight [kg]	
037160	0.736	**Pin Ø20x205mm ga**

For various and other connections.

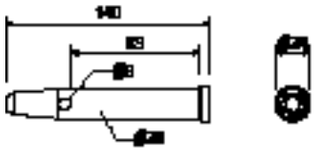


Consists of

1 pc 018060 Cotter Pin 4/1 ga

Art no.	Weight [kg]	
105400	0.330	**Pin Ø20x140mm ga**

For different connections.



Accessory (not included)

018060	0.014	**Cotter Pin 4/1 ga**

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

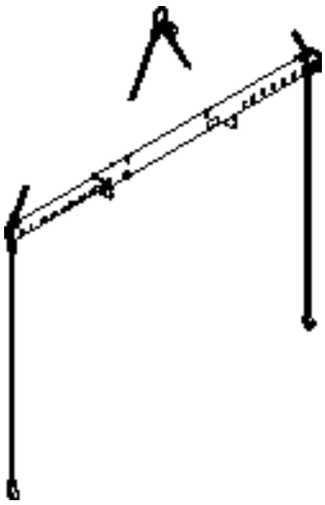
Art no.	Weight [kg]	
022230	0.033	**Cotter Pin 5/1 ga**

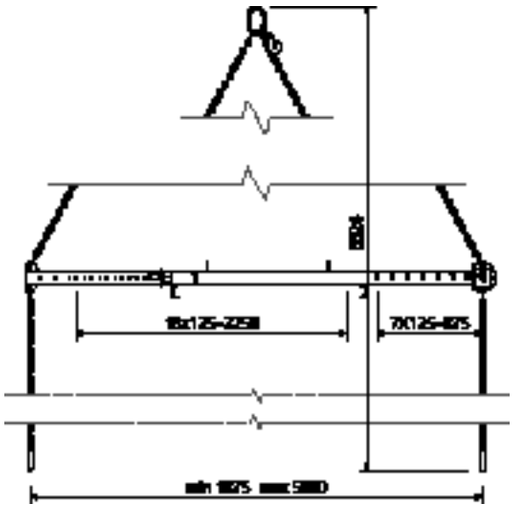
Art no.	Weight [kg]	
127320	158.000	**Lifting Beam 9t**

For moving climbing units.

Notes

Follow Instructions for Use.
Permissible load-bearing capacity 9t.





Consists of

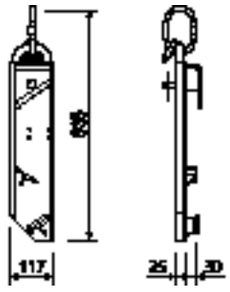
1 pc 112865 Locking Pin Ø25x180mm coat
1 pc 022230 Cotter Pin 5/1 ga
1 pc 107297 Screw ISO4014-M12x140-8.8-ga
1 pc 710330 Hex-Nut ISO4032-M12-8-ga

Art no.	Weight [kg]	
070760	4.680	**Crane Splice GT 24**

For transporting elements by crane with the GT 24 Girder.

Notes

Follow Instructions for Use!
Permissible load-bearing capacity 700kg with crane sling angle ≤ 15°.



Consists of

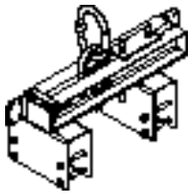
1 pc 018050 Pin Ø16x65/86mm ga
1 pc 018060 Cotter Pin 4/1 ga

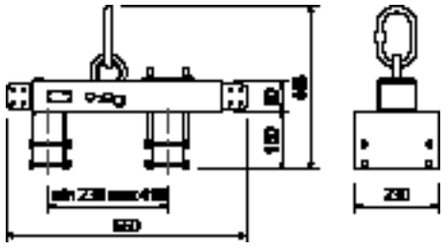
Art no.	Weight [kg]	
111238	19.800	**Crane Splice GT 24 2t**

For transporting elements by crane with the GT 24 Girder. Adjustable from 230 to 410mm.

Notes

Follow Instructions for Use!
Permissible load-bearing capacity 2t with crane sling angle ≤ 30°.





Consists of

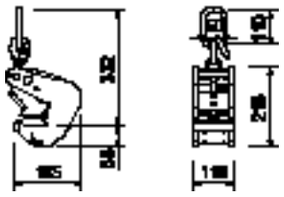
1 pc 018060 Cotter Pin 4/1 ga
8 pc 710138 Screw ISO4014-M10x110-8.8-ga
8 pc 780356 Hex-Nut ISO7040-M10-8-ga

Art no.	Weight [kg]	
115168	6.950	**Lifting Hook MX 1.5t**

For transporting MAXIMO and TRIO Panels.

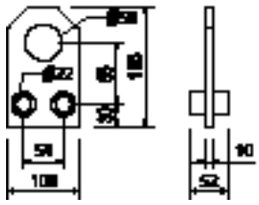
Notes

Follow Instructions for Use!
Permissible load-bearing capacity: Steel elements 1.5t. Alu elements 750kg.

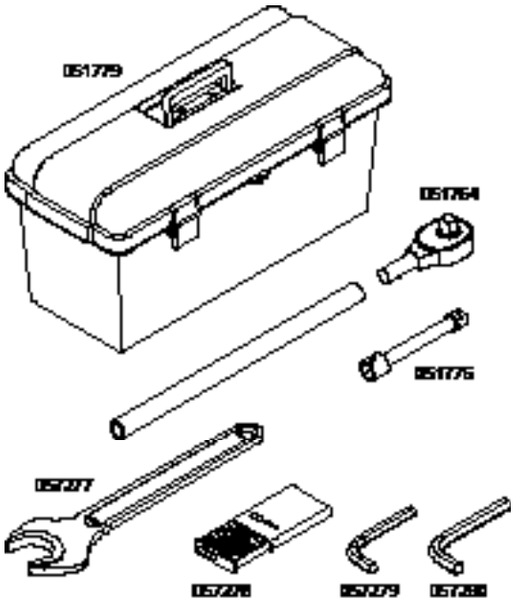


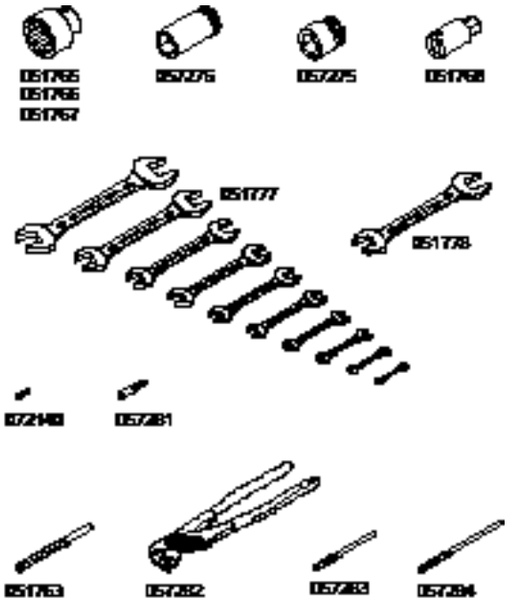
Accessories general ACS

Art no.	Weight [kg]	
715631	1.280	**Lifting Eye BR**



Art no.	Weight [kg]	
		Tools ACS
057281	0.042	**Bit Clip for TX30**
051777	1.650	**Double Spanner Set 10-pcs.**
051778	0.350	**Double Spanner SW24/SW27**
051763	0.125	**Driftpin 10mm**
057284	0.065	**Drill Bit HSS 9mm long**
057283	0.042	**Drill Bit HSS 9mm short**
051776	0.520	**Extension 3/4“ 200mm**
057277	1.510	**Open-End Wrench SW60**
057282	0.500	**Pipe Wrench**
051764	2.650	**Ratchet Wrench 3/4“**
057278	0.405	**Socket Set 8 Pieces**
057279	0.260	**Socket SW14**
057280	0.430	**Socket SW17**
051765	0.235	**Socket SW19 3/4“**
051768	0.500	**Socket SW22 3/4“**
051766	0.215	**Socket SW24 3/4“**
057276	0.625	**Socket SW30 3/4“**
051767	0.660	**Socket SW46 3/4“**
051779	3.500	**Tool Box 457x257x255mm**
051761	13.700	**Tool Set ACS**
072140	0.005	**Torx Bit TX30**



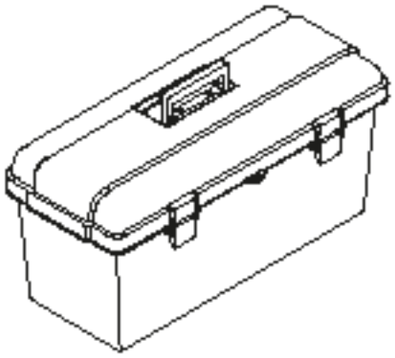


Art no.	Weight [kg]	
027212	0.445	**Hexag. Recess Wrench SW14 long**

Fits PERI Positioning Discs and Allen Key Bolts M16.

Art no.	Weight [kg]	
115581	10.280	**Service Box Hydraulics**

Consisting of:
1 pc. 115590 Tool Box 580x260x285mm
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 SW10x13
1 pc. 115592 Double Spanner SW13x17
1 pc. 135172 Double Spanner SW19x22
1 pc. 115588 Double Spanner SW19x24
1 pc. 051778 Double Spanner SW24x27
1 pc. 115589 Double Spanner SW27x32
1 pc. 057278 Allen Key Set 8 pcs.
1 pc. 115585 Allen Key SW12
1 pc. 057279 Allen Key SW14
1 pc. 057282 Pipe Wrench
1 pc. 115147 Angle Fitting Set PS
2 pc. 115396 Fitting Set PS RCS short
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 Ø120mm coat
1 pc. 126440 Socket SW17 1/2“
1 pc. 135173 Allen Key SHR-Bit SW05
1 pc. 135174 Allen Key SHR-Bit SW06
1 pc. 135175 Allen Key SHR-Bit SW08
1 pc. 135176 Allen Key SHR-Bit SW10
1 pc. 135177 SHR Screwdriver Bit 6 parts Slot/PH
2 pc. 711035 PERI Label 128x65mm
1 pc. 126434 List of contents Hydraulic Service Case

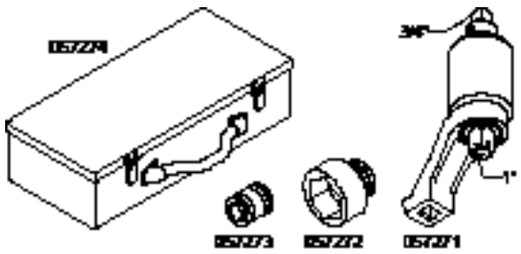


Art no.	Weight [kg]	
133372	6.800	**Cordless Screwdriver-Set ACS**

Consists of

1 pc 133356 Screwdriver ACS 18V
1 pc 111435 Socket SW17 1/2“
1 pc 133369 Extension 125mm 1/2“
1 pc 133370 Adaptor 1/4“ to C6.3 hex.
1 pc 133371 Adapter 1/4“ on 1/2“

Art no.	Weight [kg]	
057089	11.050	**Power Wrench Set 4000Nm**



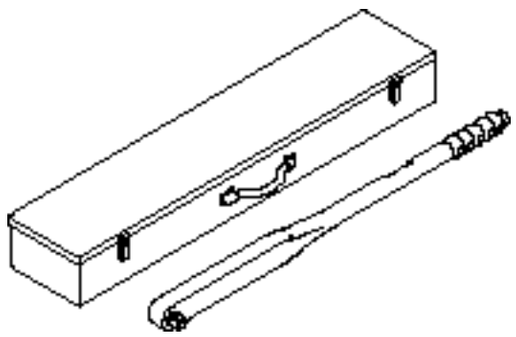
Consists of

1 pc 057274 Tool Box LKV-40RS
1 pc 057271 Power Wrench LKV-40RS 4000 Nm
1 pc 057272 Socket SW60-1“
1 pc 057273 Adaptor AVK 1/2“ to IVK 3/4“

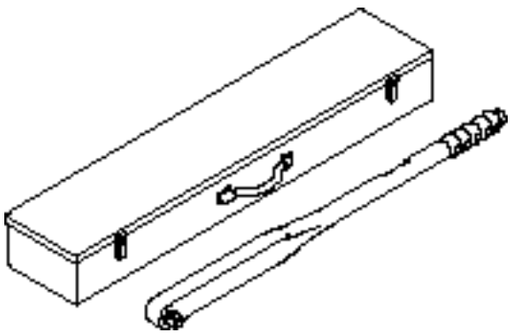
Art no.	Weight [kg]	
057090	6.700	**Torque Wrench 140-760Nm**

Notes

Outer square 3/4“
length: 812mm
incl. sheet metal case



Art no.	Weight [kg]	
138813	1.000	**Torque Wrench 40-200Nm**

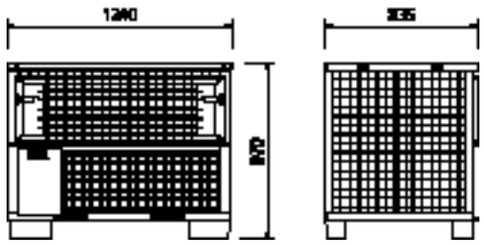


Art no.	Weight [kg]	
065068	88.200	**Grate Pallet 80x120 ga**

For stacking and transportation of formwork and scaffold components.

Notes

Follow Instructions for Use!
Capacity approx. 0.75m³.
Load-carrying capacity 1.5t.

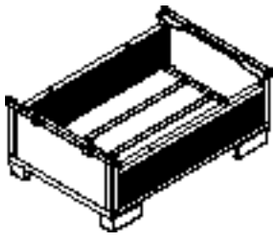


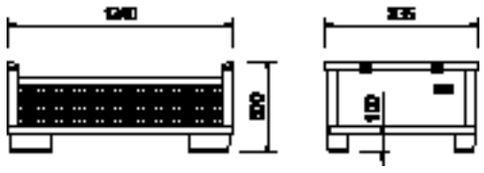
Art no.	Weight [kg]	
025660	66.500	**Hardware Box 80x120 ga**

For stacking and transportation of formwork and scaffold components.

Notes

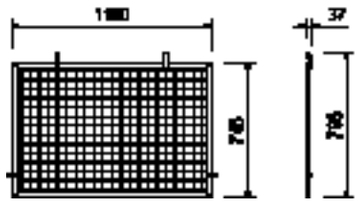
Follow Instructions for Use!
Capacity approx. 0.28m³.
Permissible load-bearing capacity 1.5t.





Art no.	Weight [kg]	
065067	9.410	**Lid for Grate Pallet 80x120**

For closing Crate Pallets 80x120 or Hardware Boxes 80x120.

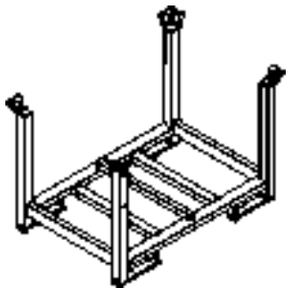


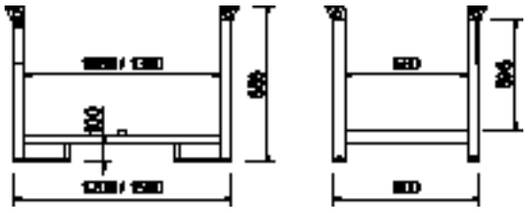
Art no.	Weight [kg]		L [mm]
		Pallets RP ga	
103434	38.500	**Pallet RP 80x120/2 ga**	1200
103429	45.300	**Pallet RP 80x150/2 ga**	1500

For stacking and transportation of formwork and scaffolding components.

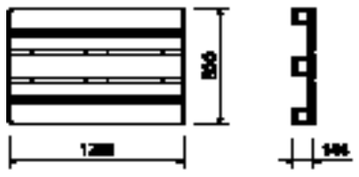
Notes

Follow Instructions for Use!
Permissible load-bearing capacity 1.5t.





Art no.	Weight [kg]	
065015	28.000	**Euro Flat Pallet 80x120**

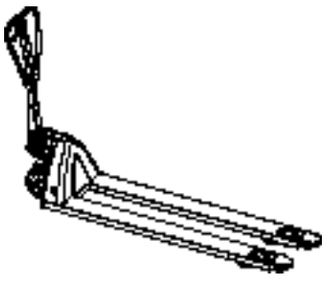


Art no.	Weight [kg]	
061510	105.000	**Pallet Lifting Trolley 1800mm**

For moving pallets and crate pallets.

Notes

Follow Instructions for Use!
Forklift arm length 1800mm, forklift arm width 550mm, stroke range 115mm.
Permissible load-bearing capacity 2t.



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