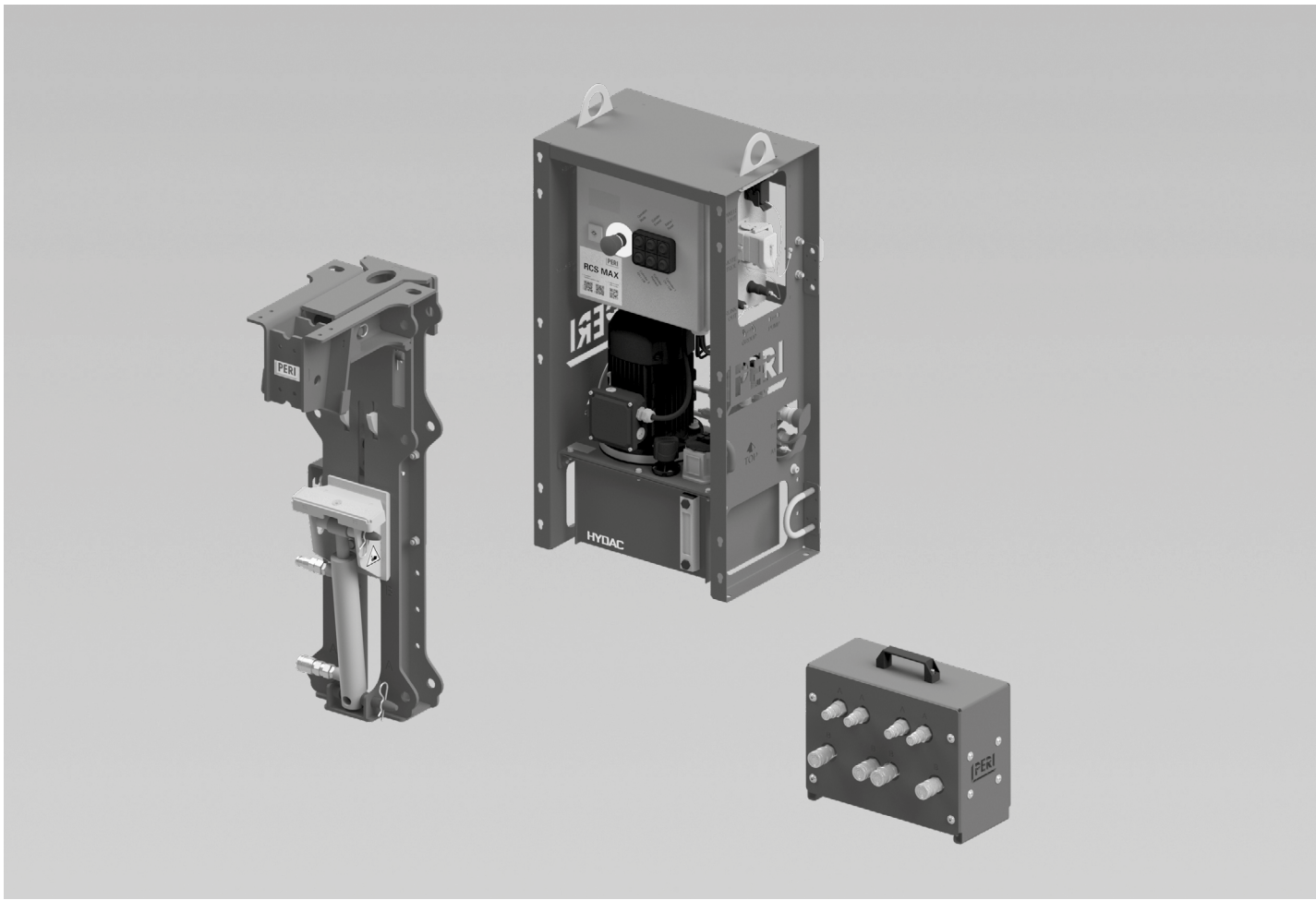
# VCT Assembly Head and Hydraulics

## Assembly, Commissioning and Maintenance
## Spare Parts and Circuit Diagrams

Assembly Instructions – Version 1.0



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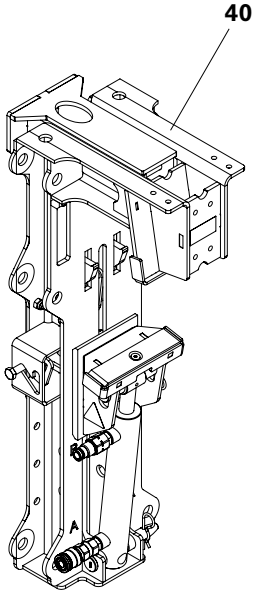
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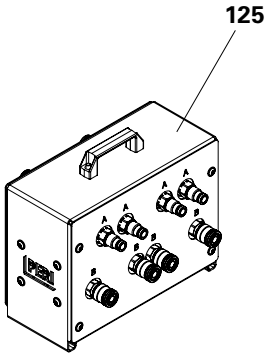
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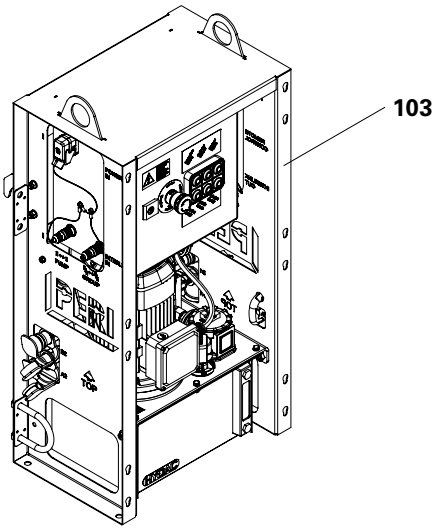
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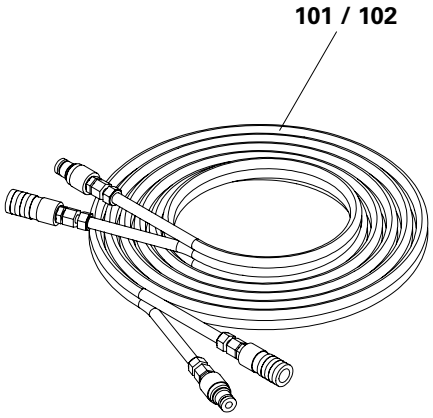
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## Main components




**40** Assembly Head VCT
**101** Hydraulic Twin Hose RCS
**102** Hydraulic Hose 2SN-DN08-FF
**103** Hydraulic Pump RCS MAX 2x 210bar, 380-460V
**125** Flow Divider RCS MAX 2/4x210

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

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

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

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

**Structure 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 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.

## Target groups

**Contractors**
These Assembly Instructions are intended for contractors who
- assemble, modify and dismantle PERI Systems, or
- use them, e.g. for concreting, or
- allow them to be used for other operations, e.g. carpentry or electrical work.

**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**
- is appointed by the contractor,
- must be on site for all system operations,
- prepares and updates the plan for assembly, modification and dismantling,
- prepares and updates the plan for use of the system 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.

**Competent personnel**
PERI is responsible for training the operating personnel. With their signature on the handover certificate, the operator confirms that they are able to correctly operate the hydraulic system and the Assembly Head VCT. See "Participation Protocol and Handover Certificate" on page 75.

**Qualified personnel**
PERI 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 system in an understandable form and language.
- Description of the measures for safely assembling, modifying or dismantling the system.
- Naming of the preventive measures to be taken to avoid the risk of persons and objects falling.
- Designation of the safety precautions in the event of changing weather conditions that could adversely affect the safety of the system, as well as the personnel concerned.
- Details regarding permissible loads.
- Description of all other risks and dangers associated with assembly, modification or dismantling operations.



- **Ensure that the respective current version of relevant national guidelines and regulations 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 system as well as during the relocation 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.

## Product description

**Regular assembly**
These instructions describe the regular assembly process and the intended use of the Assembly Head VCT.

The Assembly Head VCT is part of the composite track. This consists of a leading platform, several VCT formwork units and a finishing platform.

The Assembly Head VCT enables the platform units to be suspended and unhooked hydraulically from the steel structure of the bridge.

The following components are required for the drive:
- Assembly Head VCT
- Hydraulic Pump RCS MAX 2x 210bar
- Flow Divider RCS MAX 2/4x210
- Hydraulic Hoses 2SN-DN08-FF

**Functionality**
The Assembly Heads VCT are anchored to the steel structure of the bridge via the Cone Socket Assembly Head VCT or the Flange Adapter VCT. The Drive Rail VCT or the Rail Track VCT 300 of the platform unit is placed in the open assembly heads. The assembly heads are closed hydraulically.
After closing the assembly heads, the platform unit rests on sliding plates. The clamping shoes are placed on the pawls in the assembly head, which relieves the hydraulic system.

**Application**
The Assembly Heads VCT are used to attach the platform units of the composite track to the steel structure of the bridge. The platform unit is coupled to the neighbouring platform unit after it has been hooked in, and is then pulled out of the assembly heads. In this way, all platform units are added sequentially to the composite track.

Standard shoring structure:
- VCT Composite Track

For special applications, the planner must check whether additional or alternative measures are required when suspending or unhooking the platform units. These measures are to be shown and described in the operational or assembly plans.

The constructional systems presented in these Assembly Instructions are shown in the form of examples with only one component size. They are valid for all component sizes contained in the standard configuration.

**Features**
- Product advantages:
  - Leading platforms and formwork units can be quickly and easily assembled and disassembled on the steel structure.
  - Transfer of concreting loads possible after static verification.

**Technical data**
- Possible influence widths of the Assembly Heads VCT:
  - 1.00 m
  - 1.25 m
  - 1.50 m
- Temperature range:
  -20°C to +45°C



These assembly instructions are not a substitute for the Assembly Instructions for the hydraulic pump, the hydraulic cylinders or the Instructions for Assembly and Use for the complete system. The instructions for the installed components and systems also apply.

## Intended use

The Assembly Head VCT in conjunction with the Hydraulic Pump RCS MAX 2x 210 bar, 380-460 V is used to suspend and unhook Formwork Units VCT as well as the leading platform and finishing platform.
Concreting can also be carried out on the Assembly Head VCT in the closed position.

The hydraulic system cannot be used on its own. It is intended for installation in a composite track.

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

These Assembly Instructions serve as a basis for the project-related risk assessment, as well as instructions for the provision and use of the system by the contractor (user). However, they do not replace them.

Deviations from the standard configurations listed here are generally impermissible. Superstructures and modifications that deviate from the above constitute misuse that poses a safety risk. PERI shall not be held liable in this case.
Special applications must be described in the form of detailed planning and instructions for use based on a separate risk assessment. These special applications must be approved by PERI.

Anything other than the use that is specified in Paragraph 1 is considered contrary to the designated use!

For damage arising from non-intended use
- the operator bears sole responsibility,
- the manufacturer assumes no liability.

**Foreseeable misuse**
- Transportation of loads and persons.
- Discharge of loads not permitted by the system.
- Exceeding the permissible load-bearing capacity and load limits.
- Assembly, use and disassembly in an orientation, position or location not specified or shown in the standard assembly.

## Instructions for Use

Use in a way that is not intended according to the assembly instructions or deviations from the standard configuration or intended use constitute incorrect use with a 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 and represent a misapplication with a potential safety risk. Safety instructions and permissible loads must be observed.

Components provided by the contractor must comply with the requirements stipulated in these assembly instructions and all applicable laws and standards.

The components are to be inspected before each use to ensure they are in perfect condition and that they function correctly.

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

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

## Technical data

**Assembly Head VCT incl. hydr. cylinder 25x40 H=200**

| | |
|---|---|
| Effective stroke length | 200 mm |
| Piston-side lifting force | Theoretical nominal lifting force of 26 kN with Hydraulic Pump **RCS MAX** 2 x 210 bar, 380-460 V [1)] |
| Rod-side lifting force | Theoretical nominal lifting force of 16 kN with Hydraulic Pump **RCS MAX** 2 x 210 bar, 380-460 V [1)] |
| Piston-side lifting force | Theoretical nominal lifting force of 23 kN with Hydraulic Pump **RCS** 4 x 190 bar, 380 – 460 V [1)] |
| Rod-side lifting force | Theoretical nominal lifting force of 14 kN with Hydraulic Pump **RCS** 4 x 190 bar, 380 – 460 V [1)] |
| Max. operating pressure | 210 bar (21.0 MPa) |

[1)] The nominal lifting force depends on the following points, which must be taken into account when planning the project.
- The length of the hydraulic hoses.

**Hydraulic Pump RCS MAX 2x 210 bar, 380 – 460 V**

| | |
|---|---|
| Power supply | 400 V/50 Hz (3 phases) Output 1.3 l/min per cylinder |
| Power supply | 460 V/60 Hz (3 phases) Output 1.6 l/min per cylinder |
| Working area | dependent on the hydraulic oil used, see “Tab. 01” on page 19. |
| Sound emissions | 60 dB (A) at a distance of 1.0 m |

**Hydr.Pump RCS 4x190/380 – 460 V**

| | |
|---|---|
| Power supply | 400 V/50 Hz (3 phases) Flow rate 6 l/min |
| Power supply | 460 V/60 Hz (3 phases) Flow rate 7 l/min (For use only in Canada) |
| Working area | dependent on the hydraulic oil used, see “Tab. 02” on page 19. |
| Sound emissions | 64 dB (A) at a distance of 1.0 m |

## Additional technical documentation

- Instructions for Assembly and Use
  - VCT Composite Track
- Assembly instructions
  - Drive Rail VCT and Hydraulics
  - RCS Climbing Device and Hydraulics
  - RCS-2 Climbing Device and Hydraulics
- Instructions for Use
- User information for RFID LA-Tag Assembly Set
- PERI product information
- Manufacturer's assembly instructions
  - Hydraulic pump
  - Hydraulic cylinder
- Safety data sheets
  - Hydraulic oil
  - Long term fat
- Declarations of Conformity, Declarations of Incorporation

## 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, you can:

- Call up technical documents.
- View maintenance plans.
- Track information on transport and logistics.



For more information, see "RFID LA-TAG Assembly Set User Information".

## Cleaning and maintenance instructions

The Assembly Head VCT has been designed for long-term use on construction sites.

Maintenance intervals must be adhered to and correct storage ensured.

Some repair work may also be inevitable due to the tough working conditions.
Repairs that require the welding or forming of components must be carried out by PERI.

Use PERI original parts as spare parts.



The contractor must ensure that the personal protective equipment required for cleaning, maintenance and repair work such as
- Safety helmet,
- Safety shoes,
- Safety gloves,
- Safety goggles,

is available and used as intended.

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

Cleaning tools must be adapted to the respective surfaces of the components so that they are not damaged.

Do not clean the hydraulic pump and hydraulic cylinder with a high pressure cleaner.

Remove concrete build-up immediately after concreting.

Never clean powder-coated components, e.g. elements and accessories, with steel brushes or hard metal scrapers; this preserves the powder coating. Use spacers for reinforcements with large or flat supports; this largely avoids indentations in the formlining under load.

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

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

Do not clean components suspended on crane lifting gear.

## Disposal

- Materials are to be sorted correctly and according to type.
- Dispose of the materials in accordance with the applicable national regulations and guidelines.
- Consult the relevant safety data sheet when disposing of hydraulic oil, auxiliary materials and consumables.

## Cross-system



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

**General information**
The contractor must ensure that the documents supplied by PERI are available at all times and understood by the site personnel.

These instructions can be used as a basis for preparing the risk assessment. The risk assessment is compiled by the contractor. These instructions are not a substitute for the risk assessment!

Observe and comply with the safety instructions and permissible loads.

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

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

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

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

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

Components provided by the contractor must comply with the requirements stipulated in these instructions 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.

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 extraordinary events that may have damaging effects on the safety of the system, the contractor must immediately
- produce another risk assessment, the results of which must be used to implement suitable measures to ensure the stability of the 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 detect and repair damage in good time in order to ensure safe use of the system.

Exceptional events could be:
- accidents, fire, explosions, collisions,
- long periods of non-use,
- natural events, e.g. heavy rainfall, heavy snowfall, significant icing, storms or earthquakes.

Suitable measures could be:
- removing nets/tarpaulin,
- clearing snow and ice,
- reducing live loads,
- securing loose materials.

**Contamination**
- Always keep working areas, contact surfaces and work platforms of the system free of dirt, objects, snow and ice.
- There is an increased risk of slipping, particularly after hydraulic oil leaks and in wet weather conditions.
- Close off the system in extreme weather conditions.

# Safety instructions

**Assembly, modification and dismantling work**
PERI systems may only be assembled, modified or dismantled under the supervision of a person qualified to do so and by suitably qualified employees. 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 these instructions, the contractor must create installation instructions in order to guarantee safe assembly, modification and dismantling of the system.



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

is available and used as intended.

- For work at a higher level, use an approved ladder or platform system, or an assembly scaffold.
- Only use tested and approved lifting gear.
- Do not remain in the danger zone of moving parts.



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.
Before use, establish rescue procedures for the event of a fall, taking into account all the emergencies that may occur during work.
Rescue must take place within 20 minutes to prevent suspension trauma.
Ensure the supply of first aid!
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 via safe access routes.

The contractor must provide safe working areas for site personnel which are to be reached via safe access routes.

The contractor must ensure that the following points are observed:
- If necessary, secure single components and assemblies to prevent them from falling, e.g. using ropes.
- Cordon off and signpost danger zones.
- Ensure stability during all construction stages.
- Ensure and demonstrate that all loads that occur are safely transferred.

**Use**
Every contractor who uses or allows the PERI systems to be used, is responsible for ensuring that the equipment is in good condition.

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

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

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

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

Do not drop the components.

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

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

Pre-assembled 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, and must also be 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.

## System-specific

**Warning**
In cases of leakage, hydraulic oil can escape at high pressure!
The oil can penetrate the skin and cause severe irreversible injuries.
⇒ Do not use parts of your body to cover the leakage.
⇒ Stay away from the leakage point.

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

Make sure that the guardrails and/or edge covers at on-site openings and projections are fully installed before accessing the system.

Before entering the system, check for completeness of the platform deck and for danger spots and use PPE if necessary.

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

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

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

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

Building materials or tools must not be transported during the relocation procedure. Exceptions to this can be determined through the operational working and assembly instructions.

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

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

Enclosing the platform units or installing additional surfaces that are 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 assembled units suspended from the crane are fully under control when being moved.

Welding or abrasive cutting work is prohibited on the platforms due to the associated fire hazard.

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 their 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 protective 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 or 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.

**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 passageways. 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.

**Protection against falling components**
Work activities must 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 materials to prevent them from falling down. Remove concrete residue and other dirt as soon as possible, at the latest before the next relocation process. 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 danger zone 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.

**Relocation procedure**
Take into consideration the permissible wind speed limit for the relocation procedure.

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

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

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

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

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

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

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

In the event of malfunctions, exit the system safely and inform a person who is authorised to give instructions.

The VCT Composite Track cannot be mounted for the next concreting section until the required concrete strength has been achieved.

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

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

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

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

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

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

Do not suspend any objects from the hydraulic hoses.

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

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 using an oil pan to collect hydraulic oil from the hydraulic pump.

**Note**
Always de-energise the hydraulic pump and secure it against being switched on again as soon as a platform unit has been suspended or unhooked.
This safety measure also applies to the following:
- Assembly.
- Maintenance.
- Repairs.
- Inspections.
- Dismantling.

Approval for use is the responsibility of the operating personnel.

**Electrical components**

**Danger**
High electric voltage at the hydraulic pump!
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 pump with the type of current and voltage specified on the type plate.

Do not suspend any objects from the electrical lines.

# Component overview

| Pos. no. | Component name | Article no. |
|---|---|---|
| **5** | Suspension Head VCT | 141427 |
| **9** | Rail Track VCT 300 | 140426 |
| **10** | Coupler Pin VCT | 140293 |
| **11** | Rail Track Coupler VCT | 140519 |
| **22** | Drive Rail VCT | 140846 |
| **27** | Head bracing | – |
| **29** | Cotter Pin 4/1 ga | 018060 |
| **40** | Assembly Head VCT | 141611 |
| **41** | Travelling Nose VCT coat | 140843 |
| **100** | Hydr. Accum. Piece RCS | 112421 |
| **101** | Hydraulic Twin Hose RCS 10m | 110069 |
| | Hydraulic Twin Hose RCS 20m | 110070 |
| **102** | Hydraulic Hose 2SN-DN08-FF 1.0 m | 129035 |
| | Hydraulic Hose 2SN-DN08-FF 2.0 m | 129036 |
| | Hydraulic Hose 2SN-DN08-FF 5.0 m | 129419 |
| | Hydraulic Hose 2SN-DN08-FF 10.0 m | 129420 |
| | Hydraulic Hose 2SN-DN08-FF 15.0 m | 129421 |
| | Hydraulic Hose 2SN-DN08-FF 20.0 m | 129422 |
| **103** | Hydraulic Pump RCS MAX 2x 210 bar, 380-460 V | 135500 |
| **104** | Power Cable RCS MAX CEE-32A 2 m | 135499 |
| **107** | Power Conn. Cable RCS MAX 10m | 135498 |
| | Power Conn. Cable RCS MAX 20m | 135501 |
| **108** | Connector Power Cable RCS MAX | 135502 |
| **109** | Cable Binder NT-240H | 051760 |
| **113** | Remote Control RCS MAX 15 m | 135506 |
| **114** | Display RCS MAX | 135507 |
| **115** | Tension belt b=25 mm | – |
| **120** | Remote Contr. RCS MAX wireless | 136530 |
| **121** | Pallet RP Hydraulic Pump RCS MAX | 136165 |
| **122** | Power Cable RCS MAX 2 m | 136532 |
| **123** | Hydraulic oils ISO 11158 | – |
| **124** | Long Term Fat LT 200 EP /25kg | 727105 |
| **125** | Flow Divider RCS MAX 2/4x210 | 141572 |
| **126** | Hydr.Pump RCS 4x190/380-460V | 109766 |
| **127** | Adapter Cable RCS | 110280 |
| **128** | Plug Socket RCS black | 110279 |
| **140** | Squared timber 40x80x800mm | – |
| **141** | Squared timber 80x100x500mm | – |

## Hydraulic oil

- Observe national guidelines and regulations, e.g. DGUV regulation 113-020:2017-10 in Germany.
- Top up the hydraulic oil when the hydraulic cylinder is in a retracted position.
- Observe the hydraulic oil viscosity/ temperature diagram.
- Refer to the details for the appropriate operating temperature and viscosity of the hydraulic pump in the manufacturer's assembly instructions.
- Do not mix different hydraulic oils.
- Make a note of the oil type used for filling (e.g. on oil card).
- If the oil type is changed, the units, hydraulic cylinders and hoses need to have an oil change.

| **Areas of application for PERI hydraulic oils in combination with the Hydraulic Pump RCS MAX 2x 210 bar, 380-460 V** | | | |
|---|---|---|---|
| **Designation** | **Hydraulic oil temperature range** | **Cold start temperature** | **Hydraulic pump temperature range** |
| Hydraulic oil ISO 11158 HM10 | –20°C ... +25°C | –20°C | -20°C ... +50°C |
| Hydraulic oil ISO 11158 HVI22 | –14°C ... +50°C | ≤ –5°C | |
| Hydraulic oil ISO 11158 HVI32 | –9°C ... +62°C | ≤ +2°C | |
| Hydraulic oil ISO 11158 HVI46 | ±0°C ... +70°C | ≤ +10°C | |

Tab. 01

| **Areas of application for PERI hydraulic oils in combination with the Hydr.Pump RCS 4x190/380-460V** | | | |
|---|---|---|---|
| **Designation** | **Hydraulic oil temperature range** | **Cold start temperature** | **Hydraulic pump temperature range** |
| Hydraulic oil ISO 11158 HM10 | –20°C ... +25°C | –20°C | -20°C ... +45°C |
| Hydraulic oil ISO 11158 HVI22 | –20°C ... +49°C | ≤ –15°C | |
| Hydraulic oil ISO 11158 HVI32 | –19°C ... +62°C | ≤ –9°C | |
| Hydraulic oil ISO 11158 HVI46 | –10°C ... +70°C | ≤ ±0°C | |

Tab. 02

### Note

- The area of application of the hydraulic system must be within the temperature range of the hydraulic oil and hydraulic pump.
- If other hydraulic oils are to be used, contact PERI.

## Hydraulic hoses

Observe national guidelines and regulations, e.g. DGUV regulation 113-020:2017-10 in Germany:

- Maintenance and checking of hoses.
- Notes on laying hose lines.
- Notes on storage.
- Period of use.

Minimum bending radius (internal measurement) as per DIN EN 853:2016-09:

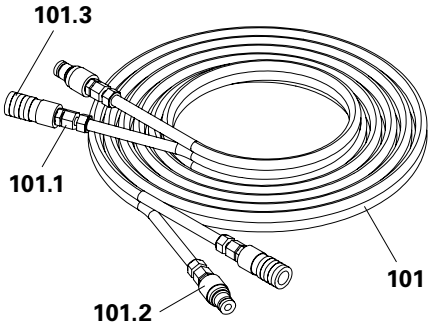
- Hose DN08: 115 mm
- Hose DN10: 130 mm
- Hose DN12: 180 mm

### Hydraulic twin hoses

**101** Hydr.Twin Hose RCS
10 m (article no. 110069)
20 m (article no. 110070)

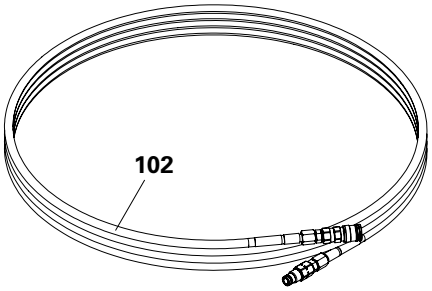
### Accessories

**101.1** Sleeve ISO16028 DN10 R3/8IG
Article no. 110822/128993
**101.2** Pin ISO16028 DN10 R3/8IG
Article no. 110823/128992
**101.3** Retaining ring



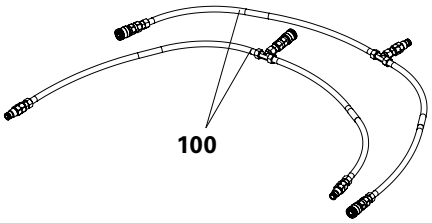

### Hydraulic single hoses

**102** Hydr.Hose 2SN-DN08-FF
1.0 m (article no. 129035)
2.0 m (article no. 129036)
5.0 m (article no. 129419)
10.0 m (article no. 129420)
15.0 m (article no. 129421)
20.0 m (article no. 129422)




### Double the oil volume

**100** Hydr. Accum. Piece RCS



## Hydraulic pump



Observe the manufacturer's assembly instructions for the maintenance and repair of the hydraulic pump.

## Assembly Head VCT

**Main components**

**40** Assembly Head VCT
**40.1** Head
**40.2** Clamping shoe
**40.3** Sliding Plate VCT
**40.4** Pawl
**40.5** Lever
**40.6** Flag
**40.7** Hydraulic cylinder
**40.8** Connection A feed
**40.9** Connection B return
**40.10** Cone Socket Assembly Head VCT
**40.11** Push-off surface
**40.12** Resetter (not visible)

The cone socket assembly head is mounted on the steel structure of the bridge and the assembly head is bolted into the cone socket.
The assembly head

- is required for attaching and detaching the platform units (leading platform, formwork units, finishing platform) to the bridge.
- absorbs horizontal and vertical forces.
- is used to support the VCT pawls for hydraulic propulsion.
  The assembly head has two profiles for this purpose. The four front sides of the profiles serve as a push-off surface (**40.11**) for the VCT pawls of the Drive Rail VCT.
  – two for forwards direction of travel
  – two for backwards direction of travel

The platform units are hooked into the assembly head with the drive rail or rail track and secured with the clamping shoe.

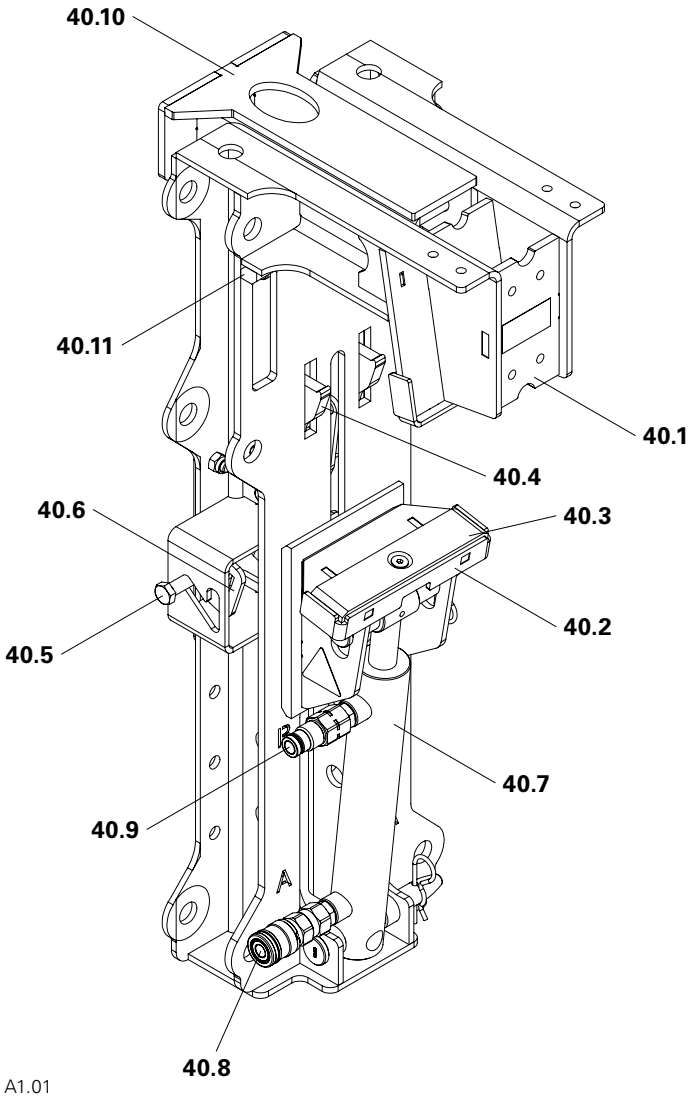



Fig. A1.01

## Flow Divider RCS MAX 2/4x210

**Main components**

**125** Flow Divider RCS MAX 2/4x210
**125.1** Connection A1 / A2
Hydraulic pump inflow
**125.2** Connection B1 / B2
Hydraulic pump return
**125.3** Connections A
Assembly head inflow
**125.4** Connections B
Assembly head return

The flow divider has two connections on the back for the
- Feed A1 / A2
- Return B1 / B2

The flow divider has four connections on the front for the
- Feed A
- Return B

Each input A1 / A2 is distributed to two outputs A via flow dividers. This enables simultaneous operation of up to four assembly heads at the same speed when extending the hydraulic cylinders.

Rear side

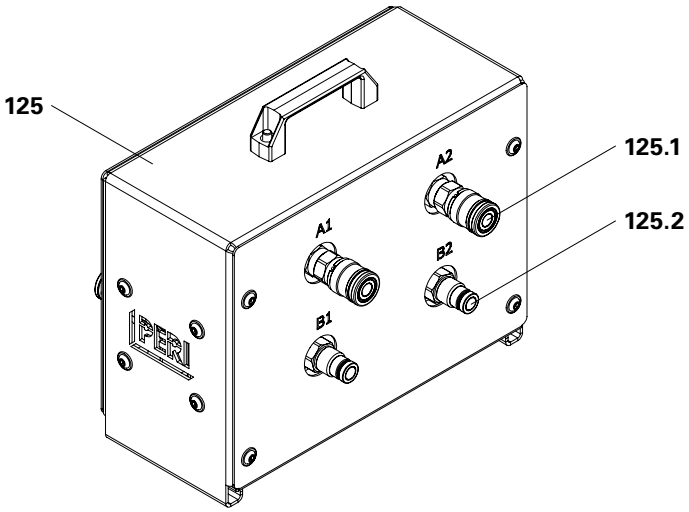



Fig. A1.02a

Front side

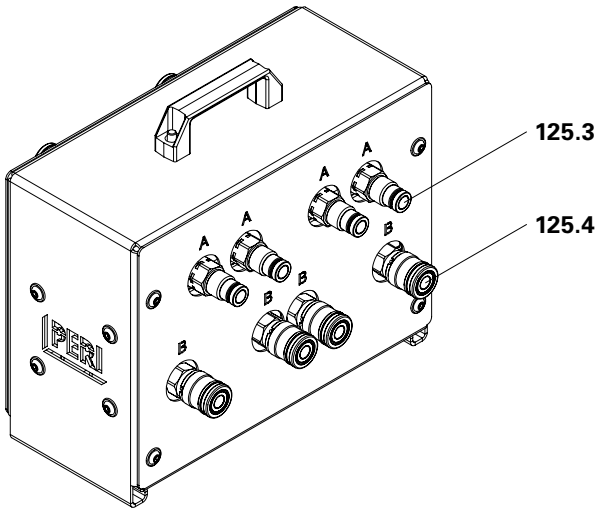



Fig. A1.02b

## Main components and accessories

### Main components

**103** Hydraulic Pump RCS MAX 2x 210 bar, 380-460 V
**103.1** Attachment points
**103.2** Suspension hook
**103.3** Securing bracket
**103.4** Oil level and temperature display
**103.23** Keypad
**103.24** Type plate
**103.25** Oil filling opening/ventilation filter
**103.26** Oil return filter
**103.28** Hydraulic Tank Gasket RCS MAX

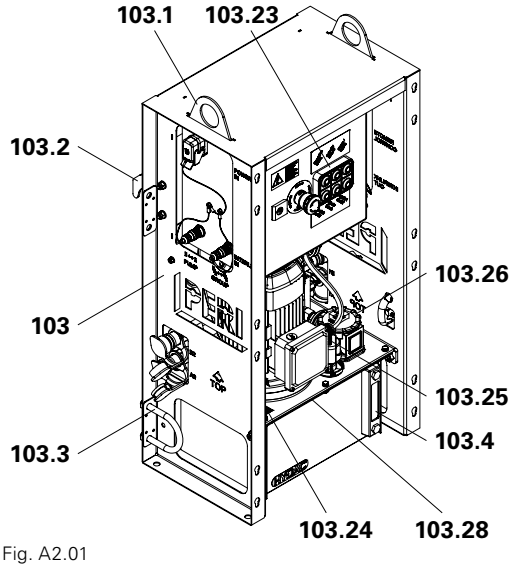


Fig. A2.01

### Connections – left side

**103.5** Power In [1]
**103.6** Interlink In "Pump" [1]
**103.7** Interlink In "Group" [2]
**103.8** Hydraulic connection A2
**103.9** Hydraulic connection B2

### Connections – right side

**103.10** Power Out [1]
**103.11** Interlink Out "Pump" [1]
**103.12** Interlink Out "Group" [2]
**103.13** Hydraulic connection A1
**103.14** Hydraulic connection B1
**103.15** Remote control/display connection
**103.27** RFID LA tag

[1] To connect individual units to a group.
[2] For connecting groups.

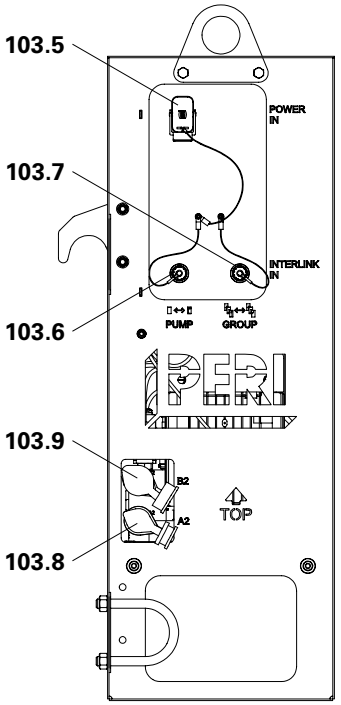


Fig. A2.02

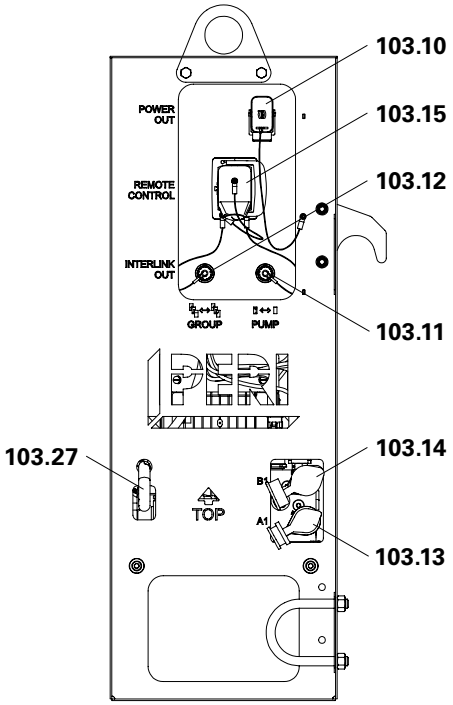


Fig. A2.03

**Control panel**

**103.16** Emergency Stop button
**103.17** "Operation Mode" key
**103.18** "Cylinder Extend" key
**103.19** "Status/Reset" key
**103.20** "Cylinder 2 On/Off" key
**103.21** "Cylinder Retract" key
**103.22** "Cylinder 1 On/Off" key

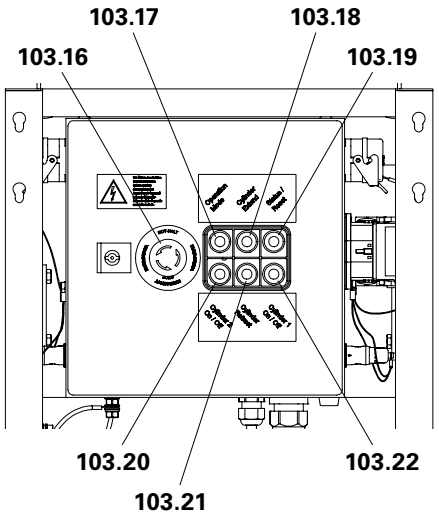



Fig. A2.04

**Accessories**

**113** Remote Control RCS MAX 15 m
**113.1** "Cylinder Extend" key
**113.2** "Cylinder Retract" key
**113.3** Emergency Stop button
**114** Display RCS MAX
**114.1** USB port
**120** Remote Control RCS MAX wireless
**120.1** Receiver Remote Control RCS MAX wireless
**120.2** Start key
**120.3** Extend cylinder key
**120.4** Retract cylinder key
**120.5** Emergency stop switch

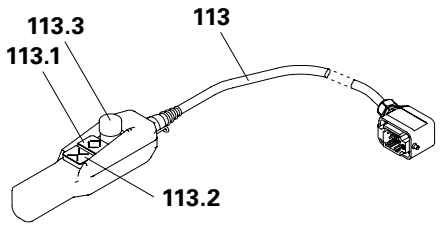



Fig. A2.05

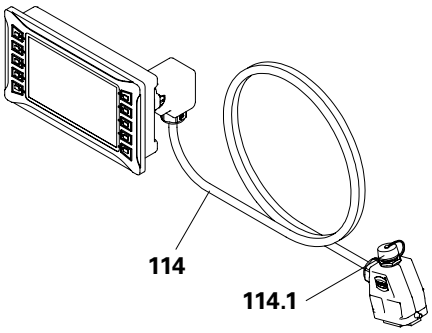



Fig. A2.06

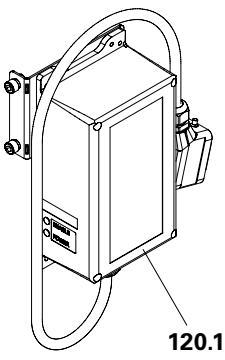



Fig. A2.07a

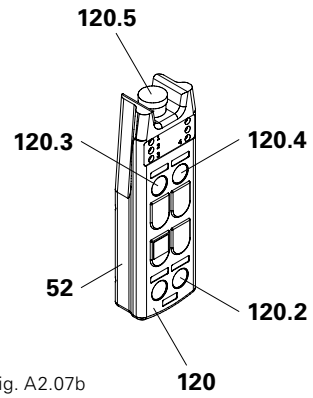



Fig. A2.07b

# A2 Hydraulic Pump RCS MAX

**Power cables**

**104** Power Cable RCS MAX CEE-32A 2 m
**104.1** Phase inverter
**107** Power Conn. Cable RCS MAX 10m/20m
**108** Conn. Power Cable RCS MAX
**122** Power Cable RCS MAX 2 m

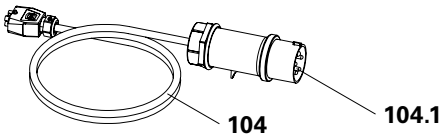


Fig. A2.08

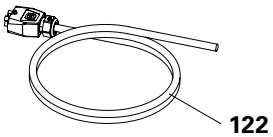


Fig. A2.09

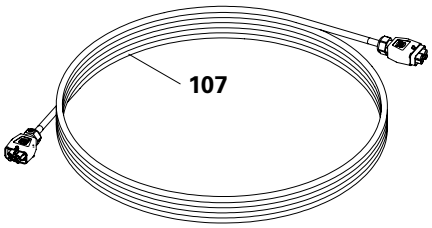


Fig. A2.10



Fig. A2.11

## Hydraulic connection plan

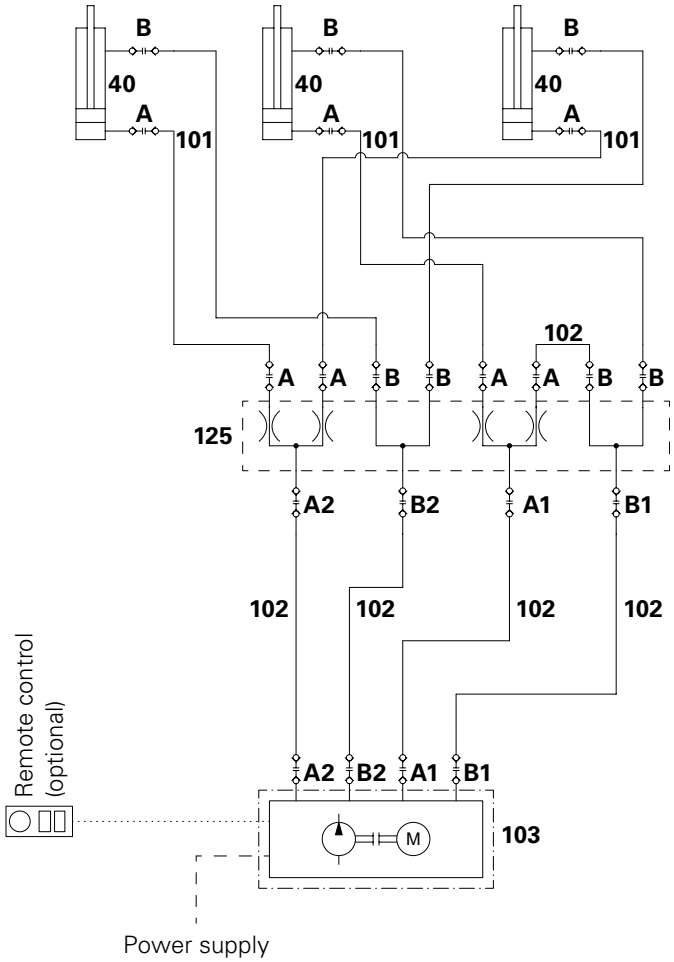



Fig. A2.12

**Note**

- The two outer assembly heads operate as a pair.
- The centre assembly head operates individually.

**Key**

- Hydraulic hoses
- Power connections
- Data connections
- System limit

| Component list for Hydraulic Pump RCS MAX | | | | |
|---|---|---|---|---|
| | Pos. no. | Article designation | Article number | Quantity |
| Assembly head | **40** | Assembly Head VCT | 141611 | 3 |
| | **101** | Hydraulic Twin Hose RCS 10m | 110069 | 3 |
| Flow divider | **125** | Flow Divider RCS MAX 2/4x210 | 141572 | 1 |
| | **102** | Hydraulic Hose 2SN-DN08-FF 1.0 m | 129035 | 1 |
| Hydraulic pump | **103** | Hydraulic Pump RCS MAX 2x 210 bar, 380-460 V | 135500 | 1 |
| | **102** | Hydraulic Hose 2SN-DN08-FF 1.0 m | 129035 | 4 |

Tab. A2.01

## Main components and accessories

### Main components

**126** Hydr.Pump RCS 4x190/380-460V
**126.1** Control lever for cylinder 1 + 2
**126.2** Control lever for cylinder 3 + 4
**126.3** Motor circuit breaker CEE
**126.4** Control lamp for rotary field monitor
**126.5** Power socket with phase inverter
**126.6** Hydraulic oil tank
**126.7** Oil level indicator and temperature display
**126.8** Filling piece with ventilation filter
**126.9** Return filter
**126.10** Oil drain plug
**126.11** Cylinder 1 return (bushing)
**126.12** Cylinder 1 feed (connector)
**126.13** Cylinder 2 return (bushing)
**126.14** Cylinder 2 feed (connector)
**126.15** Cylinder 3 return (bushing)
**126.16** Cylinder 3 feed (connector)
**126.17** Cylinder 4 return (bushing)
**126.18** Cylinder 4 feed (connector)

[1] For use in Canada only:
Hydr.Pump RCS 4x190/380-460 V CSA, article no. 114243

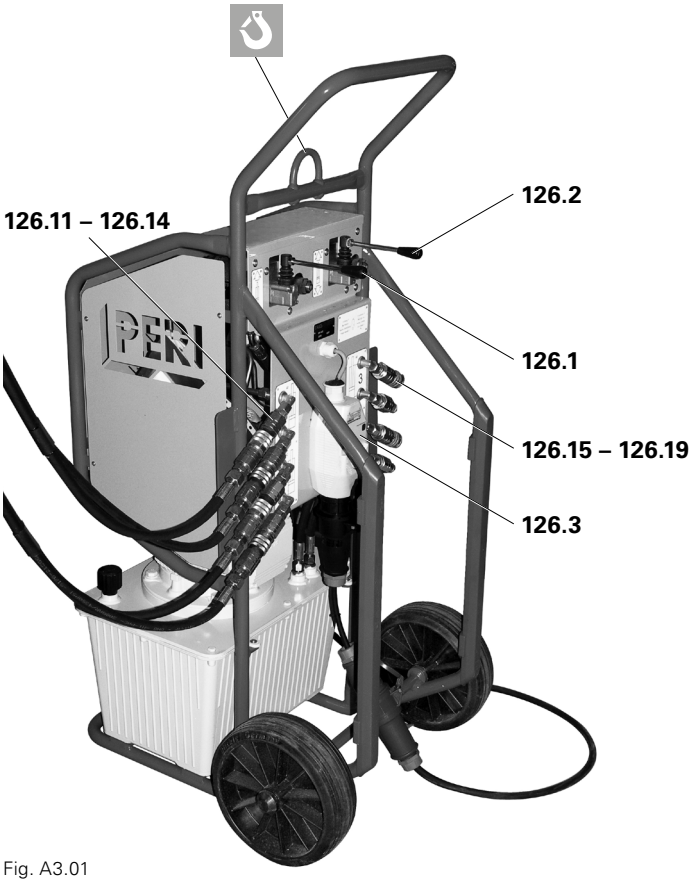



Fig. A3.01

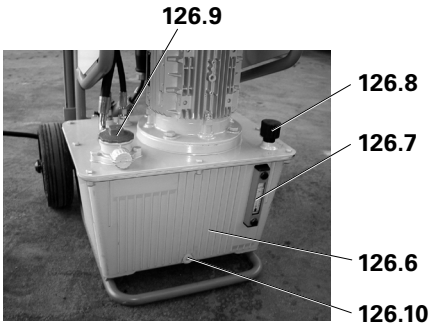



Fig. A3.02

### Control units and connections

**126.2** Control lever for cylinder 3 + 4
**126.3** Motor circuit breaker CEE
**126.4** Control lamp for rotary field monitor
**126.5** Power socket with phase inverter
**126.15** Cylinder 3 return (bushing)
**126.16** Cylinder 3 feed (connector)
**126.17** Cylinder 4 return (bushing)
**126.18** Cylinder 4 feed (connector)
**126.19** Measuring connection for pressure check (by PERI personnel only)
**127** Adapter Cable RCS

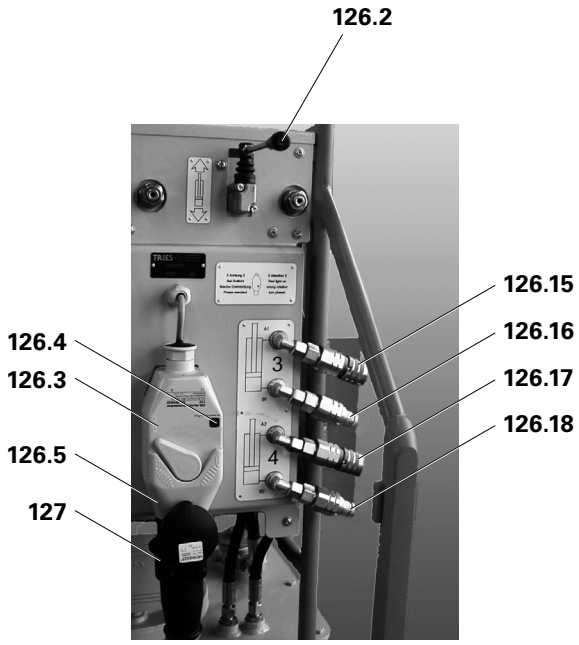



Fig. A3.03

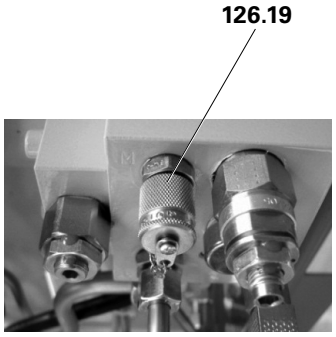



Fig. A3.04

### Power cables

**127** Adapter Cable RCS
**128** Plug Socket RCS black

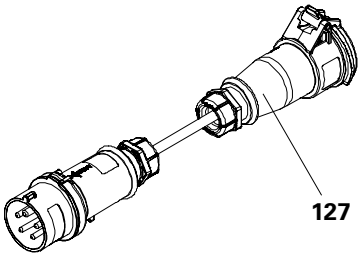



Fig. A3.05a

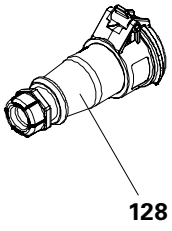



Fig. A3.05b

## Functionality of the flow divider

A flow divider is installed for each pair of cylinders in the hydraulic pump which evenly divides the flow of the hydraulic oil to the cylinders.
This ensures load-independent synchronisation of the cylinder.
Synchronisation deviations can be corrected in the respective end position by keeping the cylinder running against the limit stop for a period of time.
(Fig. A3.06)

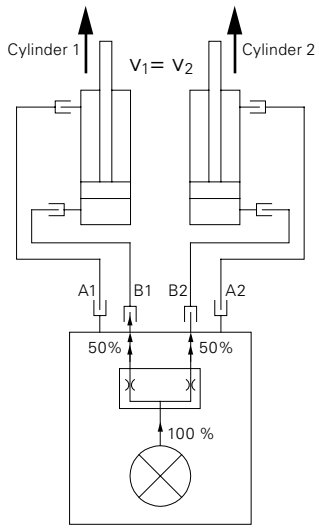



Fig. A3.06

## Hydraulic connection plan

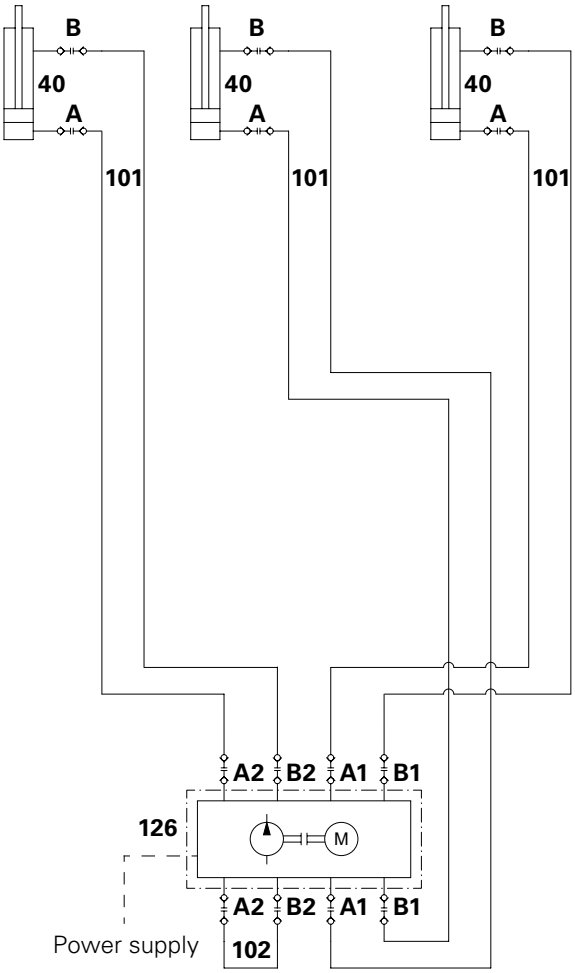



Fig. A3.07

**Note**

- The two outer assembly heads operate as a pair.
- The centre assembly head operates individually.

**Key**

——— Hydraulic hoses

– – – – – Power connections

·–·–·–· System limit

| Component list for Hydraulic Pump RCS MAX | | | | |
|---|---|---|---|---|
| | Pos. no. | Article designation | Article number | Quantity |
| Assembly head | **40** | Assembly Head VCT | 141611 | 3 |
| | **101** | Hydraulic Twin Hose RCS 10m | 110069 | 3 |
| Hydraulic pump | **126** | Hydr.Pump RCS 4x190/380-460V | 109766 | 1 |
| | **102** | Hydraulic Hose 2SN-DN08-FF 1.0 m | 129035 | 1 |

Tab. A3.01

## General information



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

### Note

- For safe handling of the hydraulic oil, follow the instructions that are included in the safety data sheet of the hydraulic oil selected for use.
- Avoid any bodily contact with the hydraulic oil.
- Ensure that the hydraulic oil does not come into contact with the structure.
- For information on cleaning and correct disposal, see the safety data sheet of the hydraulic oil selected for use.
- Do not mix hydraulic oils of different quality.

- Carry out the initial start-up for the hydraulic system before mounting the leading or finishing platform.
- The Remote Control RCS MAX 15 m can be used as a remote control instead of the Remote Contr. RCS MAX wireless.

**Measures prior to initial start-up**

- Check the completeness of the technical documentation, e.g. hydraulic connection diagram, electronics connection diagram, data cable connection diagram, manufacturer's assembly instructions.
- Site personnel must familiarise themselves with the system using the available documentation.
- Clean the bushings and clips of all quick-couplers prior to coupling and check for damage.
- For more commissioning details, see the manufacturer's assembly instructions.

**Standard assembly**

Not all assembly steps are applicable to the Hydraulic Pump RCS.

1. Set up the hydraulic pump and place the assembly heads on square timbers.
2. Check the oil level of the hydraulic pump and top up if necessary.
3. Connect the remote control.
4. Supply the hydraulic pump with power.
5. Check all fixings and connections.
6. Energise the system and check the rotary field.
7. Lay and connect the hydraulic hoses.
8. Seal unused connections with mating plugs and cover caps.
9. Ventilate the system and check for leakage, see Section "Venting the system" on page 36 and the manufacturer's assembly instructions.
10. Carry out any additional steps in the manufacturer's assembly instructions.

→ The system is ready for operation.

**Concluding work**

1. Disconnect the hydraulic hoses from the Assembly Heads VCT.
2. Roll up the hydraulic hoses.
3. Put the hydraulic hoses back in the hardware box together with the assembly heads.

- The hydraulic oil used must be free of water and dirt.
- Avoid overfilling.
- The hydraulic cylinders must always be fully retracted when filling.
- The oil tank and filling filter must be free of water and dirt.
- Filling must be carried out using a filling filter (filling sieve, filling funnel with sieve insert or ultra-fine filter). Ideally, use the CE filter pump for filling.
- All information applies to
  – initial filling,
  – changing the hydraulic oil,
  – topping up the hydraulic oil.

- Refer to the maintenance card in the annex.

**Checking the oil temperature and oil level**

- The oil level can vary depending on the type, quantity and size of the consumer.
- The operating temperature increases with an increase in the outside temperature.
- For the permissible operating temperature, see Section "Hydraulic oil" on page 19.
- With low temperatures, warm up hydraulic oil by flushing the system (at least 20°C) in order to reach the required start viscosity.
- Oil level too low
  – the operating temperature increases,
  – air inclusions occur,
  – the hydraulic cylinder may extend jerkily.
- Keep the oil level indicator clean.
- Monitor the oil level at regular intervals.
- Determine and eliminate the cause of excessive oil consumption.
- Regularly check the temperature of the electric motor and hydraulic oil during operation.

**Note**

Switch off the hydraulic pump if the oil temperature exceeds the permissible temperature range of the hydraulic oil. Identify and eliminate the cause of overheating (e.g. no pressureless flow, outside temperature too high).

The hydraulic system must be bled to ensure that the system functions correctly.
This is necessary:
- for every initial start-up.
- after replacing hoses or hydraulic cylinders.
- after maintenance tasks.
- in the event of synchronisation problems.

**Danger**

Risk of crushing through uncontrolled movement of the hydraulic cylinders!
⇒ Move all hand levers to the centre position.
⇒ Do not touch moving components.
⇒ Leave danger zones.

**Warning**

If the hydraulic cylinder is not completely bled, this can lead to uncontrolled and jerky movements!
As a result, people can become trapped and seriously injured.
⇒ Keep clear of moving parts when operating the hydraulic system.

**Note**

- When topping up the hydraulic oil, all hydraulic cylinders must be completely retracted otherwise the hydraulic pump may overflow.
- The oil level in the hydraulic pump must be regularly checked and topped up as required.

## Laying hydraulic hoses

**Route the hydraulic hoses and cables**

- Arrange the hydraulic hoses in a way that prevents them from becoming a hindrance or being damaged.
- Arrange the cables to prevent them from becoming a hindrance or being damaged.
- Observe the minimum bending radii of the hoses, see Section "Hydraulic hoses" on page 20.

**Position of the hydraulic pump**

The hydraulic pump is usually located on the steel structure of the bridge. After hooking in the finishing platform, the hydraulic pump is mounted on the finishing platform and used for the drive rail.

Lay hydraulic hoses and lines in such a way that

- loops and knots are prevented,
- no loops overhang the edge of the platform,
- they do not get stuck,
- they do not kink or cannot be pulled out of the connections,
- they are free of torsion and tension.

## Connecting hydraulic hoses

- The quick-coupler connections on the unit are clearly marked.
- Refer to the manufacturer's assembly instructions for the connection to the unit.
- For the connection diagram of the Hydraulic Pump RCS MAX, see Section "Hydraulic connection plan" on page 27.
- For the connection diagram of the Hydraulic Pump RCS, see Section "Hydraulic connection plan" on page 31.
- If problems occur during connection, see Section "Releasing pressure in hydraulic hoses" on page 66.
- Observe the minimum bending radii of the hoses, see Section "Hydraulic hoses" on page 20.

Quick-couplers consist of:

– Bushing (**101.1**)
– Clip (**101.2**)
– Retaining ring (**101.3**)

**Assembly**

1. Clean clip (**101.2**) and bushing (**101.1**) before coupling.
2. Push the clip (**101.2**) as far as possible into the bushing until the retaining ring (**101.3**) engages.
3. Turn the retaining ring with a quarter-turn right or left to secure it.
   → Accidental disconnection is thus prevented.

(Fig. A4.01)

4. Arrange the hoses so they do not pose a safety risk, and secure their position, e.g. with cable ties.

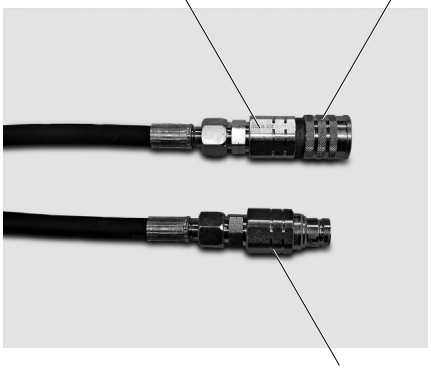



Fig. A4.01

## Electrical connection

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

- Ensure that the cable length is adequate.
- Fit strain relief on the cable.
- Observe the manufacturer's assembly instructions.
- Compare the required type of current and voltage with the information on the type plate.
- Refer to the manufacturer's assembly instructions for the terminal allocation diagram.

**Accessories for Hydraulic Pump RCS MAX**
- Power Cab. RCS MAX CEE-32A 2 m (article no. 135499)
- Power Cable RCS MAX 2 m (article no. 136532)

**Accessories for Hydraulic Pump RCS**
- Adapter Cable RCS (article no. 110280).
- Plug Socket RCS black (article no. 110279)

## Changing the phase

### Hydraulic Pump RCS MAX

If the keypad flashes alternately red/white, the rotary field is the wrong way round.

1. Turn the phase inverter (**104.1**) in the Power Cab. RCS MAX CEE-32A 2 m (**104**) through 180°.
   → The rotary field is changed.
   → The keypad stops flashing.

(Fig. A4.02)

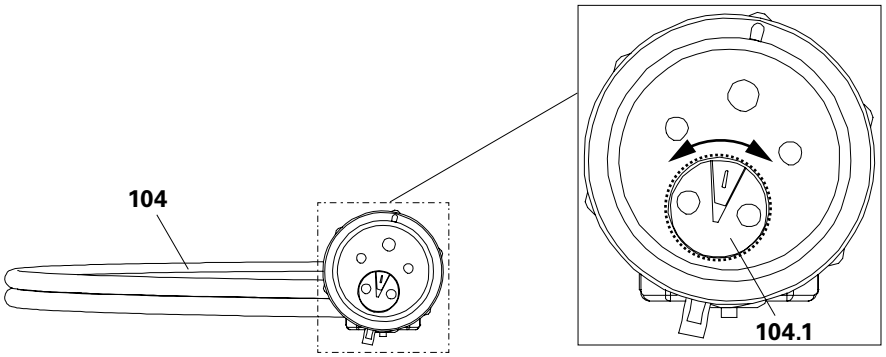



Fig. A4.02

Fig. A4.02a

### Hydraulic Pump RCS

If the rotary field display (**126.4**) lights up red, the rotary field is the wrong way round.

1. Turn the phase inverter in the power socket (**126.5**) through 180°.
   → The rotary field is changed.
   → The rotary field display is no longer lit up.

(Fig. A4.03)

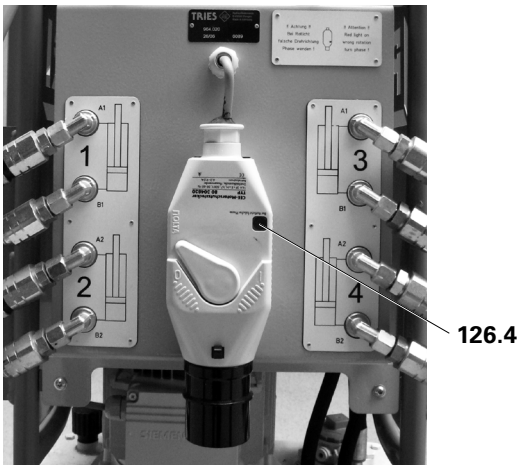



Fig. A4.03

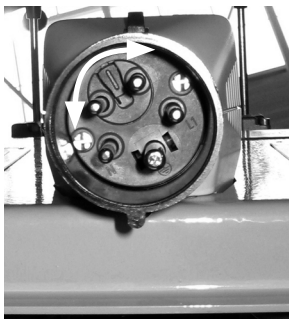


Fig. A4.03a

## Venting the system

- The system must be completely vented after initial commissioning on the construction site, after hydraulic hoses have been replaced, or after maintenance work has been carried out. The oil level in the hydraulic pump must be checked throughout this process and topped up as required.
- The flushing time for each 20 m single hose length is 1 minute (DN 08).

**Venting**

- Observe the required flushing time for all subsequent work steps.
- Noises in the hydraulic tank indicates that the bleeding procedure is taking place.
- Wait after each work step to allow the air bubbles to escape from the hydraulic oil.

1. Flush hoses using short-circuit connections.
   (Fig. A4.04 + Fig. A4.05)
2. Connect the hydraulic cylinder and extend it all the way.
   → The sound of blubbering in the oil tank indicates the bleeding procedure is taking place.
3. Uncouple the hydraulic cylinder and flush the hoses once again using short-circuit connections.
   (Fig. A4.04 + Fig. A4.05)
4. Connect the hydraulic cylinder and retract it all the way.
5. Uncouple the hydraulic cylinder and flush the hoses once again using short-circuit connections.
6. Connect the hydraulic cylinder and extend and retract it several times. In the process, extend and retract the cylinder at maximum pressure for a longer time in the end positions.
7. Check the hydraulic system for leaks.
8. Check the oil level in the unit and top up if necessary.

→ The system is ready for use.

**Venting during hose replacement**

1. Retract the hydraulic cylinder all the way.
2. Detach old hose.
3. Connect and route the new hose to the hydraulic pump.
4. For all further work steps, see the section on "Venting".

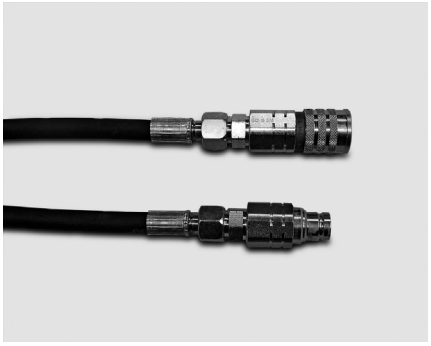


Fig. A4.04

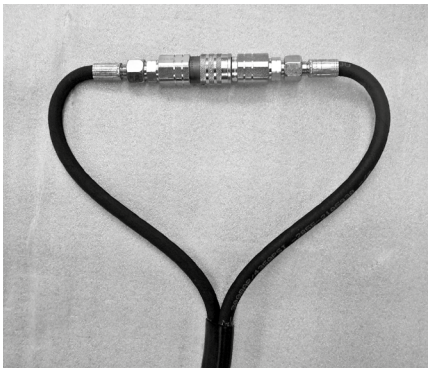


Fig. A4.05

## Measures taken during commissioning

- The same measures apply for re-commissioning as for initial commissioning.
- If necessary, follow the additional steps in the assembly instructions for the hydraulic pump or the hydraulic cylinder.
- Never re-tighten leaky screw connections under high pressure, only after a pressure release.

**Measures**

1. Check the rotary field, see Section "Changing the phase" on page 35.
2. Check the level of the hydraulic oil and top up, if necessary.
3. Check the temperature of the hydraulic oil and bring up to operating temperature, if necessary.
4. Listen out for any unusual pump noises after starting up.
5. If you hear any unusual pump noises, switch off and determine the cause.
6. Check the functionality of the control levers and hydraulic cylinders.
7. Check components and connections for signs of external leakage.

## Commissioning after a long downtime period

- Thoroughly clean and rinse preserved equipment before commissioning. Any remaining preservation agents can block the valves.
- Drain condensation water from the hydraulic tank. For this, drain the hydraulic oil.
- After a long downtime period, check hydraulic oil for usability and change if necessary.

## Commissioning at low temperatures

At low temperatures, warm up hydraulic oil by flushing the system in order to reach the required start viscosity, see Section "Hydraulic oil" on page 19.

**Warming up the hydraulic oil**

1. Retract the hydraulic cylinders and continue the process until a temperature of 20°C is reached.
2. Check that all hydraulic cylinders are running uniformly.

## Concluding work

**Assembly**

1. Switch off the hydraulic pump and secure it against reactivation.

## Mounting the platform unit

The suspension zone consists of several assembly heads. The assembly heads are bolted to the cone sockets of the assembly head and are suspended from the steel structure of the bridge. The platform units are hooked into the assembly heads.
The hydraulic pump and the flow divider are mounted on the steel structure of the bridge.

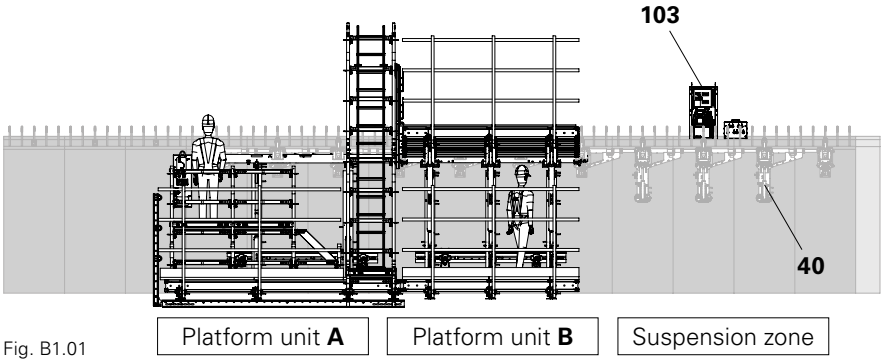



Fig. B1.01

### Components

**40** Assembly Head VCT
**101** Hydraulic Twin Hose RCS 10m
**102** Hydraulic Hose 2SN-DN08-FF 1.0 m
**103** Hydraulic Pump RCS MAX 2x 210bar, 380-460V
**113** Remote Control RCS MAX 15 m
**125** Flow Divider RCS MAX 2/4x210

### Operating position

- The assembly heads are operated from platform unit **B**, which is hooked in.
- The hydraulic system is operated from the neighbouring unit, platform unit **A**. An exception is the first platform unit, where the hydraulic system is operated from the steel structure of the bridge.

The hydraulic system is installed and commissioned on the ground **before** the assembly heads are bolted to the steel structure of the bridge.

**Altering the hydraulic pump**

Once the final platform unit has been hooked in, the hydraulic pump unit for the assembly heads is no longer required.
If the composite track has a finishing platform, mount the hydraulic pump unit on the finishing platform and connect the Drive Rail VCT. For further information, see the "Drive Rail VCT and Hydraulics" installation instructions.

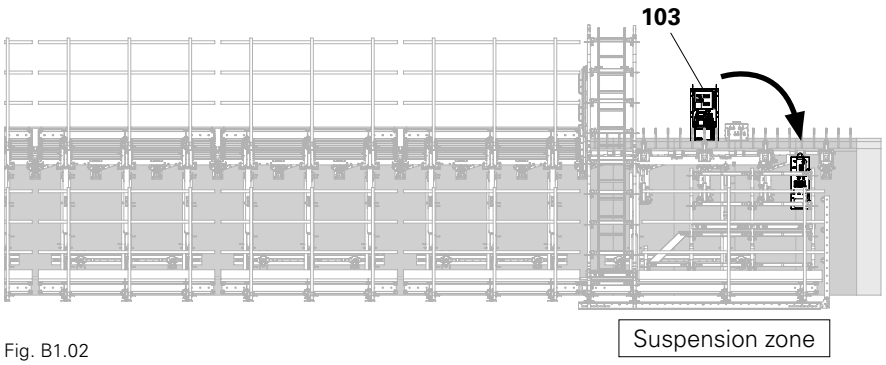



Fig. B1.02

## Unhooking the platform unit without cantilever

The unhooking zone consists of several assembly heads. The assembly heads are bolted to the cone sockets of the assembly head and are suspended from the steel structure of the bridge. The hydraulic pump and the flow divider are mounted on the steel structure of the bridge.
When unhooking, the assemblies and the platform unit are attached directly to a crane and flown out.

**Components**

**40** Assembly Head VCT
**101** Hydraulic Twin Hose RCS 10m
**102** Hydraulic Hose 2SN-DN08-FF 1.0 m
**103** Hydraulic Pump RCS MAX 2x 210bar, 380-460V
**113** Remote Control RCS MAX 15 m
**125** Flow Divider RCS MAX 2/4x210

**Operating position of Assembly Heads VCT**

- The assembly heads are operated from platform unit **A**, which is unhooked.
- The hydraulic system for the assembly heads is operated from the neighbouring platform unit **B**.

**Operating position of Drive Rail VCT**

- The mechanics for the drive rail are operated from the composite track's finishing platform.
- The hydraulic system for the drive rail is operated from the neighbouring platform unit **B**.

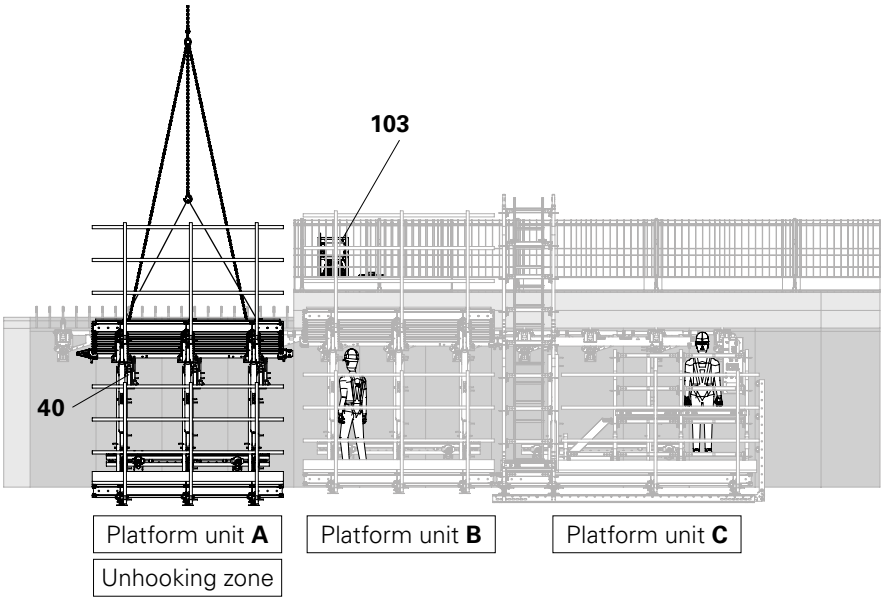



Fig. B1.03

## Unhooking the platform unit with cantilever

The unhooking zone consists of several assembly heads. The assembly heads are bolted to the cone sockets of the assembly head and are suspended from the steel structure of the bridge. The hydraulic pump and the flow divider are mounted on the cantilever of the bridge.
The cantilever prevents the platform unit from being attached directly. When unhooking, the assemblies and the platform unit are picked up and flown out with a table lifting fork.

**Components**

**40** Assembly Head VCT
**101** Hydraulic Twin Hose RCS 10m
**102** Hydraulic Hose 2SN-DN08-FF 1.0 m
**103** Hydraulic Pump RCS MAX 2x 210bar, 380-460V
**113** Remote Control RCS MAX 15 m
**125** Flow Divider RCS MAX 2/4x210

**Operating position of Assembly Heads VCT**

- The assembly heads are operated from platform unit **A**, which is unhooked.
- The hydraulic system for the assembly heads is operated from the neighbouring platform unit **B**.

**Operating position of Drive Rail VCT**

- The mechanics for the drive rail are operated from the composite track's finishing platform.
- The hydraulic system for the drive rail is operated from the neighbouring platform unit **B**.

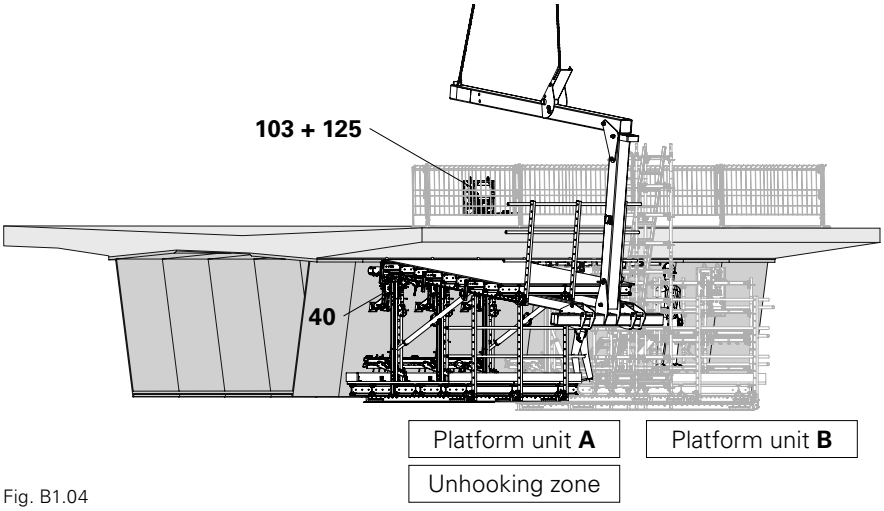



Fig. B1.04

# B2 Assembly of the hydraulic pump

## Assembly on a horizontal ledger

The hydraulic pump unit is attached to the upper horizontal ledger of the operating platform using the suspension hooks.

**Components**

| | |
|---|---|
| **103** | Hydraulic Pump RCS MAX |

**Assembly**

1. Lift up the Hydraulic Pump RCS MAX (**103**) with a short scaffolding tube using the attachment points (**103.1**).
2. Fit the Hydraulic Pump RCS MAX (**103**) to the upper Horizontal Ledger UH-2 (**76a**) with suspension hooks (**103.2**).
3. Secure the Hydraulic Pump RCS MAX (**103**) on the lower Horizontal Ledger UH-2 (**76b**) with a tension belt (**115**).

(Fig. B2.01)

Mount the hydraulic pump as far as possible to the left side to facilitate access to the drive rail and the suspension heads.

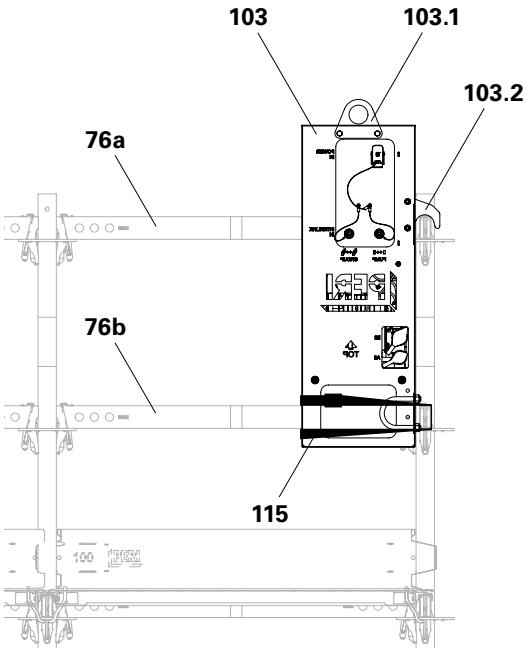



Fig. B2.01a

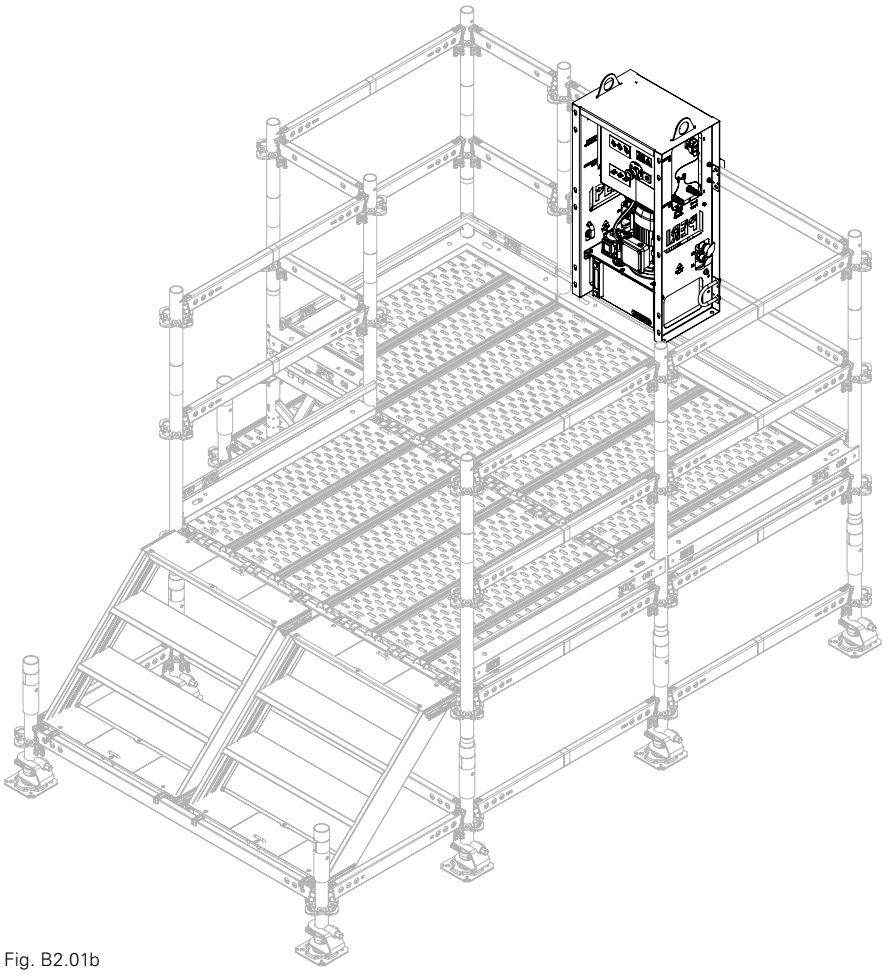


Fig. B2.01b

# B2 Assembly of the hydraulic pump

## Laying hydraulic hoses

**Route the hydraulic hoses and cables**

- Arrange the hydraulic hoses in a way that prevents them from becoming a hindrance or being damaged.
- Arrange the cables to prevent them from becoming a hindrance or being damaged.
- Observe the minimum bending radii of the hoses, see Section "Hydraulic hoses" on page 20.

Lay hydraulic hoses and lines in such a way that

- loops and knots are prevented,
- no loops overhang the edge of the platform,
- they do not get stuck,
- they do not kink or cannot be pulled out of the connections,
- they are free of torsion and tension.

**Components**

**101** Hydraulic Twin Hose RCS 10m
**109** Cable Binder NT-240H

**Assembly**

The hydraulic pump is usually located on the steel structure of the bridge.

1. Guide the hydraulic hoses (**101**) between the steel structure of the bridge and the head reinforcement (**27**) to the assembly heads (**40**).
2. Guide the hydraulic hoses (**101**) on the left-hand side downwards along the side panel (rear) and secure with cable ties (**109**).

(Fig. B2.02)

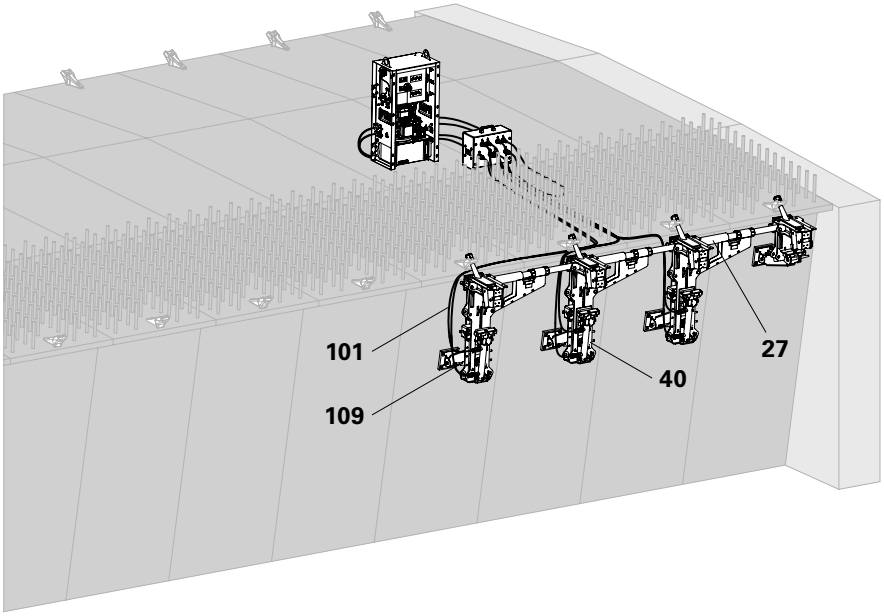



Fig. B2.02

## Safety instructions

### Danger

- Coupling and uncoupling the individual platform units will create fall edges between the platform units!
  A fall can result in serious injury or even death.
  ⇒ Use personal protective equipment to prevent falling from a height.
- There is the possibility of the platform unit falling when it is suspended or unhooked!
  A fall can result in serious injury or even death.
  ⇒ Leave the platform unit before opening or closing the assembly heads.
  ⇒ When opening or closing the assembly heads, attach the platform unit to the crane or secure it with suitable lifting gear.

### Warning

Body parts can get caught between the head and the clamping shoe of the Assembly Head VCT and become trapped!
This can result in serious injuries.
⇒ Do not touch any moving parts.
⇒ Do not touch any moving parts.
⇒ Stay away from shearing edges.

### Note

- During the entire suspension, relocation or unhooking process, there must be two-way communication between all the fitters involved.

## General information

- Only use serviced and tested material.
- If necessary, refer to and carry out the hydraulic system checks in the manufacturer's assembly instructions.
- Check hydraulic hoses and replace if necessary.
- Carefully rinse and bleed hydraulic cylinders and hoses before use, see Section "Venting the system" on page 36.
- Check fluid level in the oil container and top up, if necessary.
- Unravel any loops and twists in the hydraulic hoses and cables.
- Check whether hydraulic hoses could become trapped.
- Check the data and power connection.
- Close unused connections with mating plugs.
- Turn on the power to the system.
- Check the rotary field and adjust if necessary.
- Check the temperature of the oil and bring it to the specified temperature by flushing, if necessary. (For a cold start, see the manufacturer's instructions for use.)
- Listen out for any pump noises after starting up.
- Check components and connections for leaks.
- Grease the sliding surfaces on the drive rails and rail tracks.

Refer to these assembly instructions together with the Instructions for Assembly and Use of the VCT Composite Track.
So as not to interrupt the complex sequence of actions, some steps are not described in detail in these instructions.

PERI recommends using the Remote Contr. RCS MAX wireless when moving the composite track or, alternatively, the Remote Control RCS MAX 15 m.

## Lubricating assembly heads

To minimise frictional forces, lubricate the Assembly Heads VCT (**40**) or the Rail Track VCT 300 (**9**) before each relocation process.

- Use pressure and heat-resistant long term fat, e.g. Ixelon LT 200 EP.
- Follow the instructions in the safety data sheet before use.

**Components**

| | |
|---|---|
| **124** | Long Term Fat 200 EP |

**Assembly Heads VCT**

1. After installing the Assembly Head VCT, grease the following components and areas with long term fat:
   - Sliding plates (**40.3**) over the entire surface
   - Sliding surface on the front of Assembly Head VCT
   - Lower edge of clamping shoe (**40.2**)
   - Top side of resetter (**40.12**)
   - Shifting gate and lever (**40.5**)

(Fig. C1.01)

**Rail Track VCT 300**

1. Check that the Drive Rail VCT (**22**) and the Rail Tracks VCT 300 (**9**) are sufficiently greased (lubricated) each time before relocating the composite track. If necessary, regrease with long term fat (**124**).
   Apply a thin layer of fat to the sliding surface on the front and underside.

(Fig. C1.02)

Note on illustration:
For the sake of clarity, the ladder and cantilevered formwork are not shown.

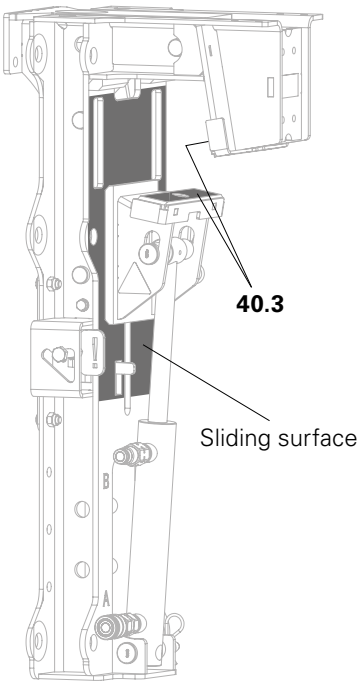



Fig. C1.01a

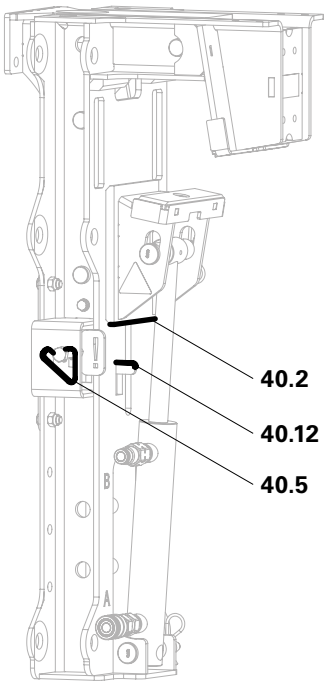



Fig. C1.01b

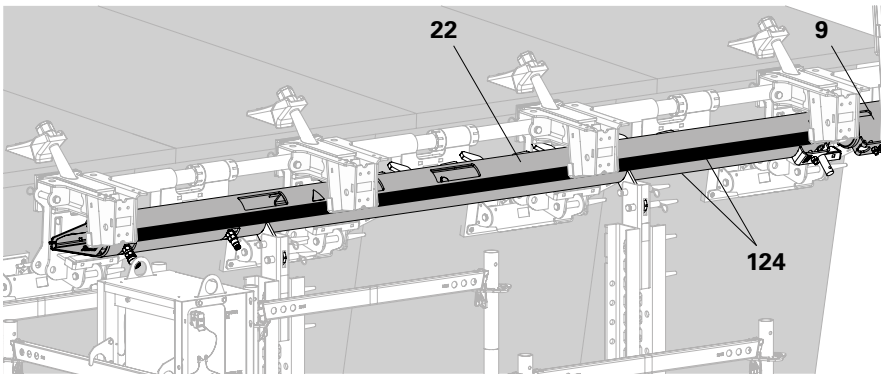



Fig. C1.02

## Operating the Hydraulic Pump RCS MAX

- Observe the manufacturer's assembly instructions.
- Connect the power connections, data connections and remote controls.

**Connecting to power supply**

1. Check that all hoses and cables are connected and securely arranged (e.g. pump/group, remote control).
2. Connect the Power Cable RCS MAX CEE-32A 2 m (**104**) or Power Cable RCS MAX 2 m (**122**) to POWER IN (**103.5**).
3. Connect the Power Cable RCS MAX CEE 32A 2 m (**104**) or Power Cable RCS MAX 2 m (**122**) to the power supply.
   – Ensure that the supply cable is long enough.
   – If necessary, attach strain relief.
4. Check the rotary field on the keypad (**103.23**): If all the keys on the keypad are flashing red/white, the rotary field is not set correctly. If necessary, change the rotary field using a phase inverter on Power Cable RCS MAX CEE-32A 2 m (**104**), see Section "Changing the phase" on page 35.
5. Carry out any additional steps in the hydraulic pump's assembly instructions.

→ The unit has been prepared.
(Fig. C1.03 + Fig. C1.04)

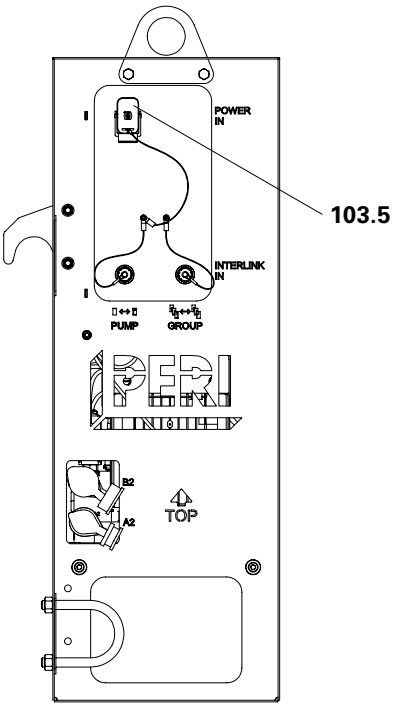



Fig. C1.03

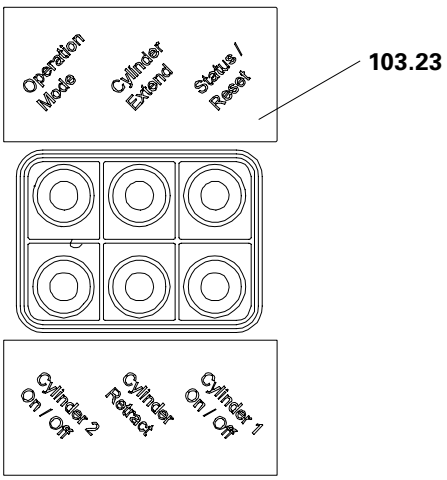



Fig. C1.04

- Observe the project-specific concreting sequence.
- Observe the assembly instructions for the hydraulic pump.

**Setting the hydraulic pump so it is ready for operation**

1. Press the "Operation Mode" key (**103.17**) and switch the hydraulic pump to "Single Mode Operation".
   → The "Operation Mode" key (**103.17**) flashes orange.
2. Press the "Status/Reset" key (**103.19**) until the key is no longer illuminated red; to do this, switch off and acknowledge any errors that may occur.

→ The unit it ready for operation.
(Fig. C1.05)

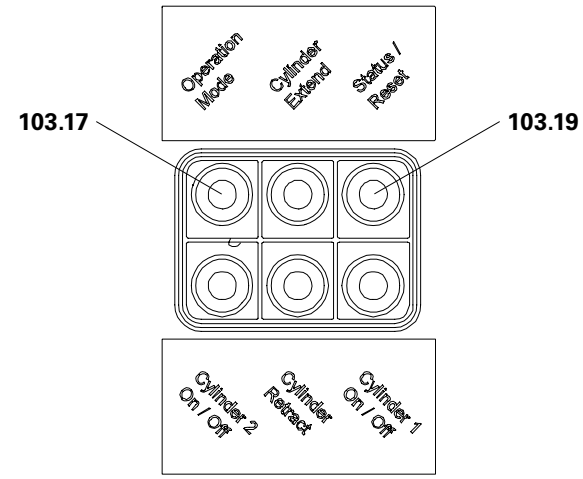



Fig. C1.05

**Extending the hydraulic cylinder**

1. Press the "Cylinder Extend" button (**113.1**) on the remote control and extend the hydraulic cylinder.

(Fig. C1.06)

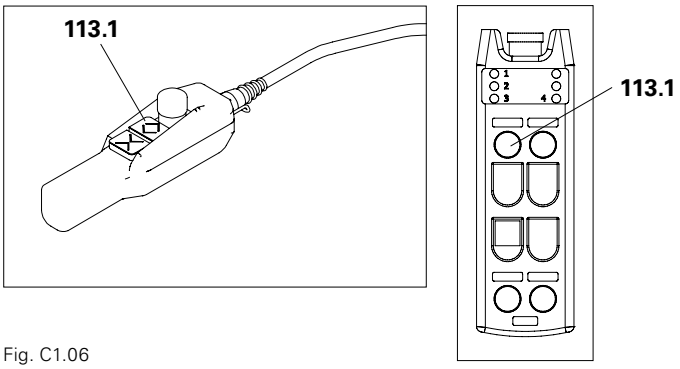



Fig. C1.06

**Retracting the hydraulic cylinder**

1. Press the "Cylinder Retract" button (**113.2**) on the remote control and retract the hydraulic cylinder.

(Fig. C1.07)

**Switching off the hydraulic pump**

- As soon as the "Cylinder Extend" or "Cylinder Retract" key is no longer pressed, the hydraulic pump goes into standby mode and the hydraulic pump switches off after 30 seconds.
- When the power supply is interrupted, the hydraulic pump switches off completely.

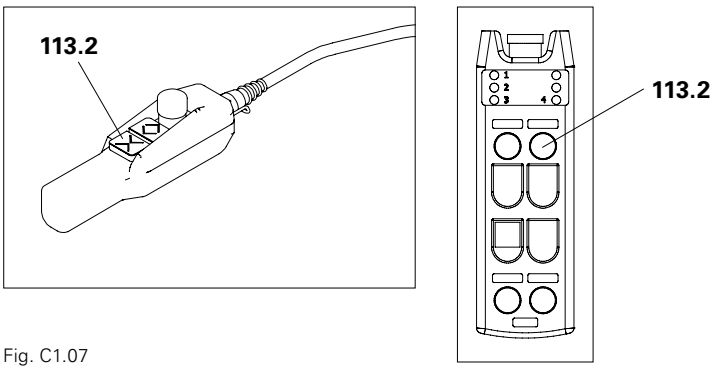



Fig. C1.07

## Operating the Hydraulic Pump RCS

- Observe the instructions for use for the Hydr.Pump RCS 4x190/380 – 460 V.
- Before switching on, check that both control levers are in the centre position.

**Switching on the hydraulic pump**

1. Turn the toggle on the motor circuit breaker (**126.3**) to the right.

(Fig. C1.08)

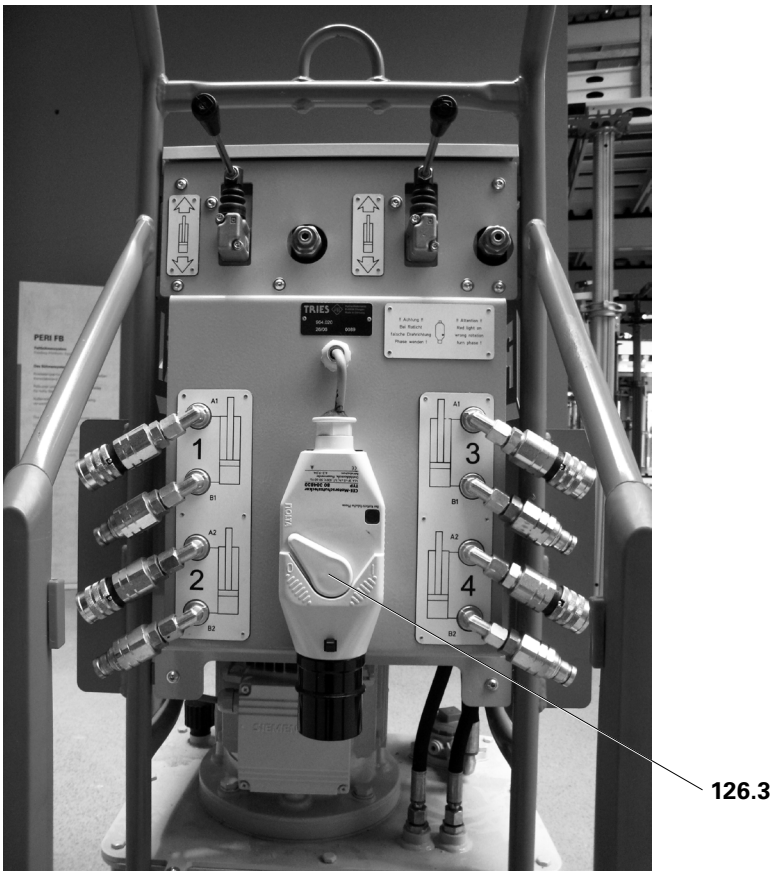



Fig. C1.08

**Extending the hydraulic cylinder**

1. Press the control lever (**126.1**) upwards.
   → The hydraulic cylinder extends.
2. Move the control lever (**126.1**) into the starting position.
   → The hydraulic cylinder remains stationary.

(Fig. C1.09)

**Retracting the hydraulic cylinder**
**Ending the moving procedure**

1. Press the control lever (**126.1**) downwards.
   → The hydraulic cylinder retracts.
2. Move the control lever (**126.1**) into the starting position.
   → The hydraulic cylinder remains stationary.

(Fig. C1.09)

**Switching off the hydraulic pump**

1. Turn the toggle on the motor circuit breaker (**126.3**) to the left.

(Fig. C1.09)

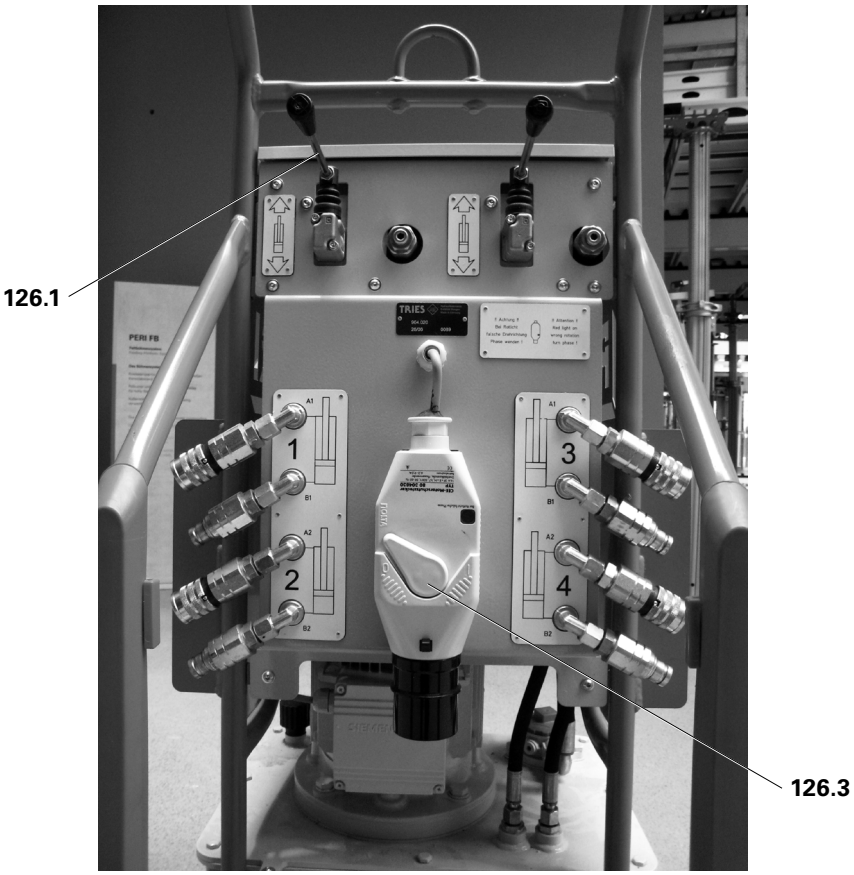



Fig. C1.09

## Structure and function

The assembly head consists of the fixed head (**40.1**) and the movable clamping shoe (**40.2**), which is moved by the hydraulic cylinder (**40.7**).
To hook in the platform unit, the hydraulic cylinder (**40.7**) is moved downwards with the clamping shoe (**40.2**).
The platform unit is then positioned in the assembly head with the drive rail or rail track.
The hydraulic cylinder (**40.7**) with the clamping shoe (**40.2**) is moved upwards and the assembly head is closed.
To relieve the hydraulic cylinder (**40.7**), the clamping shoe (**40.2**) is placed on the pawls (**40.4**).
(Fig. C2.01)

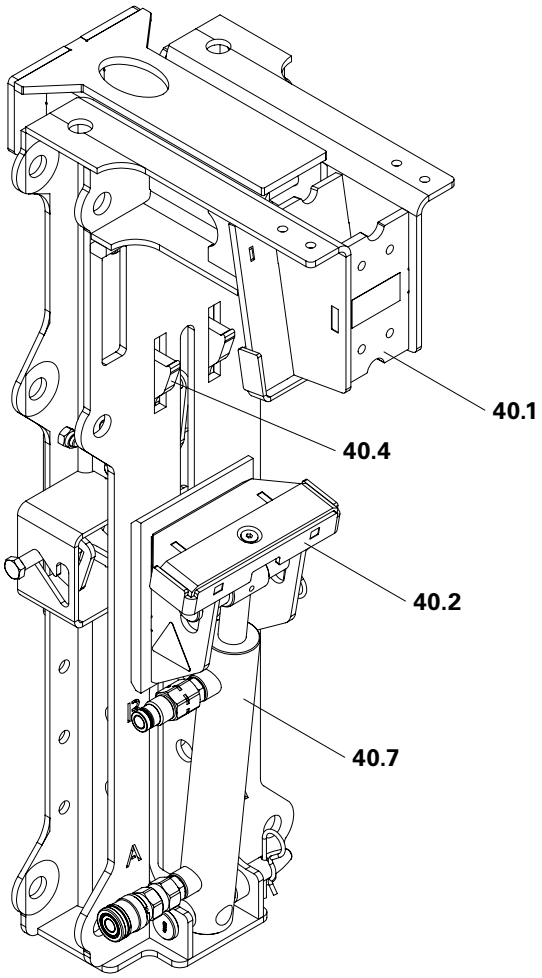



Fig. C2.01

## Operating pawls

The pawls are activated or deactivated using the lever (**40.5**).

**Activating pawls**

| Component | Position |
|---|---|
| Lever | Rear |
| Flag | not visible |
| Resetter | not visible |

(Fig. C2.02)

1. Move the lever (**40.5**) to the rear position of the shifting gate.
   → The pawls (**40.4**) swivel out and are activated.
   → The clamping shoe (**40.2**) can be set down on the pawls.

(Fig. C2.02)

If the pawl is activated, this is indicated in the instructions by the following symbol:

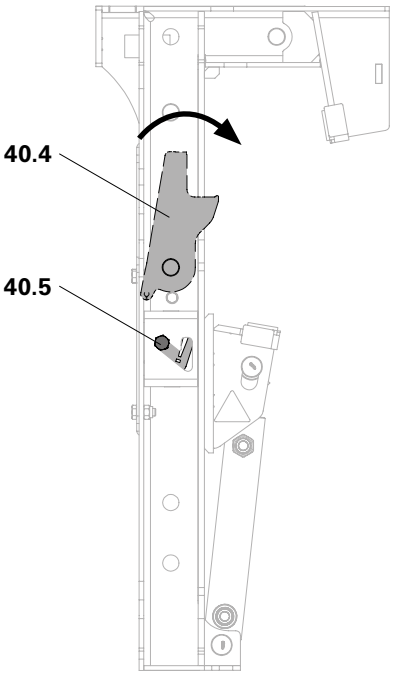



Fig. C2.02a

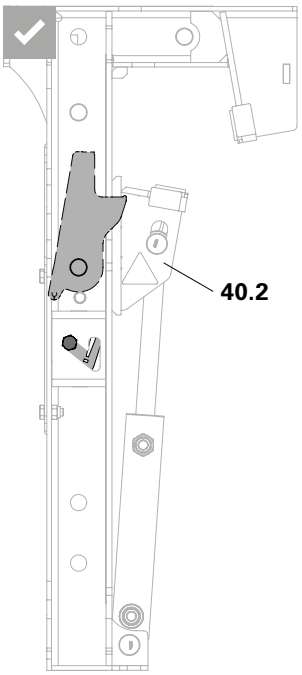



Fig. C2.02b

**Deactivating pawls**

| Component | Position |
|---|---|
| Lever | Front |
| Flag | visible |
| Resetter | visible |

(Fig. C2.03)

- It is not possible to deactivate the pawls when the hydraulic cylinder is retracted.
- Only deactivate the pawls when the clamping shoe is seated on the pawls!
- The flag indicates that the pawls are deactivated.

1. Move the lever (**40.5**) to the front position of the shifting gate.
   → The pawls (**40.4**) remain activated.
   → The flag (**40.6**) swivels out.
   → The resetter (**40.12**) swivels out and is activated.

(Fig. C2.03a)

2. Extend the hydraulic cylinder (**40.7**) all the way.
   → The pawls (**40.4**) swivel in and are deactivated.

(Fig. C2.03b)

If the pawl is deactivated, this is indicated in the instructions by the following symbol:

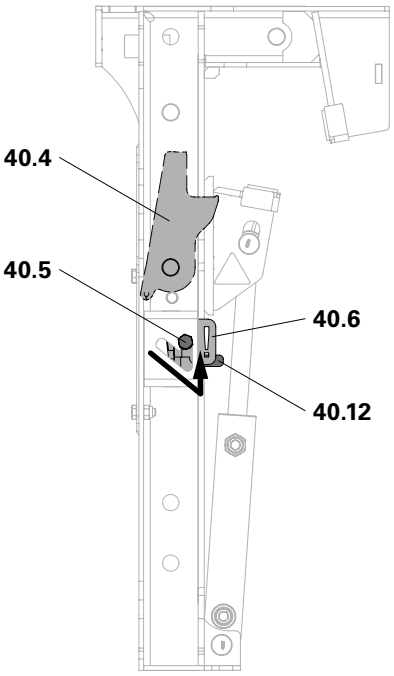



Fig. C2.03a

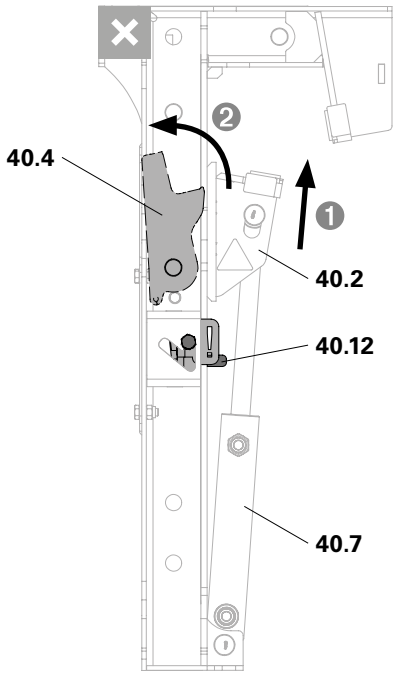



Fig. C2.03b

**Activating pawls automatically**

Requirements:
- The hydraulic cylinder is fully extended.
- The pawls are swivelled in and deactivated.
- The resetter is activated.

| Component | Position **before** activation |
|---|---|
| Lever | Front |
| Flag | visible |
| Resetter | visible |

(Fig. C2.04a)

1. Fully retract the hydraulic cylinder (**40.7**).
   → The clamping shoe (**40.2**) overruns the resetter (**40.12**).

| Component | Position **after** activation (Fig. C2.04b) |
|---|---|
| Lever | Rear |
| Flag | not visible |
| Resetter | not visible |

(Fig. C2.04b)

**How the resetter works**

By overrunning the resetter:
– the lever (**40.5**) jumps to the rear position of the shifting gate.
– this activates the pawls (**40.4**).
– the flag (**40.6**) swivels in.
(Fig. C2.04b)

→ The assembly head (**40**) is ready and the next platform unit can be hooked in.

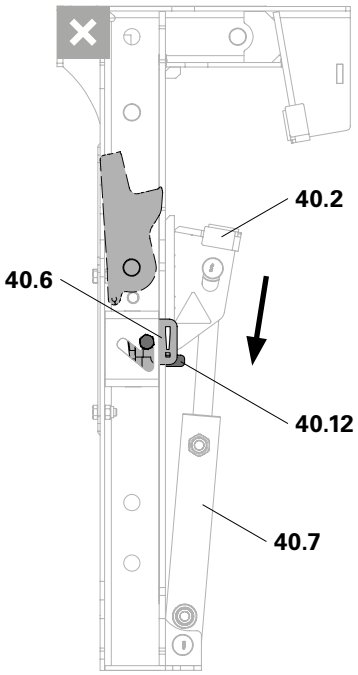


Fig. C2.04a

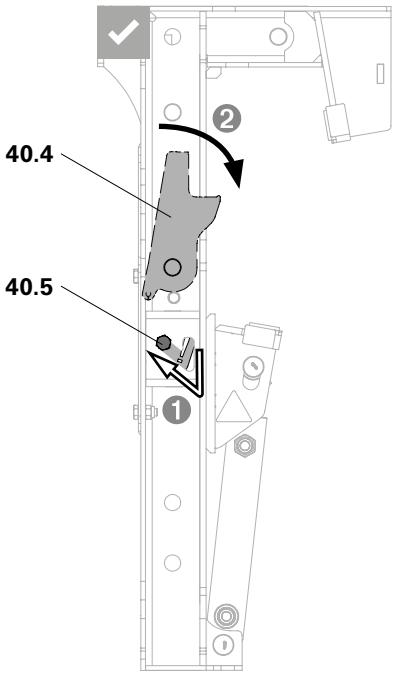


Fig. C2.04b

## Attaching the platform unit

**Danger**

When suspending the platform units, fall edges are created between the platform units!
A fall can result in serious injury or even death.
⇒ Use personal protective equipment to prevent falling from a height.

**Requirements**

- The assembly heads are fitted and the hydraulic cylinders are fully retracted.
- All hydraulic hoses are connected.
- The hydraulic system is bled and ready for operation.
- The pawls of the assembly heads are activated!

- The platform units are coupled in the first Suspension Head VCT.
- For the coupling process, both profiles, the Drive Rail VCT (**22**) and Rail Track VCT 300 (**9**), must be centred in the Suspension Head VCT (**5**).

(Fig. C3.01)

**Execution**

1. Check whether the pawls of the assembly heads are **activated**, activate the latches if necessary. See Section "Activating pawls" on page 51.
2. Retract the hydraulic cylinder completely.
3. Attach platform unit **B** to the crane and swivel the drive rail or rail track into the assembly heads and **lift**.
   - The drive rail or rail track must **not** be resting on the clamping shoes (**40.2**)!
   - The drive rail or rail track is stored in the head.

(Fig. C3.02)

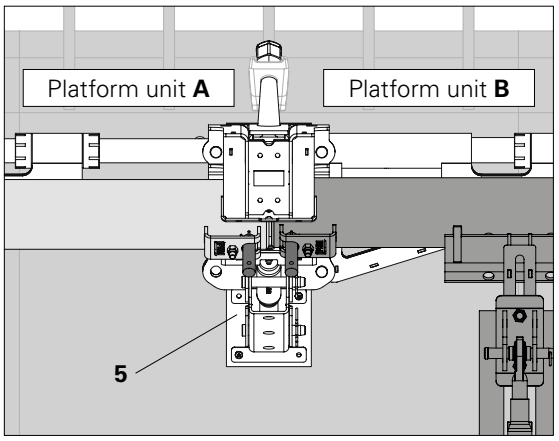



Fig. C3.01

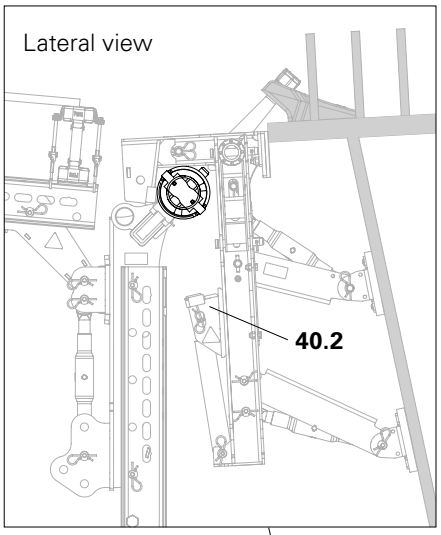



Fig. C3.02a

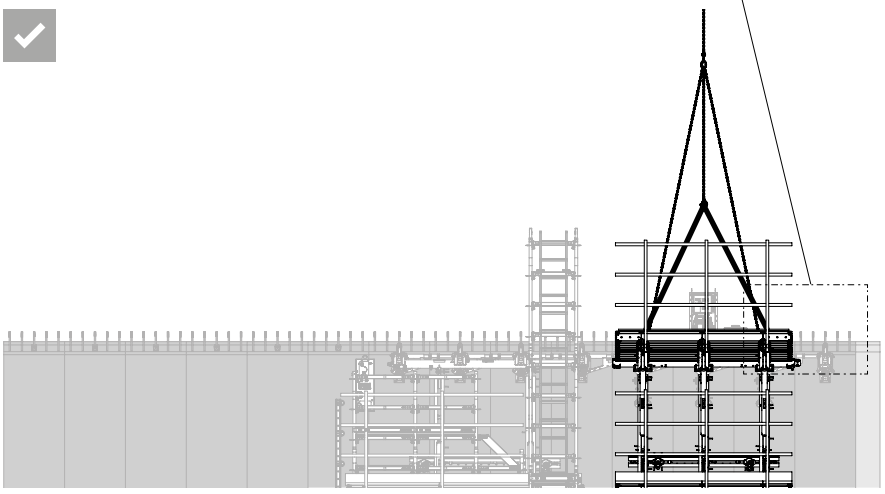



Fig. C3.02

4. Fully extend the hydraulic cylinder.
   → The clamping shoes overrun the pawls.
5. Retract the hydraulic cylinder and place the clamping shoes on the pawls.
   → The assembly heads are closed and platform unit **B** can no longer fall out of the assembly heads.

(Fig. C3.03)

6. Couple platform unit **A** and platform unit **B** with Coupler Pin VCT (**10**).
   → Platform unit **B** hangs securely in the suspension zone and can be accessed.

(Fig. C3.04)

7. Deactivate the pawls of the assembly heads, see Section "Deactivating pawls" on page 52.
8. Remove platform unit **B** from the crane.
9. Grease the Rail Tracks VCT, if necessary.
10. Pull platform unit **B** with the finishing platform of the composite track out of the suspension zone.
    The end of the rail track must be in the centre of the first Suspension Head VCT.

(Fig. C3.05)

11. Fully extend the hydraulic cylinders of the assembly heads.
    → The pawls swivel in and are deactivated.
12. Fully retract the hydraulic cylinders of the assembly heads.
    → The clamping shoes overrun the resetter and activate the pawls of the assembly heads.

→ The assembly heads are ready for suspending the next platform unit.

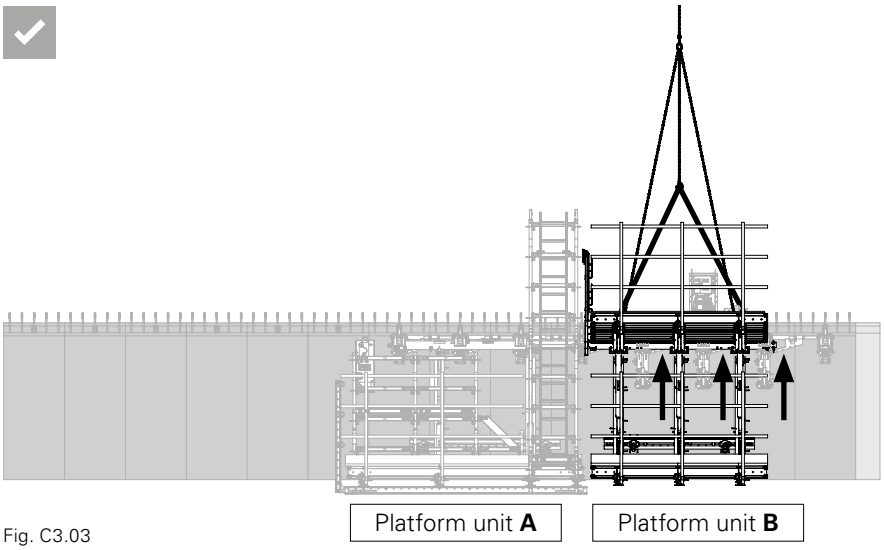



Fig. C3.03

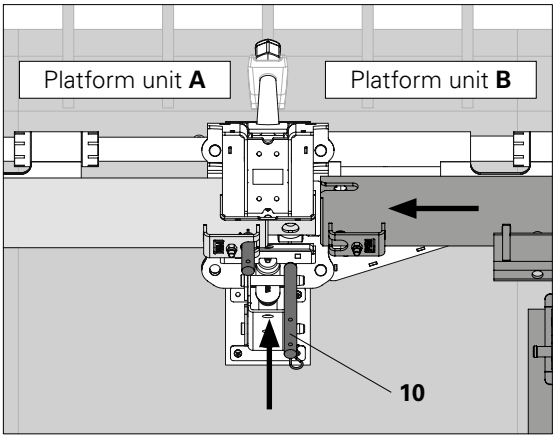



Fig. C3.04

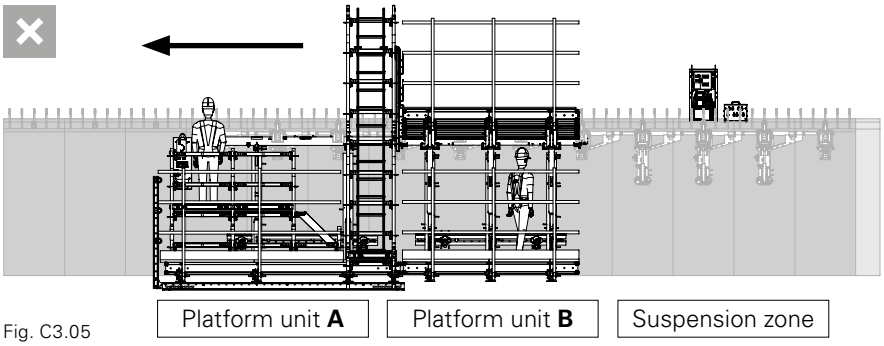



Fig. C3.05

# C4 Unhooking the platform units

## General information

When unhooking the platform units, a distinction is made between unhooking with the crane and unhooking with the table lifting fork.

**Unhooking with the crane**
It is only possible to unhook with the crane if the final concreting section has not been concreted.
See Section "Unhooking with the crane" on page 57.
(Fig. C4.01)

**Unhooking with the table lifting fork**
Once all concreting sections have been concreted in full, unhooking can only be carried out using the table lifting fork.
See Section "Unhooking with the table lifting fork" on page 60.
(Fig. C4.02)

**Position of the hydraulic system**
After the final relocation process, the hydraulic pump of the leading platform is no longer required for the Drive Rail VCT.
Uncouple the hydraulic pump from the drive rail, place it on the bridge and connect the Assembly Heads VCT. See Section "Hydraulic connection plan" on page 27 or Page 31.

**Dismantling site**
- For temporary storage of the platform units, make a sufficiently large, stable and level dismantling area available.
- Set the platform units or assemblies down on squared timbers.
- If necessary, secure the platform units or assemblies to prevent them from tipping.

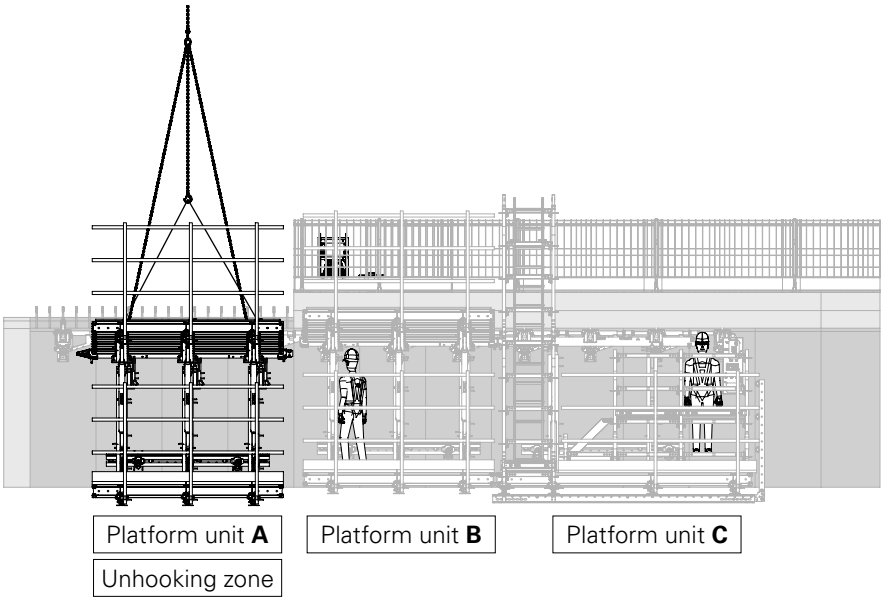



Fig. C4.01

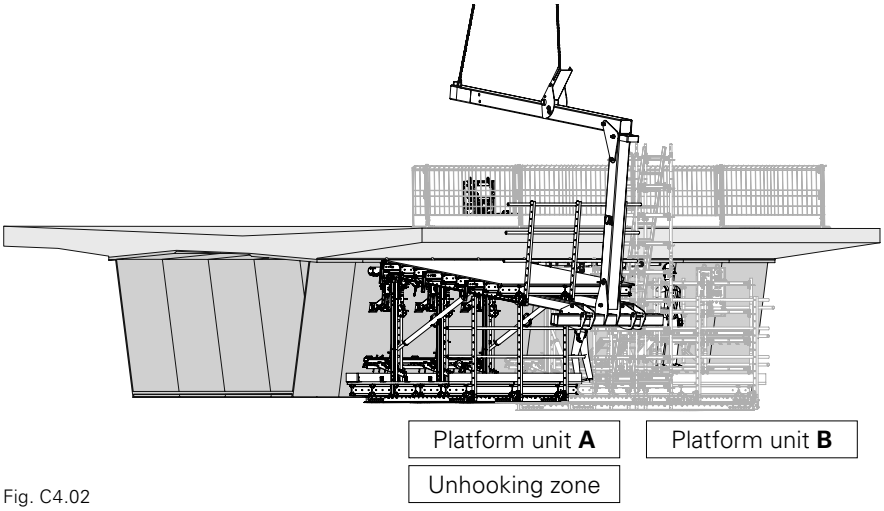



Fig. C4.02

## Unhooking with the crane

### Danger

Once the platform units have been uncoupled, there will be fall edges! A fall can result in serious injury or even death.

⇒ Use personal protective equipment to prevent falling from a height.

**Requirements**

- The assembly heads are fitted and the hydraulic cylinders are fully retracted.
- All hydraulic hoses are connected.
- The hydraulic system is bled and ready for operation.
- The pawls of the assembly heads are activated!
- The Travelling Nose VCT (**41**) is mounted in the rail track of platform unit **A**.

- The platform units are uncoupled between the final Suspension Head VCT (**5**) and the first Assembly Head VCT (**40**).

(Fig. C4.03)

**Execution**

1. Check whether the pawls of the assembly heads are **activated**, activate the latches if necessary. See Section “Activating pawls” on page 51.

(Fig. C4.03)

2. Fully extend the hydraulic cylinder.
   → The clamping shoes overrun the pawls.
3. Retract the hydraulic cylinder and place the clamping shoes on the pawls.
   → The assembly heads are closed and platform unit **A** can be retracted into the assembly heads.

(Fig. C4.04)

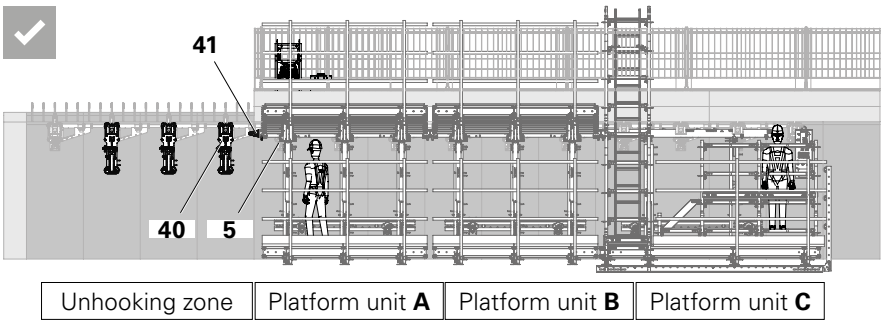



Fig. C4.03

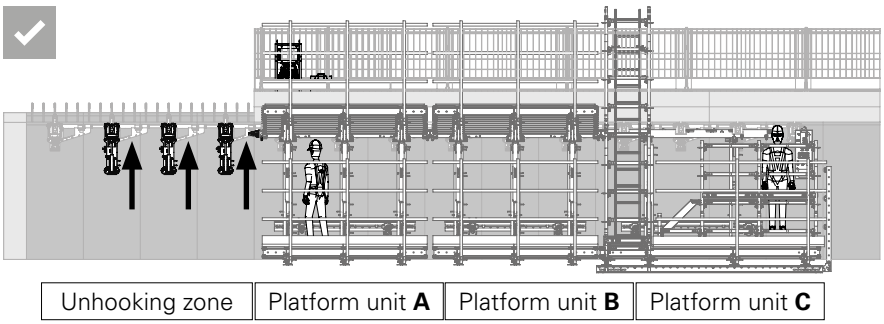



Fig. C4.04

4. Move platform unit **A** into the assembly heads with the finishing platform of the composite track.
5. Attach platform unit **A** to the crane and tighten the crane lifting gear (do not tension).
6. Deactivate the pawls of the assembly heads, see Section "Deactivating pawls" on page 52.
7. Uncouple platform unit **A**. Remove Coupler Pin VCT (**10**) from platform unit **B**. The Rail Track Coupler VCT (**11**) remains on platform unit **A**.
8. Leave platform unit **A**!

(Fig. C4.05)

9. Completely separate platform unit **A** and **B** so that there is a gap between the Rail Track Coupler VCT (**11**) and platform unit **B**.

(Fig. C4.06)

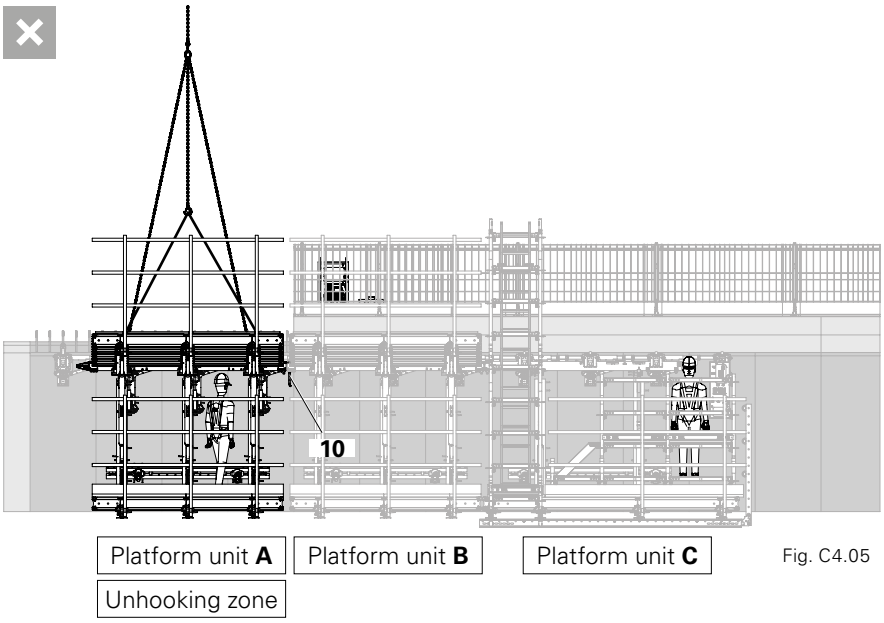



Fig. C4.05

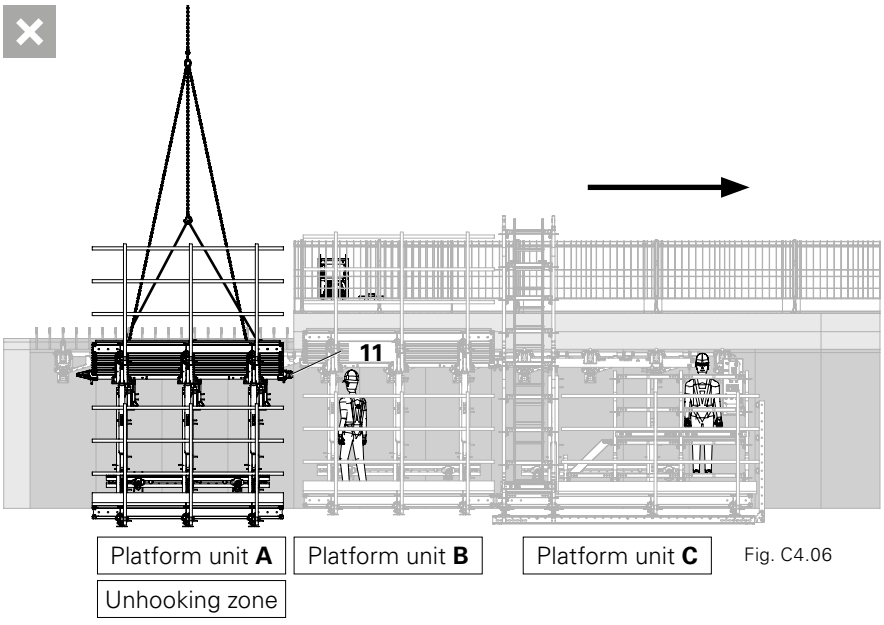



Fig. C4.06

10. From a secured position on platform unit **B**, fully extend the hydraulic cylinders of the assembly heads.
    → The pawls swivel in and are deactivated.
11. From a secured position on platform unit **B**, fully retract the hydraulic cylinders of the assembly heads.
    → The clamping shoes overrun the resetter and activate the pawls of the assembly heads.

(Fig. C4.07)

**Components**

**10** Coupler Pin VCT
**29** Cotter Pin 4/1 ga
**41** Travelling Nose VCT coat

12. Fly out platform unit **A** and set it down at the assembly site.
13. Fit the Travelling Nose VCT (**41**) to the rail track of platform unit **B**.
14. Fasten Travelling Nose VCT (**41**) with Coupler Pin VCT (**10**) and secure with Cotter Pin 4/1 ga (**29**).

(Fig. C4.08)

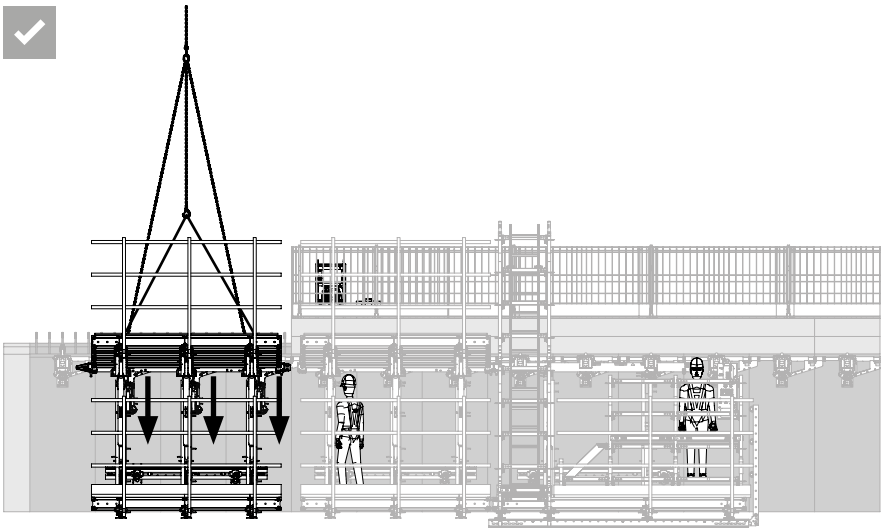



Fig. C4.07

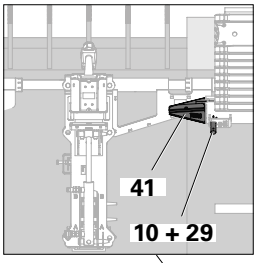



Fig. C4.08a

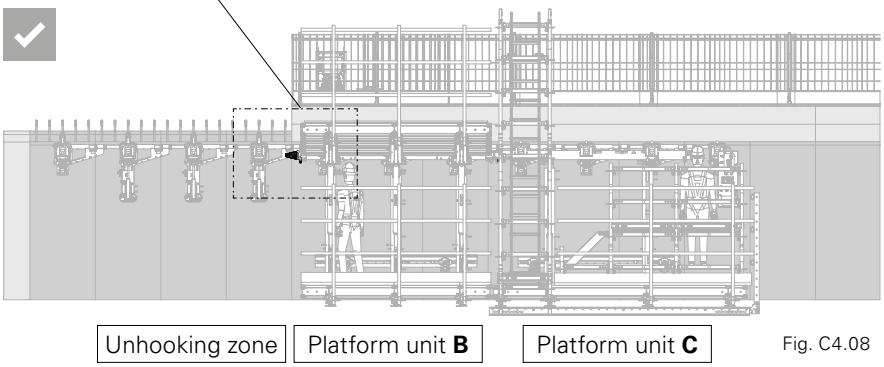



Fig. C4.08

## Unhooking with the table lifting fork

### Danger

Once the platform units have been uncoupled, there will be fall edges! A fall can result in serious injury or even death.

⇒ Use personal protective equipment to prevent falling from a height.

**Requirements**

- The assembly heads are fitted and the hydraulic cylinders are fully retracted.
- All hydraulic hoses are connected.
- The hydraulic system is bled and ready for operation.
- The pawls of the assembly heads are activated!
- The Travelling Nose VCT (**41**) is mounted in the rail track of platform unit **A**.

### Note

- Do not exceed the payload capacity of the table lifting fork.
- If necessary, the Formwork Unit VCT can be removed in two steps.

- The platform units **A** + **B** are uncoupled between the final Suspension Head VCT (**5**) and the first Assembly Head VCT (**40**).

(Fig. C4.09)

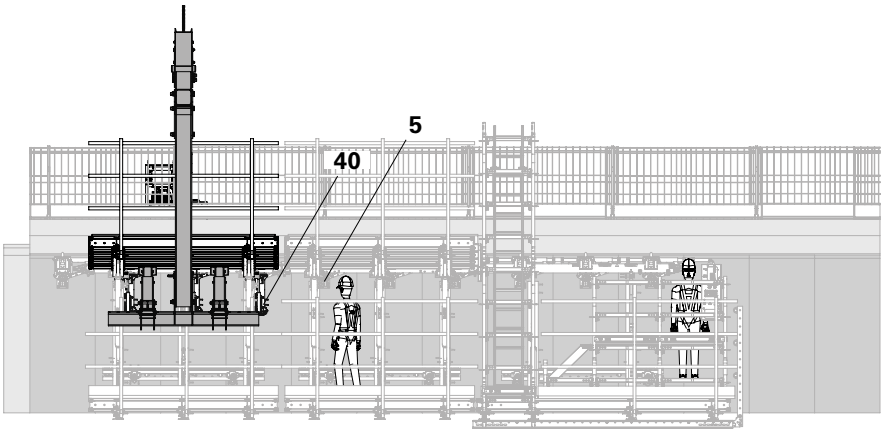



Fig. C4.09

# C4 Unhooking the platform units

**Execution**

1. Check whether the pawls of the assembly heads are **activated**, activate the latches if necessary. See Section “Activating pawls” on page 51.

(Fig. C4.10)

2. Fully extend the hydraulic cylinder.
   → The clamping shoes overrun the pawls.
3. Retract the hydraulic cylinder and place the clamping shoes on the pawls.
   → The assembly heads are closed and platform unit **A** can be retracted into the assembly heads.

(Fig. C4.11)

4. Move platform unit **A** into the assembly heads with the finishing platform of the composite track.

(Fig. C4.12)

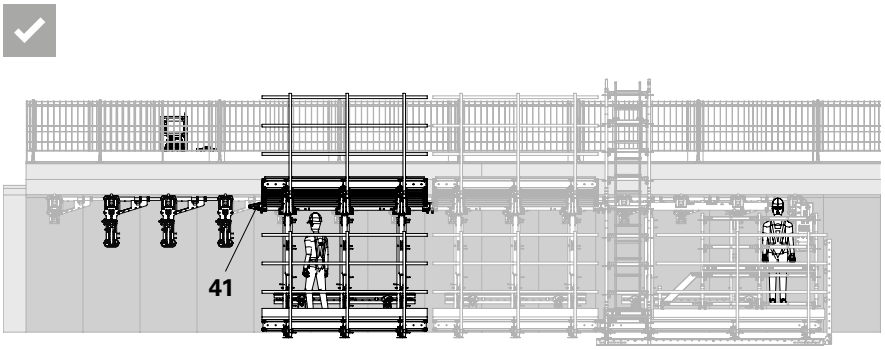



Fig. C4.10

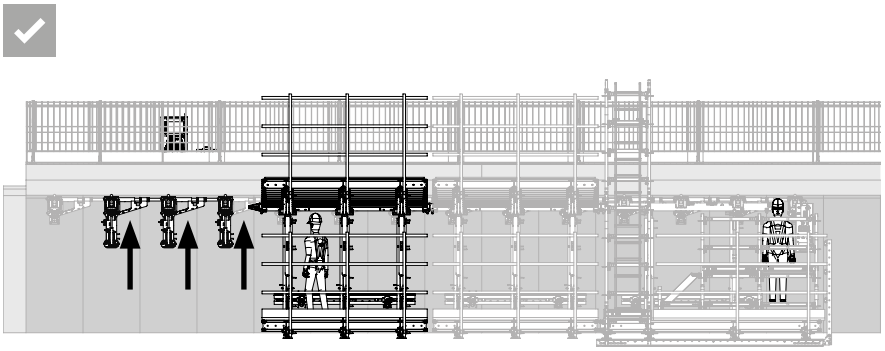



Fig. C4.11

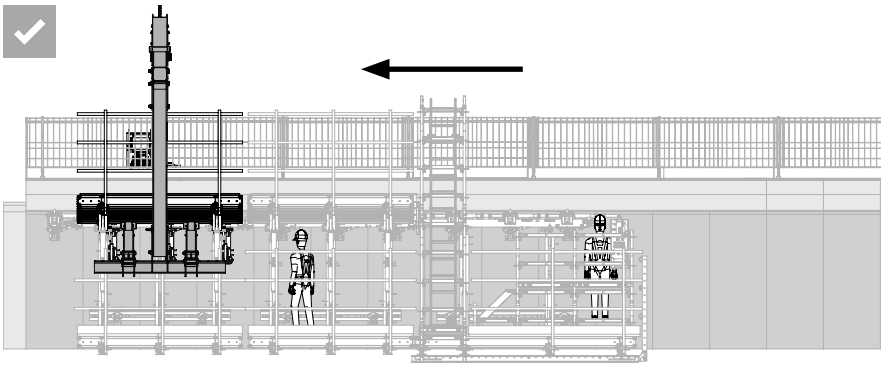



Fig. C4.12

5. Formwork Unit VCT only:
   If necessary, separate the cantilevered formwork from the formwork unit and fly it out with the table lifting fork. Set the cantilevered formwork down at the assembly site.

(Fig. C4.13)

6. Deactivate the pawls of the assembly heads, see Section "Deactivating pawls" on page 52.
7. Couple the table lifting fork and platform unit **A**.
8. Uncouple platform unit **A**.
   Remove Coupler Pin VCT (**10**) from platform unit **B**. The Rail Track Coupler VCT (**11**) remains on platform unit **A**.
9. Leave platform unit **A**!

(Fig. C4.14)

10. Completely separate platform unit **A** and **B** so that there is a gap between the Rail Track Coupler VCT (**11**) and platform unit **B**.

(Fig. C4.15)

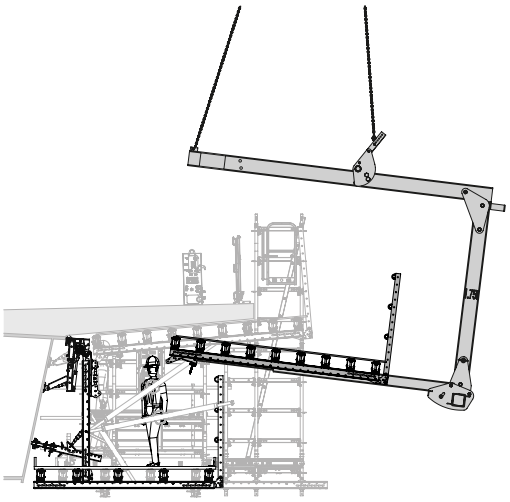


Fig. C4.13

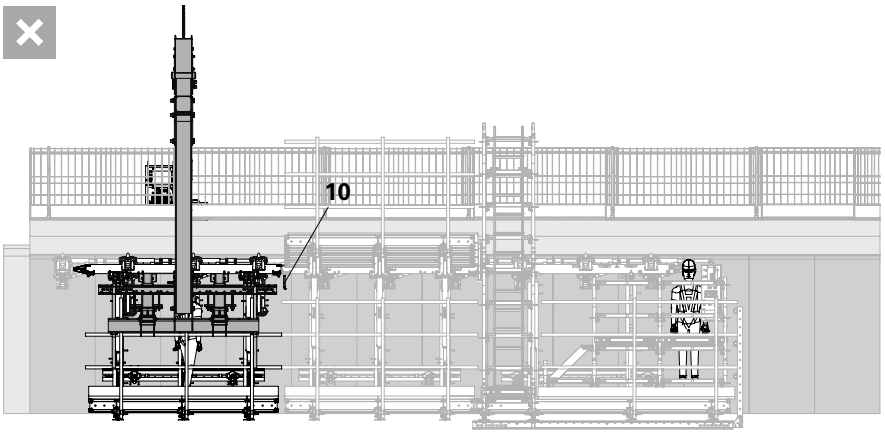



Fig. C4.14

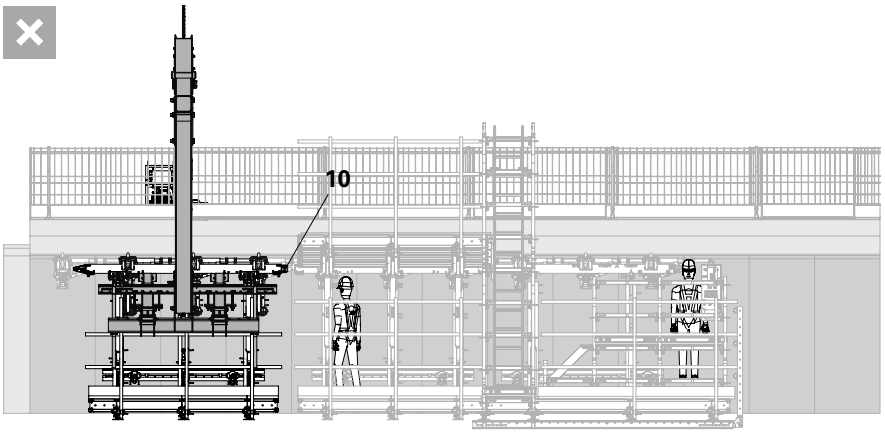



Fig. C4.15

# C4 Unhooking the platform units

11. From a secured position on platform unit **B**, fully extend the hydraulic cylinders of the assembly heads.
    → The pawls swivel in and are deactivated.
12. From a secured position on platform unit **B**, fully retract the hydraulic cylinders of the assembly heads.
    → The clamping shoes overrun the resetter and activate the pawls of the assembly heads.

(Fig. C4.16)

13. Fly out platform unit **A** and set it down at the assembly site.
14. Fit the Travelling Nose VCT (**41**) to the rail track of platform unit **B**.

(Fig. C4.17)

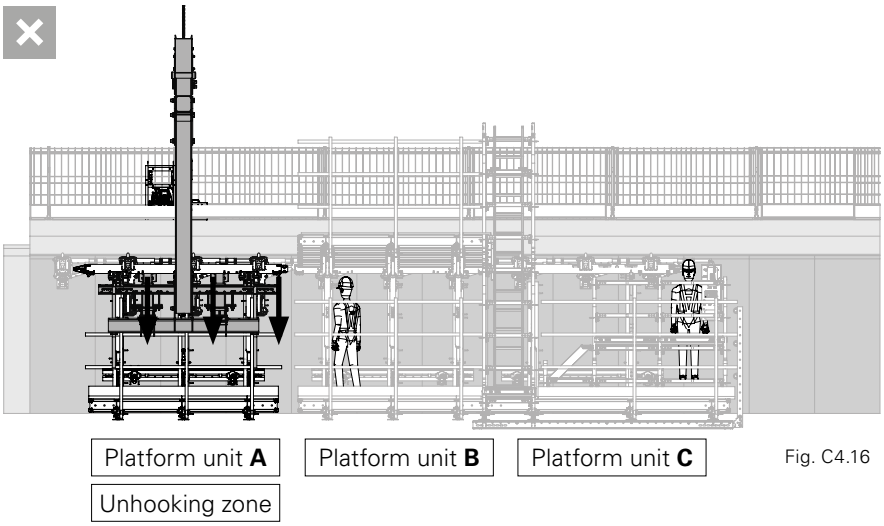



Fig. C4.16

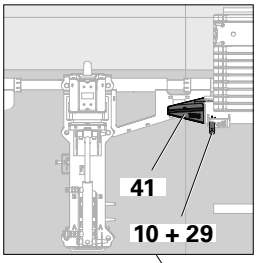



Fig. C4.17a

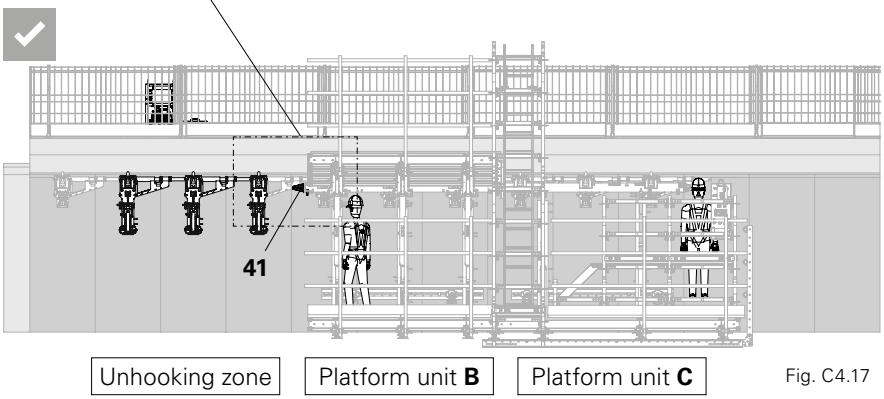



Fig. C4.17

# C5 Remedial measures for malfunctions

## Overview

| Malfunction | Cause | Remedial measure |
|---|---|---|
| Cylinder extends and retracts unevenly. | Air in the hydraulic system. | Bleed the system. The cylinder can be flushed/ vented by retracting it for a longer period of time. |
| | Dirt in the hydraulic system. | Replace hydraulic oil and, if necessary, the oil filter, see manufacturer's assembly instructions. |
| | Leakage between unit and cylinder. | Identify leakage point and seal it.<br>Replace defective hoses. |
| | Insufficient hydraulic oil in the system. | Check system for leaks and seal it.<br>Top up the oil.<br>Bleed the system.<br>Replace defective hoses. |
| | Too much friction. | Reduce friction by lubricating the Suspension Heads VCT.<br>Check the tie position. |
| | Too much weight on the composite track. | Reduce the weight. |
| Drive rail touches the suspension head. | Suspension heads not positioned correctly. | Check and correct the position of the suspension heads. |
| Hydraulic oil is leaking. | Hydraulic hose is broken or leaks. | Stop the relocation procedure and replace the hydraulic hose.<br>Check all hydraulic hoses. |
| | Connections not tightened properly. | Disconnect the hydraulic pump from the mains.<br>Re-tighten the connections. |
| Unit overflows. | Too much hydraulic oil in the tank. | Pump out the hydraulic oil. |
| | Seal on the return flow filter is defective. | Replace the return flow filter, see manufacturer's assembly instructions. |
| Cylinder does not extend. | Blockage in Assembly Head VCT | Retract the cylinder and remove the blockage. |
| | Insufficient hydraulic oil in the system. | Check system for leaks and seal it.<br>Top up the oil.<br>Bleed the system.<br>Replace defective hoses. |
| | Leakage between unit and cylinder. | Identify leakage point and seal it.<br>Replace defective hoses. |
| | Hoses not connected correctly. | Check hose connections and connect, if necessary. |
| | Too much friction. | Reduce friction by lubricating the Suspension Heads VCT. |

# C5 Remedial measures for malfunctions

| Malfunction | Cause | Remedial measure |
|---|---|---|
| Pawl not engaging/ disengaging. | Pawl jammed. | Rectify the jam. |
| | Pawl deactivated. | Activate the pawl. |
| | Pawl moves sluggishly or is dirty. | Clean the moving parts.<br>Check functionality. |
| | Spring in assembly head broken. | Replace the assembly head. Have repair carried out by PERI. |
| Pawl is not activated. | Resetter not triggering. | From a secured position, move the lever (**40.5**) to the rear position of the shifting gate.<br>Regrease the components of the assembly head, see Section "Lubricating assembly heads" on page 45. |
| Hydraulic coupling cannot be inserted. | Pressure in the hydraulic system. | Switch off system.<br>Carefully release the coupling on the hose to release the pressure, e.g. release coupling by turning halfway and re-tighten.<br>Collect any oil drips.<br>Screw the coupling on again. |
| Status lights up red.<br>Status flashes red.<br>All keys flash red/white.<br>Operation mode lights up orange.<br>Operation mode flashes orange.<br>Further problems. | Problems with the hydraulic pump. | Observe the manufacturer's assembly instructions. |

## Releasing pressure in hydraulic hoses

**Warning**

Hydraulic hoses are under high pressure.
Loosening pressurised hydraulic hoses can lead to serious irreversible injuries.

⇒ Ensure that the hydraulic pump is switched off and that there is no operating pressure.
⇒ Ensure that the drive rail is not under load.

When the temperature changes, pressure can build up in the hydraulic hoses, preventing the quick couplings from being operable and the hoses from being connected.

**Relieve the pressure by releasing the quick-coupler**

1. Loosen the quick-coupler with open-end wrenches (AF22/24) approx. half a turn until 2-3 drops of oil come out.
2. Collect any oil with a cloth.
   → Pressure is relieved.
3. Hand-tighten the quick-coupler again with open-end wrenches (AF22/24).
4. Wipe up leaked oil with a cloth.
5. During operation, check the system for leaks and re-tighten leaking couplings.

(Fig. C5.01)

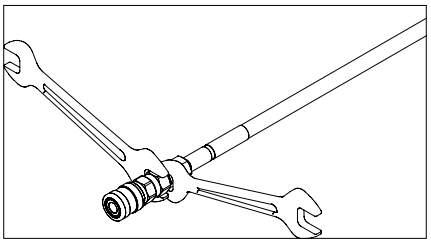


Fig. C5.01

**Relieving the pressure on Hydraulic Pump RCS MAX**

It is possible to relieve the pressure on the Hydraulic Pump RCS MAX using the software.
See PI 599 in this regard.

## Disconnecting the hydraulic hoses

**Before uncoupling**

1. Switch the hydraulic pump to which the hose is connected to “Single Mode”.
2. Retract cylinder completely by pressing “Cylinder Retract”.
3. Keep the “Cylinder Retract” key pressed for approx. 10 seconds.
4. Then press the “Cylinder Extend” key
   → Pressure is released and the hoses can be easily disconnected.

Alternatively, see Section “Releasing pressure in hydraulic hoses” on page 66.

**Disconnecting**

1. Turn the retaining ring (**102.3**) on the bushing (**102.1**) until the check mark is reached.
   → Coupling is unlocked.
2. Pull the retaining ring (**102.3**) back in the direction of the hose.
   → Coupling is unlocked.

(Fig. C6.01 + Fig. C6.02)

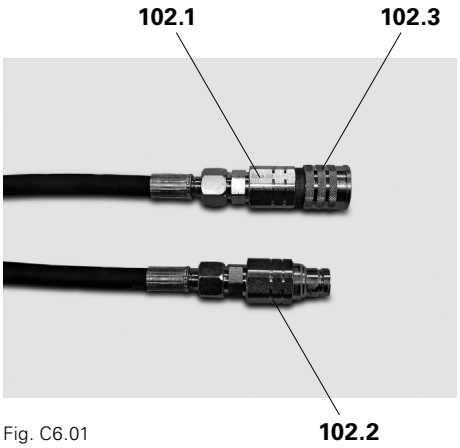



Fig. C6.01

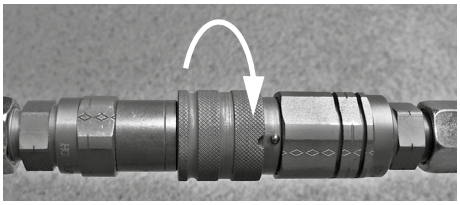


Fig. C6.02

# D1 Storage and transportation measures

## Safety instructions

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.

Use only suitable and approved load-carrying equipment.

Do not drop the components.

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

During the relocation procedure
- only ever attach components and assemblies in a positive-locking manner.
- ensure that components or assemblies 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.
- remove or secure loose parts.

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, and must also be 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.

## General information

Store PERI products and components
- in such a way that damage is impossible.
- dry, cleaned and with corrosion prevention at temperatures from – 20°C to + 60°C.
- store electrical and electronic components in a dry and dust-free location.
- store products and components in a location that is protected from the effects of the weather, sunlight, oils and aggressive substances of any kind.



Observe the manufacturer's instructions for the following components:
- Assembly instructions for the hydraulic pump.
- Safety data sheet for the hydraulic oil.

**Moving on the construction site**
- Keep bushing and clip of all quick-couplers clean and fit with protective caps during transportation (one set with 4 pieces, article no. 125632) or couple them together.
- Transport the hydraulic hoses and cables rolled up – do not drag along the ground. (do not go below the minimum bending radius.)
- Transport the hydraulic cylinder only with the piston rod in a retracted position.
- When transporting the hydraulic pump manually, pick it up with a scaffolding tube.
  Alternatively, use the RCS MAX trolley.
- For transportation by crane, attach the hydraulic pump to the attachment points with 2-sling lifting gear.
- For more details see the manufacturer's assembly instructions.

# D1 Storage and transportation measures

**Temporary storage on the construction site (duration < 6 months)**

- Clean bushings and clips of all quick-couplers and fit with protective caps when storing, or connect together.
- Store the hydraulic hoses and cables rolled up and weather-proofed. (Do not go below the minimum bending radius.)
- Store the hydraulic cylinder only with the piston rod in a retracted position.
- Do not store the hydraulic pump in a horizontal position as the oil may escape.
- Store hydraulic pumps in appropriate containers, e.g. pallets, see Section "D2 Packaging" on page 70.
- For more details see the manufacturer's assembly instructions.

**Transport from and to the construction site**

- Clean dirt off the drive rail and hydraulic pumps, and dry them.
- Clean the bushings and clips of all quick-couplers and fit with protective caps, or connect together.
- Transport the hydraulic hoses and cables rolled up. (do not go below the minimum bending radius.)
- Fill the hydraulic cylinder and hoses with oil.
- Transport the hydraulic cylinder only with the piston rod in a retracted position.
- Place the hydraulic pumps in the designated means of transport and secure them. See Section "D2 Packaging" on page 70.
- Do not transport the hydraulic pumps in a horizontal position.
- When moving transport crates with the crane, use only suitable lifting slings that are wrapped around the underside.
- For more details see the manufacturer's assembly instructions.

**Longer storage periods**

- Do not drain the hydraulic oil during downtime.
- Protect connections against corrosion using a suitable preserving agent. Close all openings so they are airtight.
- For more details see the manufacturer's assembly instructions.
- Store hydraulic hoses and cables rolled up, weather-proofed and in the dark. (do not go below the minimum bending radius.)

## Note

- Transport crates
  - used for transport and storage purposes,
  - post pallet can be lifted and moved using the 4-sling lifting gear and crane.

- Items on the post pallet must be fixed during transport.
- Clean and dry the assembly head and hydraulic pumps to remove any dirt.
- Clean the bushings and clips of all quick-couplers and close with protective caps, or connect together.
- If necessary, fit a cover onto the transport crates.
- Store the hydraulic hoses and cables rolled up and weather-proofed. (do not go below the minimum bending radius.)
- Do not store hydraulic pumps horizontally, as oil may escape through the vent valve.

| | |
|---|---|
| Hydraulic Pump RCS MAX<br>Article no. 135500 | 47.0 kg |
| Hydraulic Twin Hose RCS<br>Length 10 m<br>Article no. 110069<br>Length 20 m<br>Article no. 110070 | <br>9.0 kg<br><br>16.0 kg |

All weight details do not include the oil.

## Transporting the assembly head

- Place the assembly heads on squared timber in a small hardware box.
- Stacking height for hardware box: max. 6 pieces

| | |
|---|---|
| Assembly Head VCT<br>Article no. 141611 | 44.7 kg |
| Hardware box 80x120<br>Article no. 025660 | |
| Squared timber 40x80x800mm<br>Squared timber 80x100x500mm | 1x<br>2x |

All weight details do not include the oil.

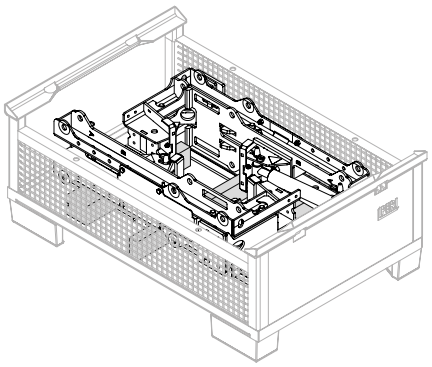


Fig. D2.01

## Transporting the Hydraulic Pump RCS MAX

Dimensions of Hydraulic Pump RCS MAX

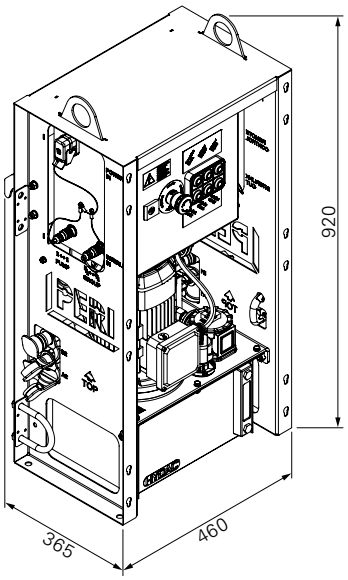



Fig. D2.02

**Pallet RP Hydr.Pump RCS MAX**

- When putting two Hydraulic Pumps RCS MAX into storage, always position them diagonally.
- Storage areas and transport routes must be non-slip, level, free of obstacles and must have a sufficient load-bearing capacity.
- Additional safety measures may be necessary during transportation.
- Place Hydraulic Pumps RCS MAX in the pallet with the keypad pointing outwards.
- Max. load-bearing capacity = 4 units
- Crane sling angle ≤ 30 °
  → Four-sling lifting gear L ≥ 1.5 m

(Fig. D2.03)

**Stacking heights**

- Individual pallet:
  – Transport using a truck, pallet lifting trolley, forklift truck or crane
- Stacking height of max. 2 pallets:
  – Storage on the construction site with a base that is inclined by no more than 3% and working wind load.
  – Storage in rental warehouse/building yard with a base that is inclined by no more than 2% and working wind load.
  – Transportation by truck or forklift truck.
- Stacking height of max. 4 pallets:
  – Storage in the hall on level base.
  – No wind permitted.




Fig. D2.03

Pallet RP Hydr.Pump RCS MAX
(article no. 136165)

**Filling**

1. Open and fold in the metal clip (**121.1**).
2. Attach the Hydraulic Pumps RCS MAX to the crane and move them onto the earmarked positions on the pallet.
3. Close the metal clip (**121.1**) and secure with a cotter pin.

(Fig. D2.04 – Fig. D2.06)

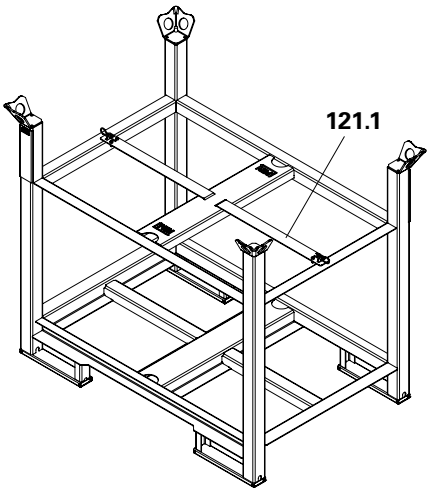



Fig. D2.04

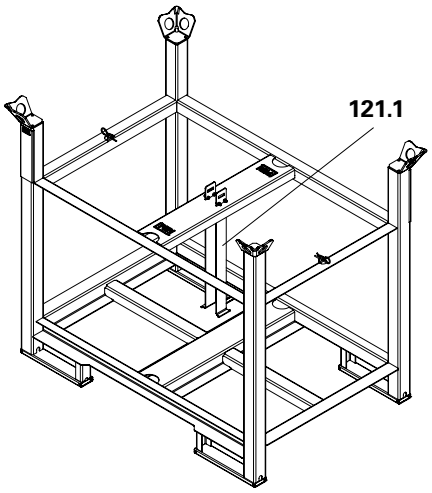



Fig. D2.05

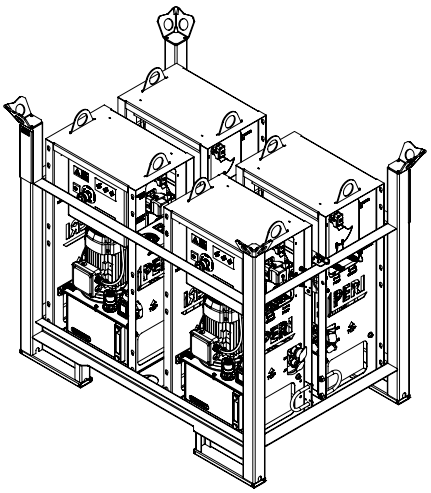


Fig. D2.06

## Transporting the Hydraulic Pump RCS

### Note

- Transport crate
  - are only used for transport and storage purposes,
  - do not use as load-carrying equipment!
  - Fix cover to the transport crate.

| | |
|---|---|
| Hydraulic Pump RCS | 109.0 kg |
| Article no. 109766 | |

All weight details do not include the oil.

Transport crate for Hydraulic Pump RCS



Fig. D2.07

Dimensions of Hydraulic Pump RCS

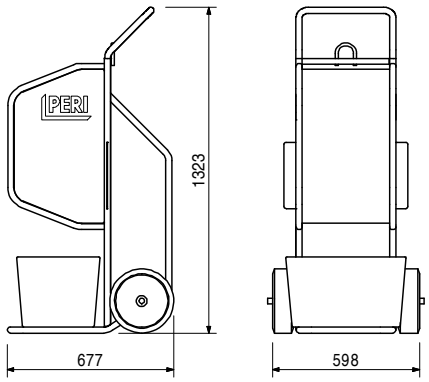



Fig. D2.08

# E1 Maintenance

## Maintenance and repairs



- Damage and any resulting downtime can be avoided by carrying out scheduled maintenance work.
- Refer to the manufacturer's maintenance table for the hydraulic pump maintenance intervals.



PERI recommends shortened maintenance intervals:
- for equipment showing signs of heavy wear.
- with high thermal and mechanical loads.
- when subject to heavy soiling.



For further information on maintenance, see:
- Assembly instructions for "RCS Climbing Device and Hydraulics".
- Assembly instructions for "RCS-2 Climbing Device and Hydraulics".

| Maintenance and repairs | Recommended maintenance intervals |
|---|---|
| ■ Replace oil filter, air filter and hydraulic oil. | Before use on next construction site, at least 1x per year. |
| ■ Replace hydraulic hoses. | If damaged, before use on next construction site. Maximum service life 6 years. |
| ■ Check oil temperature and oil level. | Before use on next construction site. |
| ■ Clean machine housing and cylinder.<br>■ Lubricate moving parts on the cylinder. | If necessary, after each concreting process. |
| ■ Check system for leaks.<br>■ Check working and control pressures.<br>■ Check system for noises and vibrations.<br>■ Check hoses for external damage. | After assembly.<br>Daily to weekly. |
| ■ Check Sliding Plate VCT. | During each relocation procedure. |
| ■ Replace Sliding Plate VCT. | Wear limit: 1 mm above bolt head. |
| ■ Check device fastening. | Weekly to monthly. |
| ■ Check housing (dirt, damage, protective covers)<br>■ Check performance. | Monthly to quarterly. |
| ■ Check tubes and hoses.<br>■ Check protective covers. | Before first use, every six months to one year. |
| ■ Maintenance work on the hydraulic pump. | See manufacturer's assembly instructions. |

## Maintenance schedule

| Maintenance location | Serial number of the hydraulic pump | Maintenance work carried out Oil type and quantity | Date | Name/Signature |
|---|---|---|---|---|
| | | | | |
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## Participation Protocol and Handover Certificate Assembly Head VCT and Hydraulics

Name: _____

Position: _____

Training: _____

- I have participated in the above training course.
- I have received and understood the assembly instructions for the Assembly Head VCT and Hydraulics.
- I know the safety regulations and will adhere to them in practice.
- If I have any questions or in case of uncertainty, I will contact:

Date/Signature:

Germany
PERI SE
Postfach 1264

D - 89259 Weissenhorn

Phone: +49 7309 950 - 0
Fax: +49 7309 950 - 6210

# EG-Einbauerklärung

**im Sinn der EG-Maschinenrichtlinie 2006/42/EG, Anhang II, Teil 1, Abschnitt B vom 17.05.2006.**

| | |
|---|---|
| **Hersteller:** | PERI SE<br>Rudolf-Diesel-Straße 19<br>89264 Weißenhorn<br>Deutschland |

Die speziellen Technischen Unterlagen gemäß EG-Maschinenrichtlinie 2006/42/EG, Anhang VII, Teil B wurden erstellt! Auf begründetes Verlangen werden die speziellen Technischen Unterlagen an die zuständigen staatlichen Stellen übermittelt! Die Übermittlung kann elektronisch oder auf Papier erfolgen! Alle Schutzrechte verbleiben bei o.g. Hersteller.

Die Inbetriebnahme unseres Produktes bleibt so lange untersagt, bis festgestellt wurde, dass die Ausführung der Anlage/ Maschine, in welcher der Einbau erfolgen soll oder von dem es ein Teil sein wird, mit den entsprechenden Rechtsvorschriften übereinstimmt.

| | |
|---|---|
| Bevollmächtigter für die Zusammenstellung der technischen Unterlagen: | PERI SE, GROUP QUALITY<br>Anschrift siehe Hersteller |

Hiermit erklären wir, dass die Bauart und die Ausführung

| | |
|---|---|
| **Unvollständigen Maschine** | Hydraulischer Montagekopf VCT |
| **für das System** | VCT VARIOKIT Composite Track |
| **gemäß der Zeichnung** | MO-24-08684 |
| **und der Funktion** | Der Montagekopf VCT wird zur Montage und Demontage von Schalungseinheiten sowie Vor- und Nachlaufbühnen des Systems VCT an dem Stahlbau einer Brücke verwendet. Zusätzlich kann der Montagekopf VCT in geschlossener Position bei der Betonage verwendet werden. In dem Montagekopf VCT wird das Antriebsprofil VCT und das Fahrprofil VCT 300 geführt und auf Gleitplatten gelagert, wobei eine dieser Lagerstellen hydraulisch vertikal verschiebbar ist. Dadurch können die Schalungseinheiten und Bühnen, am Kran hängend, horizontal in die geöffneten Köpfe eingeschwenkt werden. Danach werden die Köpfe wieder hydraulisch geschlossen, sodass die Antriebs- und Fahrprofile an den Gleitplatten des Montagekopfs anliegen und die daran befestigte Schalungseinheit von dem Kran gelöst werden kann. Die hydraulisch bedienbare Lagerstelle lastet in geschlossener Position auf einer Klinke, die für die hydraulische Bedienung mit einem Hebel deaktiviert werden kann. |

folgenden geltenden Normen und Richtlinien entspricht.

| | |
|---|---|
| **EG-Richtlinie 2006/42/EG** | Richtlinie 2006/42/EG des Europäischen Parlaments und des Rates vom 17. Mai 2006 über Maschinen |

Es wird erklärt, dass die folgenden grundlegenden Anforderungen der Maschinenrichtlinie 2006/42/EG erfüllt sind: 1.1.3, 1.3., 1.3.1, 1.3.2, 1.3.7, 1.3.9, 1.5.1, 1.5.15, 1.6.1, 1.6.3, 1.6.5

**Angewandte harmonisierte Normen, insbesondere:**

| | |
|---|---|
| DIN EN ISO 12100: 2011-03 | Sicherheit von Maschinen; Allgemeine Gestaltungsleitsätze – Risikobeurteilung und Risikominderung |
| DIN EN 60204-1: 2019-06 | Sicherheit von Maschinen; Elektr. Ausrüstung von Maschinen - Teil 1: Allgemeine Anforderungen |
| DIN EN ISO 13854: 2020-01 | Sicherheit von Maschinen; Mindestabstände zur Vermeidung des Quetschens von Körperteilen |
| DIN EN ISO 13857: 2020-04 | Sicherheit von Maschinen; Sicherheitsabstände gegen das Erreichen von Gefährdungsbereichen mit den oberen und unteren Gliedmaßen |
| DIN EN 614-1: 2009-06 | Sicherheit von Maschinen – Ergonomische Gestaltungsgrundsätze – Teil 1: Begriffe und allgemeine Leitsätze |
| DIN EN ISO 4413: 2011-04 | Fluidtechnik – Allgemeine Regeln und sicherheitstechnische Anforderungen an Hydraulikanlagen und deren Bauteile |

Weißenhorn, den 05.06.2025

Dieter Deifel
Leiter Product Engineering | BU Engineered Solutions

# EC-Declaration of incorporation

**according with the EC Machinery Directive 2006/42/EC, Annex II, Part 1, Section B of 17.05.2006.**

**Manufacturer:**

PERI SE
Rudolf-Diesel-Straße 19
89264 Weißenhorn
Deutschland

The special technical documents according to EC Machinery Directive 2006/42/EC, Annex VII, Part B have been prepared! Upon justified request, the special technical documents will be forwarded to the responsible state authorities! The transmission can be made electronically or on paper! All property rights remain with the above-mentioned manufacturer.

The commissioning of our product remains prohibited until it has been determined that the design of the system/machine in which it is to be installed or of which it will be a part complies with the relevant legal regulations.

Person established in the Community authorized to compile the relevant technical documentation: PERI SE, GROUP QUALITY
Address, see manufacturer

We hereby declare that the design and construction of the

| | |
|---|---|
| **partly completed machinery** | Hydraulic Assembly Head VCT |
| **for the system** | VCT VARIOKIT Composite Track |
| **according drawing** | MO-24-08684 |
| **and function** | The Assembly Head VCT is used for assembling and dismantling formwork units as well as leading and trailing platforms of the VCT system on the steel structure of a bridge. In addition, the Assembly Head VCT can be used in the closed position during concreting. The Drive Rail VCT and the Rail Track VCT 300 are guided in the Assembly Head VCT and mounted on sliding plates, one of which can be moved vertically by means of a hydraulic cylinder. This allows the formwork units and platforms, suspended from the crane, to be swung horizontally into the open heads. The heads are then closed again hydraulically so that the Drive Rail VCT and the Rail Track VCT 300 rest on the sliding plates of the assembly head and the formwork unit attached to them can be detached from the crane. In the closed position, the hydraulically operated bearing point rests on a pawl, which can be deactivated for hydraulic operation using a lever. |

complies with the following applicable standards and directives.

**EC-Directive 2006/42/EC** Directive 2006/42/EC of the European Parliament and of the Council, dated 17th of May 2006 on machinery

It is declared that the following essential requirements of the Machinery Directive 2006/42/EC have been fulfilled: 1.1.3, 1.3., 1.3.1, 1.3.2, 1.3.7, 1.3.9, 1.5.1, 1.5.15, 1.6.1, 1.6.3, 1.6.5

**Applied harmonised standards, in particular:**

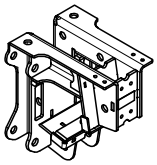
| | |
|---|---|
| DIN EN ISO 12100: 2011-03 | Safety of machinery - General principles for design - Risk assessment and risk reduction |
| DIN EN 60204-1: 2019-06 | Safety of machinery - Electrical equipment of machines - Part 1: General requirements |
| DIN EN ISO 13854: 2020-01 | Safety of machinery - Minimum gaps to avoid crushing of parts of the human body |
| DIN EN ISO 13857: 2020-04 | Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs |
| DIN EN 614-1: 2009-06 | Safety of machinery –Ergonomic design principles - Part 1: Terminology and general principles |
| DIN EN ISO 4413: 2011-04 | Hydraulic fluid power – General rules and safety requirements for systems and their components |

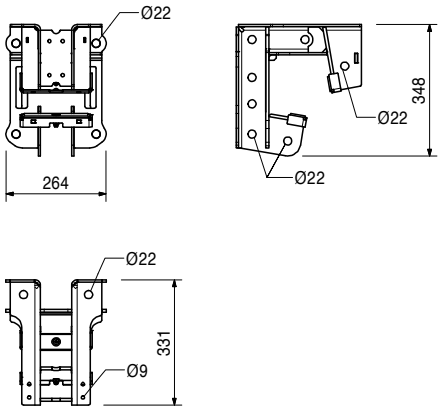
Weissenhorn, 2025-06-05

Dieter Deifel
Head of Product Engineering | BU Engineered Solutions

| Art no. | Weight [kg] | | B [mm] | L [mm] |
|---|---|---|---|---|
| 141427 | 17.200 | **Suspension Head VCT** | 264 | 331 |

Suspension Head for Rail Track VCT



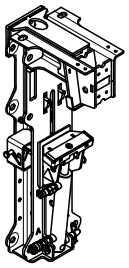


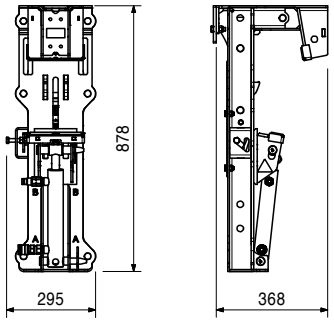

**Accessory (not included)**

136290 Pin Ø20x98mm

018060 Cotter Pin 4/1 ga

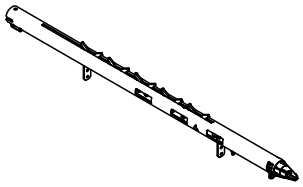
| Art no. | Weight [kg] | | B [mm] | L [mm] |
|---|---|---|---|---|
| 141611 | 46.700 | **Assembly Head VCT** | 295 | 368 |

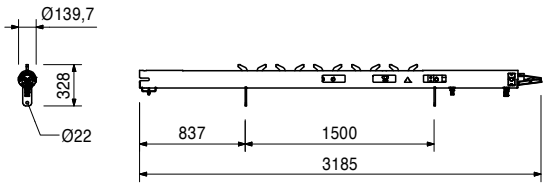





| Art no. | Weight [kg] | | B [mm] | L [mm] |
|---|---|---|---|---|
| 140846 | 130.000 | **Drive Rail VCT** | 139.7 | 3185 |

Drive Rail with internal hydraulic cylinder.

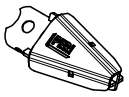


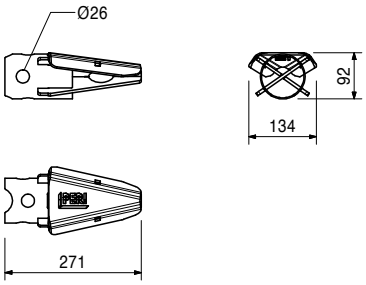



**Included in delivery**

140843 Travelling Nose VCT coat 1 pc

| Art no. | Weight [kg] | | |
|---|---|---|---|
| 140843 | 2.570 | **Travelling Nose VCT coat** | |

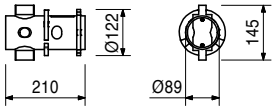





| Art no. | Weight [kg] | | B [mm] | L [mm] |
|---|---|---|---|---|
| 140519 | 4.230 | **Rail Track Coupler VCT** | 122 | 210 |

Coupler between the Rail Tracks VCT 300 and for the Drive Rail VCT.





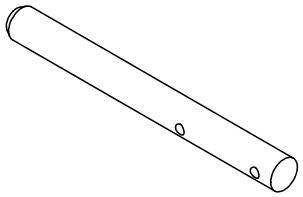

**Accessory (not included)**

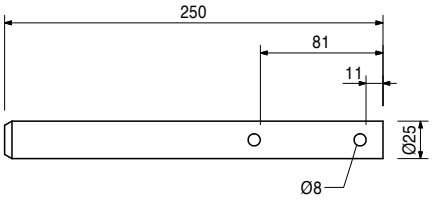
140293 Coupler Pin VCT

018060 Cotter Pin 4/1 ga

| Art no. | Weight [kg] | | B [mm] | L [mm] |
|---|---|---|---|---|
| 140293 | 0.940 | **Coupler Pin VCT** | 25 | 250 |

Coupler pin as connecting part between Rail Track VCT and Rail Track Coupler VCT





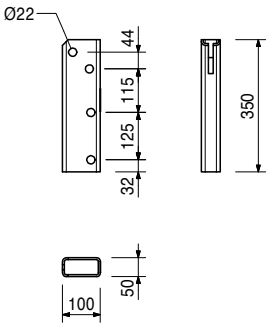

**Accessory (not included)**

018060 Cotter Pin 4/1 ga

| Art no. | Weight [kg] | | B [mm] | L [mm] |
|---|---|---|---|---|
| 141255 | 3.460 | **Adapter Drive Rail VCT** | 50 | 350 |

Adapter for connecting Steel Waler SRU to Drive Rail VCT





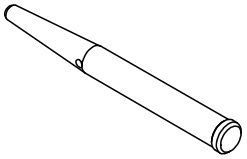

**Accessory (not included)**

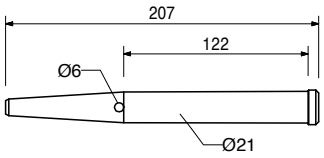
104031 Fitting Pin Ø21x120mm

018060 Cotter Pin 4/1 ga

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

For different connections. High strength.

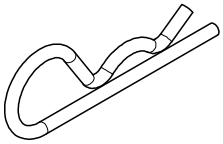





**Accessory (not included)**

018060 Cotter Pin 4/1 ga

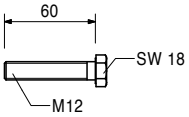
| Art no. | Weight [kg] | |
|---|---|---|
| 018060 | 0.014 | **Cotter Pin 4/1 ga** |





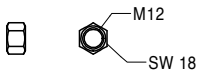

| Art no. | Weight [kg] | |
|---|---|---|
| 126001 | 0.060 | **Screw ISO4017-M12x60-8.8-ga** |






| Art no. | Weight [kg] | |
|---|---|---|
| 723805 | 0.017 | **Nut ISO4034-M12-5** |

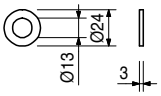





| Art no. | Weight [kg] | |
|---|---|---|
| 780702 | 0.006 | **Washer ISO7089-12-200HV-ga** |

Corresponds to old standard DIN 125 Form A



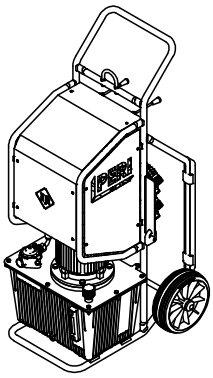


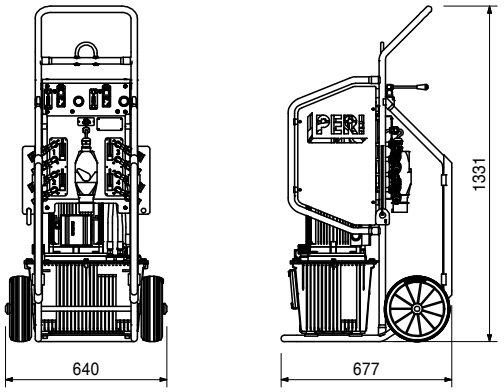
| Art no. | Weight [kg] | |
|---|---|---|
| 109766 | 109.000 | **Hydr.Pump RCS 4x190/380-460V** |

Hydraulic pump for actuating the Climbing Device RCS 50 or LPS 30.

**Notes**

Follow Instructions for Use.
Use only original PERI Hydraulic Oil.

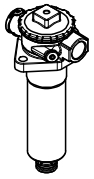


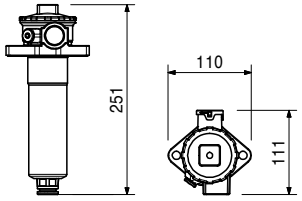



**Accessory (not included)**

| | |
|---|---|
| 057376 | Hydr.Oil ISO11158 HVI46 20l |
| 131270 | Hydr.Oil ISO11158 HM10 20l |
| 131274 | Hydr.Oil ISO11158 HVI22 20l |
| 137373 | Hydr.Oil ISO11158 HVI32 20l |

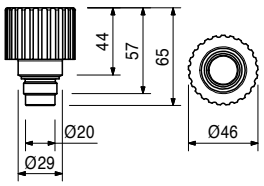
| Art no. | Weight [kg] | |
|---|---|---|
| 130528 | 0.500 | **Return Oil Filter Pump RCS** |






| Art no. | Weight [kg] | |
|---|---|---|
| 130529 | 0.600 | **Ventilation Filter Pump RCS** |



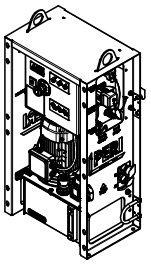


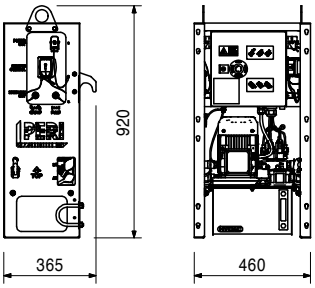
| Art no. | Weight [kg] | |
|---|---|---|
| 135500 | 47.000 | **Hydr.P. RCS MAX 2x210/380-460V** |

Hydraulic Pump for driving two Climbing Devices RCS MAX 75 or 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 | Return Filter RCS MAX |
| 135607 | Tank Breather Filter RCS MAX |
| 137281 | Hydr.Oil Filter Pump CE |
| 137282 | Hydr.Oil Filterelement 500 |
| 137283 | Suction-/Pressure Hose 250 |

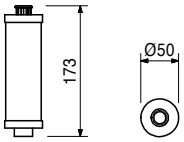
| Art no. | Weight [kg] | |
|---|---|---|
| 135606 | 0.100 | **Return Filter RCS MAX** |

Spare part for Hydraulic Pump RCS MAX 2x210 bar.

**Notes**

Follow Assembly Instructions of the manufacturer!





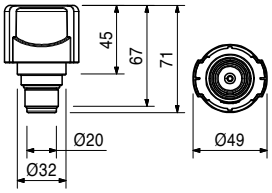

| Art no. | Weight [kg] | |
|---|---|---|
| 135607 | 0.100 | **Tank Breather Filter RCS MAX** |

Spare part for Hydraulic Pump RCS MAX 2x210 bar.

**Notes**

Follow Assembly Instructions of the manufacturer!



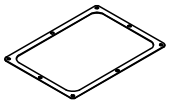


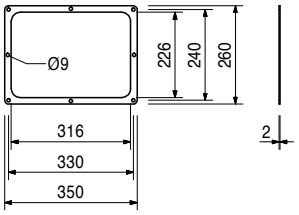
| Art no. | Weight [kg] | |
|---|---|---|
| 136597 | 0.050 | **Gasket Hydr. Tank RCS MAX** |

Spare part for Hydraulic Pump RCS MAX 2x210 bar.

**Notes**

Follow Assembly Instructions!





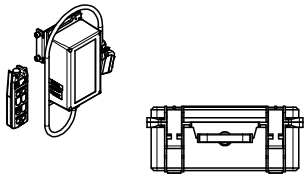

| Art no. | Weight [kg] | |
|---|---|---|
| 136530 | 5.080 | **Remote Contr. RCS MAX wireless** |

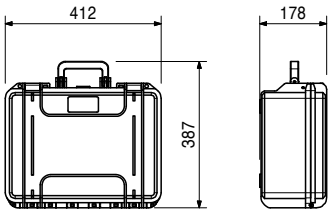
For a wireless operation of Hydraulic Pump RCS MAX 2x210 bar.

**Notes**

Follow Assembly Instructions of the manufacturer!

Scope of delivery:
1 pc. Remote Control RCS MAX wireless
1 pc. Receiver paired with Remote Control RCS MAX wireless
1 pc. Battery charger with base adapters
2 pc. Chargeable batteries
1 pc. Case Remote Control RCS MAX
2 pc. Magnetic keys
1 pc. Protective casing with harmess



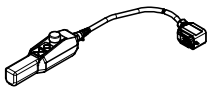


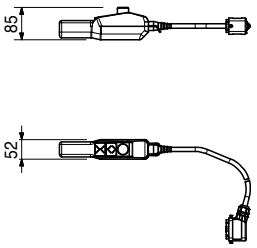

| Art no. | Weight [kg] | |
|---|---|---|
| 135506 | 2.500 | **Remote Control RCS MAX** |

Remote control for the simultaneous operation of a climbing unit.

**Notes**

Follow Assembly Instructions of the manufacturer!



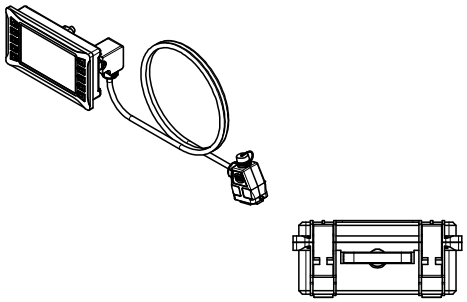


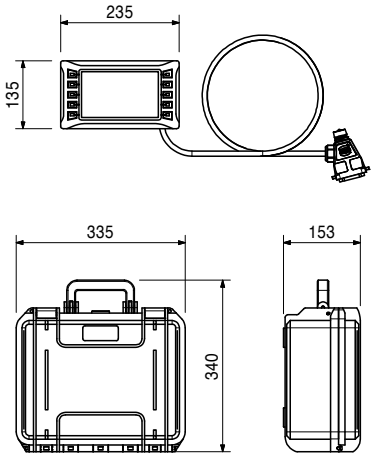
| Art no. | Weight [kg] | |
|---|---|---|
| 135507 | 3.360 | **Display RCS MAX** |

For displaying extended information and monitoring of interconnected Hydraulic Pumps RCS MAX 2x210 bar.

**Notes**

Follow Assembly Instructions of the manufacturer!
Cable length: 1.50 m.



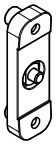


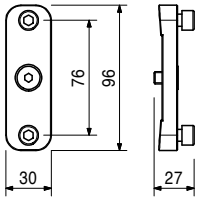

**Included in delivery**

136675 Case Display RCS MAX 1 pc

| Art no. | Weight [kg] | |
|---|---|---|
| 136043 | 0.058 | **Display Holder RCS MAX** |

For attachement of Display RCS MAX on the Hydraulic Pump RCS MAX 2x210 bar.






**Included in delivery**

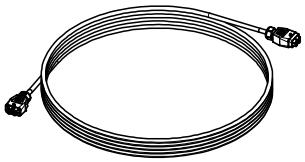
136045 Screw ISO10642-M8x16-8.8-ga 1 pc

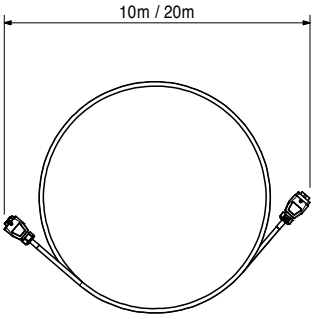
| Art no. | Weight [kg] | |
|---|---|---|
| | | **Power Conn. Cables RCS MAX** |
| 135498 | 2.500 | **Power Conn. Cable RCS MAX 10m** |
| 135501 | 4.700 | **Power Conn. Cable RCS MAX 20m** |

For the power supply between max. 8 Hydraulic Pumps RCS MAX 2x210 bar.

**Notes**

Follow Assembly Instructions of the manufacturer!






**Accessory (not included)**

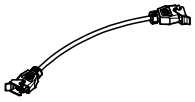
135502 Conn. Power Cable RCS MAX

| Art no. | Weight [kg] | |
|---|---|---|
| 135502 | 0.200 | **Conn. Power Cable RCS MAX** |

For connecting two Power Connection Cables RCS MAX.

**Notes**

Follow Assembly Instructions of the manufacturer!
Lenght 18 cm.

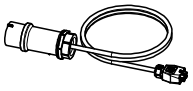


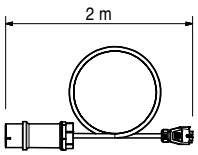
| Art no. | Weight [kg] | |
|---|---|---|
| 135499 | 0.800 | **Power Cab. RCS MAX CEE-32A 2m** |

For connecting max. 8 Hydraulic Pumps RCS MAX 2x210 bar to the power supply.

**Notes**

Follow Assembly Instructions of the manufacturer!
With CEE-Plug 400 V, 32 A. Manual phase inverter inside.





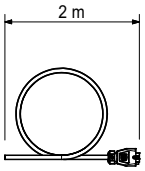
| Art no. | Weight [kg] | |
|---|---|---|
| 136532 | 0.400 | **Power Cable RCS MAX 2m** |

For making a country specific power cable.

**Notes**

Follow Assembly Instructions of the manufacturer!
To connect a country-specific connector to the cable. Only qualified electricians are permitted to work on and repair electrical components.



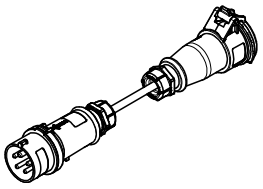


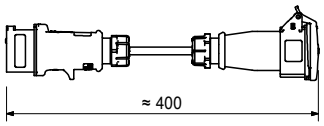

| Art no. | Weight [kg] | |
|---|---|---|
| 110280 | 0.500 | **Adaptor Cable RCS** |

For the power supply to the Hydraulic Pump RCS.

**Notes**

Follow Instructions for Use!
With CEE plug connector 400 V 16 A.





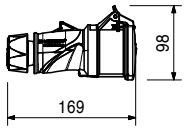

| Art no. | Weight [kg] | |
|---|---|---|
| 110279 | 0.291 | **Plug Socket RCS black** |

For providing the power supply to the Hydraulic Pump RCS with 380 – 460 V, 50 – 60 Hz.

**Notes**

Follow Instructions for Use!

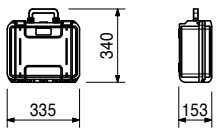





| Art no. | Weight [kg] | |
|---|---|---|
| 136673 | 1.700 | **Case Data Conn. RCS MAX** |

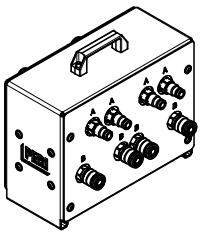
For packaging wireless RCS MAX group connections.

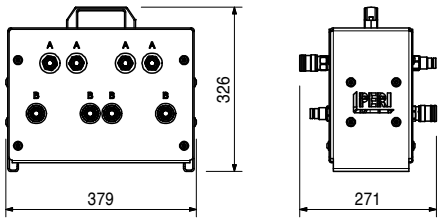




| Art no. | Weight [kg] | | B [mm] | L [mm] |
|---|---|---|---|---|
| 141572 | 25.800 | **Flow Divider RCS MAX 2/4x210** | 271 | 379 |

Flow divider for even distribution of 2 to max. 4 volume flows.






**Accessory (not included)**

129035 Hydr.Hose 853-2SN-DN08-FF 1m

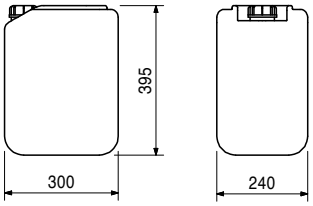
| Art no. | Weight [kg] | |
|---|---|---|
| | | **Hydr.Oils ISO11158 in canister** |
| 131270 | 17.900 | **Hydr.Oil ISO11158 HM10 20l** |
| 131274 | 18.300 | **Hydr.Oil ISO11158 HVI22 20l** |
| 137373 | 18.300 | **Hydr.Oil ISO11158 HVI32 20l** |
| 057376 | 18.300 | **Hydr.Oil ISO11158 HVI46 20l** |

High-quality synthetic hydraulic oils for PERI Hydraulic Pumps with different viscosity suitable for different 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.



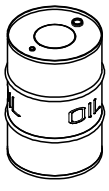


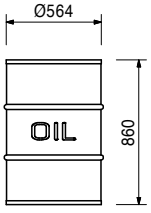

| Art no. | Weight [kg] | |
|---|---|---|
| | | **Hydr.Oils ISO11158 in drum** |
| 131273 | 200.000 | **Hydr.Oil ISO11158 HM10 210l** |
| 131275 | 200.000 | **Hydr.Oil ISO11158 HVI22 210l** |
| 137374 | 201.000 | **Hydr.Oil ISO11158 HVI32 210l** |
| 131277 | 201.000 | **Hydr.Oil ISO11158 HVI46 210l**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

High-quality synthetic hydraulic oils for PERI Hydraulic Pumps with different viscosity suitable for different 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.



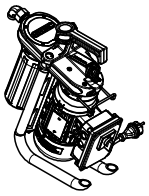


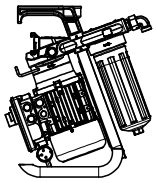
| Art no. | Weight [kg] | |
|---|---|---|
| 137281 | 14.000 | **Hydr.Oil Filter Pump CE** |

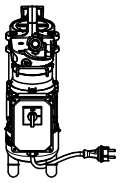
Filter pump for quick and clean transfer of hydraulic oil with simultaneous filtration.

**Notes**

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







**Accessory (not included)**

137282 Hydr.Oil Filterelement 500

137283 Suction-/Pressure Hose 250

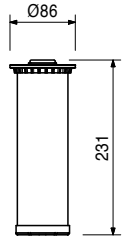
| Art no. | Weight [kg] | |
|---|---|---|
| 137282 | 1.000 | **Hydr.Oil Filterelement 500** |

Wear part of the Hydr.Oil Filter Pump CE.

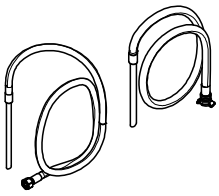
**Notes**

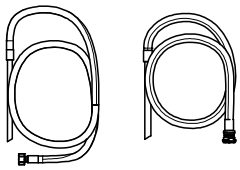
Follow Instruction for use!
Observe the maintenance instructions in the technical documentation for the oil filter pump!
Observe disposal instructions!






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

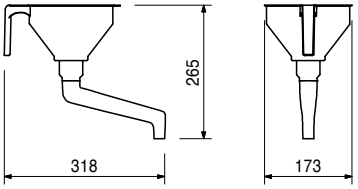




| Art no. | Weight [kg] | |
|---|---|---|
| 130685 | 0.225 | **Universal Funnel** |

For easy filling of hydraulic pumps with oil.



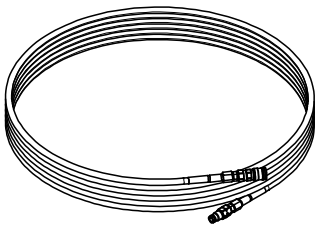


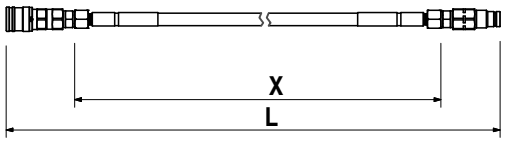
| Art no. | Weight [kg] | | L [mm] | X [mm] |
|---|---|---|---|---|
| | | **Hydr.Hoses 853-2SN-DN08-FF** | | |
| 129035 | 0.996 | **Hydr.Hose 853-2SN-DN08-FF 1m** | 1169 | 1000 |
| 129036 | 1.430 | **Hydr.Hose 853-2SN-DN08-FF 2m** | 2169 | 2000 |
| 129419 | 2.690 | **Hydr.Hose 853-2SN-DN08-FF 5m** | 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 8 mm.

**Notes**

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



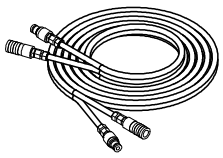


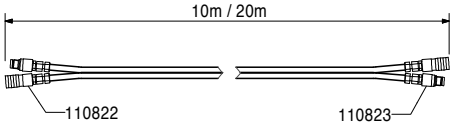

**Included in delivery**

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

| Art no. | Weight [kg] | |
|---|---|---|
| | | **Hydr.Twin Hoses RCS** |
| 110069 | 8.500 | **Hydr.Twin Hose RCS 10m** |
| 110070 | 15.300 | **Hydr.Twin Hose RCS 20m** |

Two permanently connected hydraulic hoses for connecting hydraulic pumps with hydraulic climbing devices.

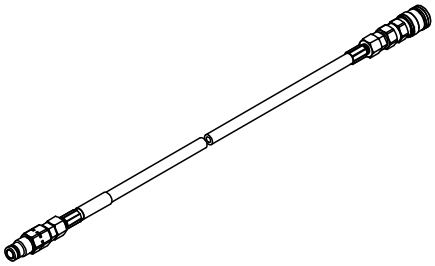


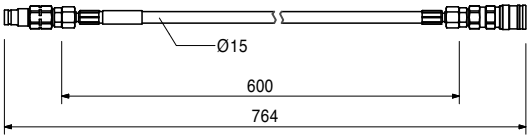



**Included in delivery**

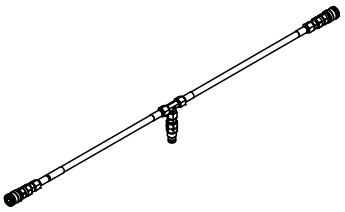
128992 Pin ISO16028 DN10 R3/8IG 2 pc
128993 Sleeve ISO16028 DN10 R3/8IG 2 pc
051750 Male Stud Coupl. X-GE12PSR-ED 4 pc

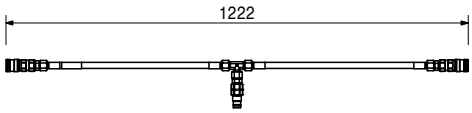
| Art no. | Weight [kg] | |
|---|---|---|
| 126646 | 0.651 | **Bypass Hose RCS** |





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



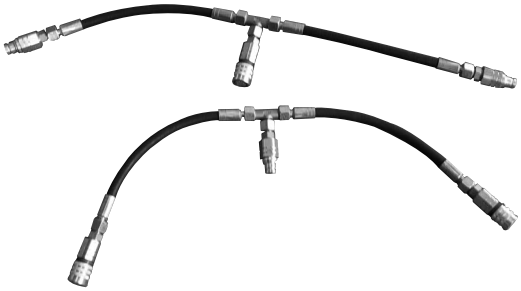



**Included in delivery**

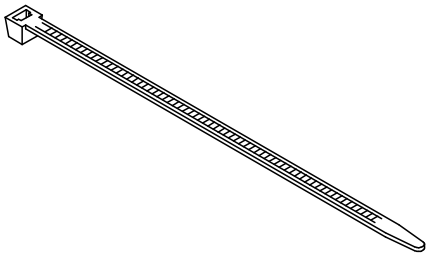
128992 Pin ISO16028 DN10 R3/8IG 1 pc
128993 Sleeve ISO16028 DN10 R3/8IG 2 pc
051750 Male Stud Coupl. X-GE12PSR-ED 3 pc

| Art no. | Weight [kg] | |
|---|---|---|
| 112421 | 3.000 | **Hydr. Accum. Piece RCS** |

To double the volume of the oil at the Hydraulic Pump RCS. Also doubles the speed.



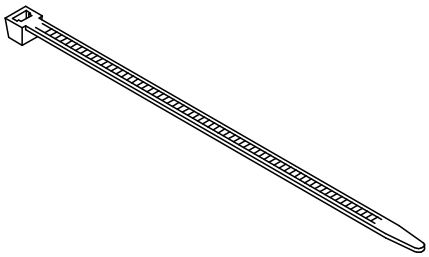
| Art no. | Weight [kg] | |
|---|---|---|
| 137346 | 0.007 | **Cable Binder 7.8x540mm** |



| Art no. | Weight [kg] | |
|---|---|---|
| 051760 | 0.004 | **Cable Binder NT-240H** |

**Notes**

Delivery unit = 1 pc.

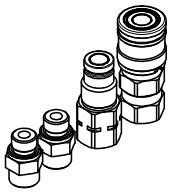


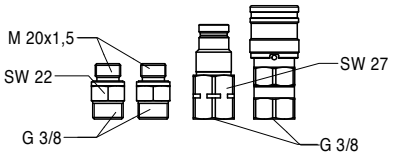
| Art no. | Weight [kg] | |
|---|---|---|
| 129424 | 0.440 | **FF-Coupling Pair X-GE12PSR-ED+** |

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

**Notes**

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



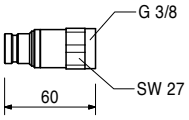



**Included in delivery**

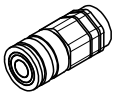
128992 Pin ISO16028 DN10 R3/8IG 1 pc
128993 Sleeve ISO16028 DN10 R3/8IG 1 pc
051750 Male Stud Coupl. X-GE12PSR-ED 2 pc

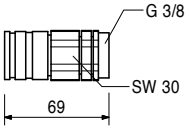
| Art no. | Weight [kg] | |
|---|---|---|
| 110823 | 0.171 | **Quick Coupler Nipple RCS** |






| Art no. | Weight [kg] | |
|---|---|---|
| 110822 | 0.297 | **Quick Coupler Bushing RCS** |



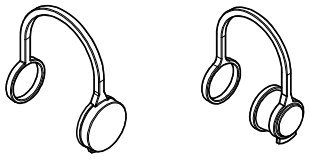


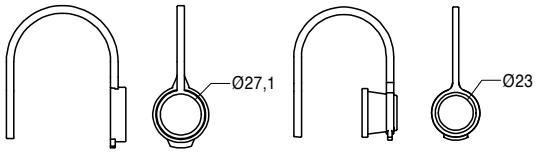

| Art no. | Weight [kg] | |
|---|---|---|
| 125632 | 0.050 | **Prot. Covers Climb. Device RCS** |

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 (2 x bushing and 2 x nipple each).



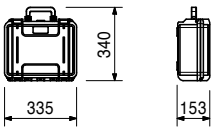



| Art no. | Weight [kg] | |
|---|---|---|
| 727105 | 1.000 | **Long Term Fat LT 200 EP /25kg** |

| Art no. | Weight [kg] | |
|---|---|---|
| 136675 | 1.700 | **Case Display RCS MAX** |

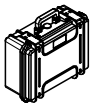
For packaging of RCS MAX display.

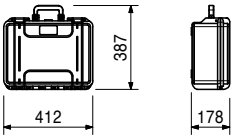





| Art no. | Weight [kg] | |
|---|---|---|
| 136674 | 2.300 | **Case Remote Control RCS MAX** |

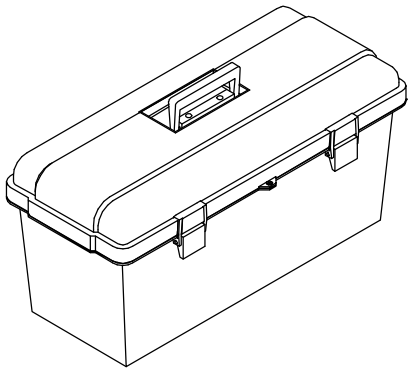
For packaging of wireless RCS MAX Remote Control.






| 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

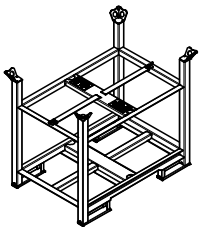


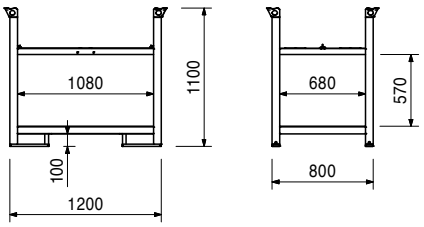
| Art no. | Weight [kg] | |
|---|---|---|
| 136165 | 59.000 | **Pallet RP Hydr.Pump RCS MAX** |

For transportation of up to 4 Hydraulic Pumps RCS MAX.

**Notes**

Pay attention to the stacking height!
Follow Assembly Instructions!



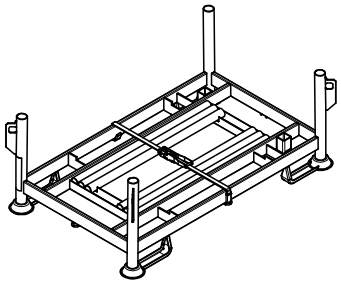



| Art no. | Weight [kg] | | L [mm] |
|---|---|---|---|
| 103429 | 45.300 | **Pallet RP 80x150/2 ga** | 1500 |

For stacking and transporting formwork and scaffolding components.

**Notes**

Follow Instructions for Use!

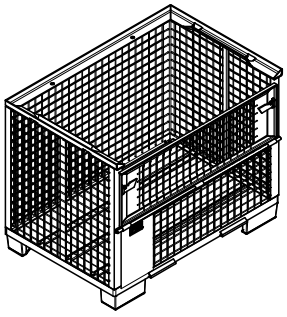


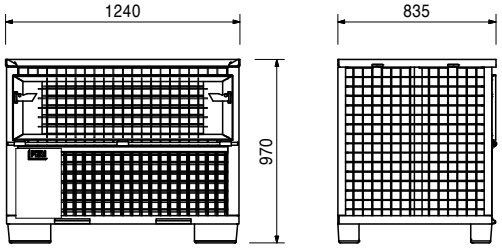
| Art no. | Weight [kg] | |
|---|---|---|
| 065068 | 88.200 | **Crate Pallet 80x120 ga** |

For stacking and transportation of formwork and scaffold components.

**Notes**

Follow Instructions for Use!
Capacity approx. 0.75 m³.
Load-carrying capacity 1.5 t.



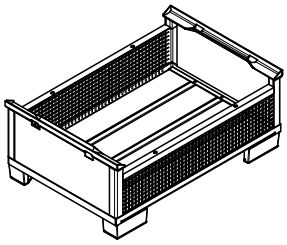


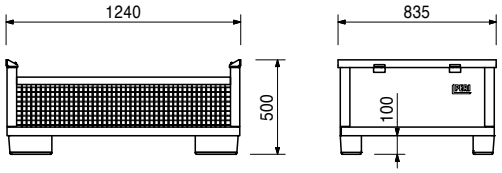
| Art no. | Weight [kg] | |
|---|---|---|
| 025660 | 66.500 | **Hardware Box 80x120 ga** |

For stacking and transportation of formwork and scaffold components.

**Notes**

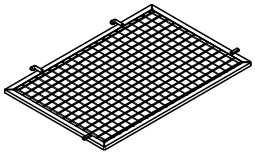
Follow Instructions for Use!
Capacity approx. 0.28 m³.
Permissible load-bearing capacity 1.5 t.

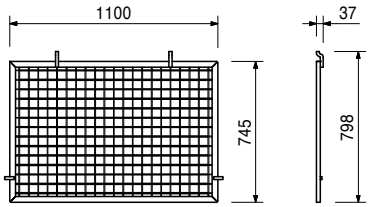





| Art no. | Weight [kg] | |
|---|---|---|
| 065067 | 9.410 | **Lid for Crate Pallet 80x120** |

For closing Crate Pallets 80 x 120 or Hardware Boxes 80 x 120.





**PERI SE**
**Formwork Scaffolding Engineering**
Rudolf-Diesel-Strasse 19
89264 Weissenhorn
Germany
Tel. +49 (0)7309.950-0
Fax +49 (0)7309.951-0
info@peri.com
www.peri.com

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