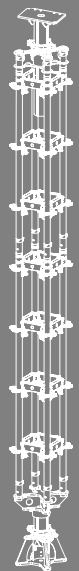
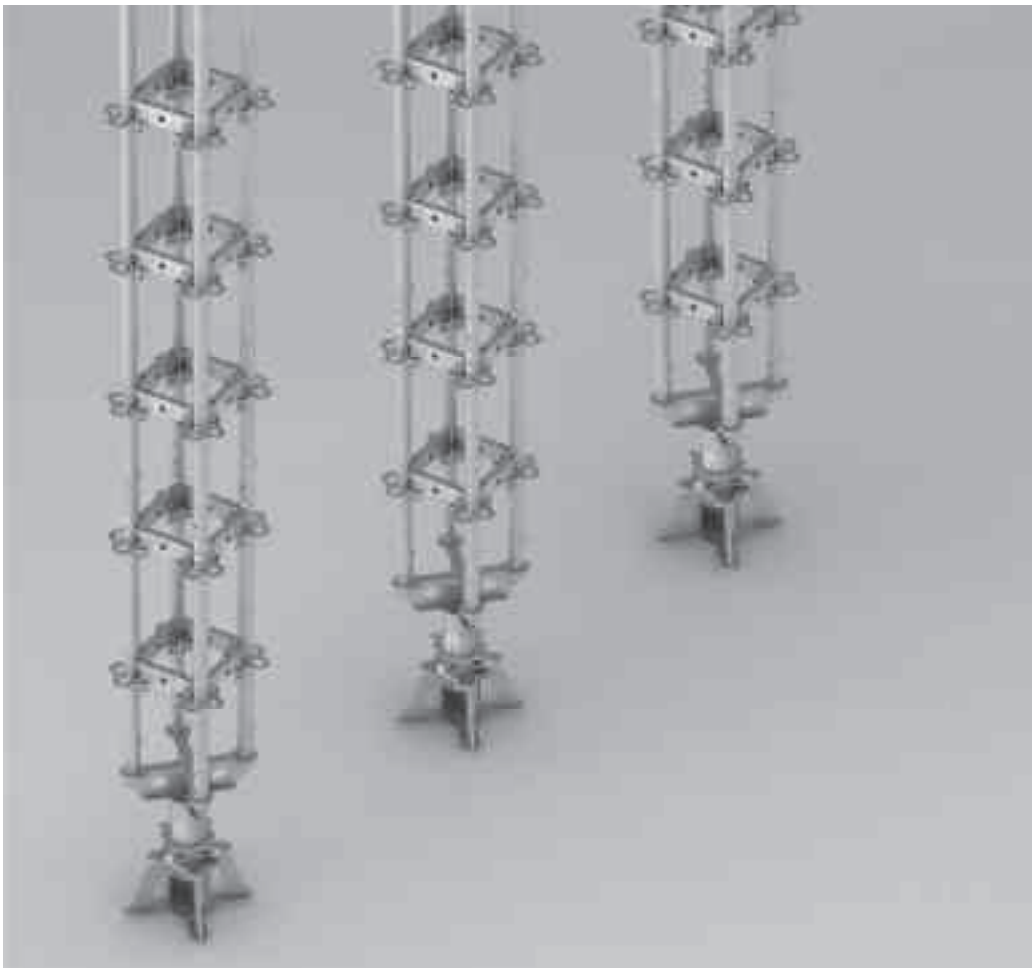


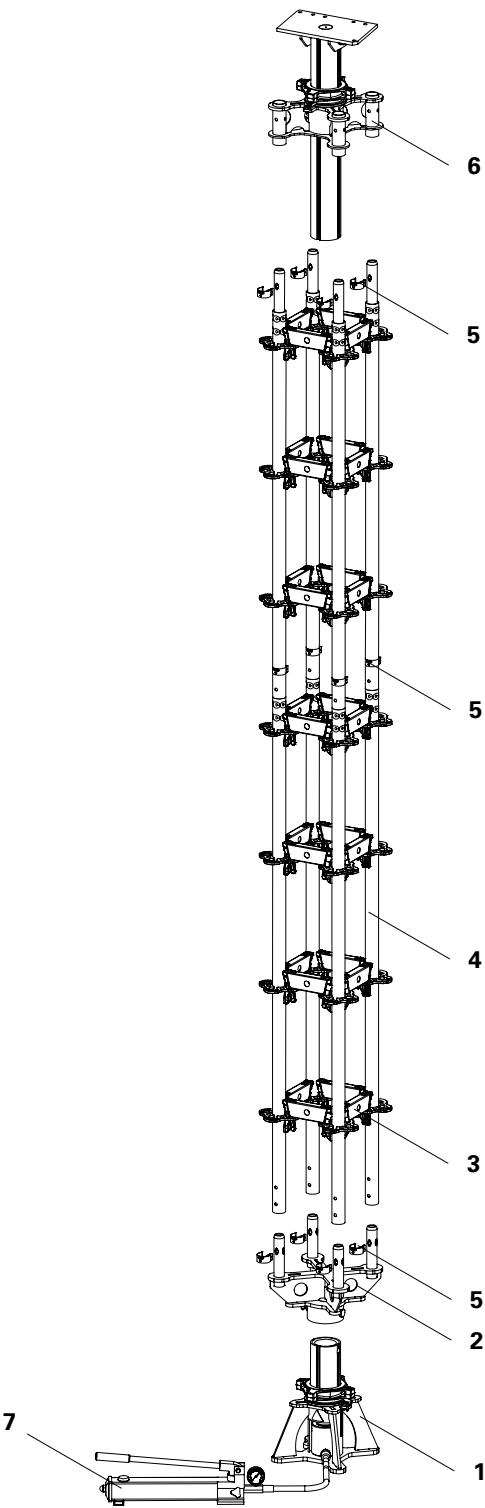
# **PERI UP Flex Heavy-Duty Prop HD**

Instructions for Assembly and Use – Standard Configuration



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## Main components



- |   |                  |   |  |
|---|------------------|---|--|
| 1 | Lowering Jack HD | 5 | Locking Pin Ø 48/57 or Bolt M10 x 70, Mu |
| 2 | Connector UJC    | 6 | Head Spindle TR 110-80/55                |
| 3 | Ledger UH Plus   | 7 | Hydraulic Unit HD                        |
| 4 | Standard UVR     |   |  |

## Key

### Pictogram | Definition


 Safety instructions

 Note

 Lifting point

 Visual check

 Tip

 Misapplication

### Dimension specifications

Dimensions are usually given in cm. Other units of measure, 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**.

### Arrows

→ Arrow representing an action

---

## Presentational reference

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

For a better understanding, detailed illustrations are partly incomplete. The safety installations which have possibly not been included in these detailed drawings must nevertheless still be available.



## Target groups

### Contractors

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

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

### Construction site coordinator

The Safety and Health Protection Coordinator\*

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

### Qualified personnel

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

### Qualified specialists

The scaffolding may only be assembled, modified or dismantled by personnel who are suitably qualified to do so. For the work to be carried out, the qualified specialists must have received instructions\*\* which contain at least the following points:

- An explanation of the plan for the assembly, modification or dismantling of the scaffolding in an understandable form and language.
- Description of measures in order to safely assemble, modify or dismantle the scaffolding.
- Designation of the preventive measures to avoid the risk of persons and objects falling.

- Designation of the safety precautions in the event of changing weather conditions which could adversely affect the safety of the scaffolding as well as the personnel concerned.
- Details regarding the permissible loads.
- Description of any other risks that are associated with the assembly, modification or dismantling procedures.



**In other countries, ensure that the relevant national guidelines and regulations in the respective current version are complied with!**

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

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

## Additional technical documentation

- Approval Z-8.22-863 PERI UP Flex Modular System
- Approval for Main Beam Clamp HD
- Instructions for Use
  - Hydraulic Unit HD
  - Pallets and Stacking Devices
- Data Sheet for Anchor Bolt PERI 14/20 x 130
- PERI Design Tables – Formwork and Shoring

## Intended use

### Product description

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

The 4-legged Rosett Heavy-Duty Prop consists of standard PERI UP system components and is used for the vertical transfer of concentrated individual loads of up to 200 kN.

These occur in shoring assemblies as well as construction work on existing buildings. The hydraulic cylinder in the base allows displacement and force-controlled lowering of the prop under load as well as systematic force-controlled pre-stressing which is required with shoring in existing buildings.

For assembling the Heavy-Duty Prop, individual Standards are connected with PERI UP Ledgers UH Plus which are particularly easy to assemble due to the wedge connections.

Through the combination of standards with varying lengths, all heights can be continuously achieved.

### Features

- The height is always adjusted via the Head Spindle.
- Pre-loading and load release of the Heavy-Duty Spindle is carried out by means of the Hydraulic Unit HD.
- The transmission of force in a non-operating mode takes place mechanically via the adjusting nut; in the process, the Hydraulic Unit HD is free of any load and can be removed.
- Heavy-Duty Props in the form of shoring assemblies facilitate a wide range of project-specific fields of application.

### System dimensions

Ground plan of the standard configuration 25 x 25 cm.

### Permissible load-bearing capacities

- assembly height  $\leq 8.00$  m,
- permissible prop load up to 200 kN.

---

## Instructions for use

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

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

Changes to PERI components are not permitted.

## Care and maintenance instructions

In order to maintain the value and operational readiness of the PERI products over the long term, clean the elements after each use.

Some repair work may also be inevitable due to the tough working conditions.

The following points should help to keep care and maintenance costs as low as possible.

Do not clean powder-coated or galvanized components with steel brushes or metal scrapers.

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

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

Do not clean components when suspended on a crane.

Any repairs to PERI products are to be carried out by PERI qualified personnel only.

## Cross-system

### General

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

These Instructions for Assembly and Use can be used as the basis for creating a risk assessment. The risk assessment shall be compiled by the contractor. The Instructions for Assembly and Use do not replace the risk assessment!

Always take into consideration and comply with the safety instructions and permissible loads.

For the application and inspection of PERI products, the current safety regulations and guidelines must be observed in the respective countries where they are being used.

Materials and working areas are to be inspected on a regular basis especially before each use and assembly for:

- signs of damage,
- stability and
- functionality.

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

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

Components provided by the contractor must conform with the characteristics required in these Instructions for Assembly and Use as well as all valid construction guidelines and standards. Unless otherwise indicated, this applies in particular to:

- timber components: Strength Class C24 for Solid Wood according to EN 338.
- scaffold tubes: galvanised steel tubes with minimum dimensions of Ø 48.3 x 3.2 mm according to EN 12811-1:2003 4.2.1.2.
- scaffold tube couplings according to EN 74.

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

On the basis of this risk assessment, determine appropriate measures for working and operational safety as well as stability.

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

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

- create an additional risk assessment, with appropriate measures for ensuring the stability of the scaffolding system being carried out based on the results,
- and arrange for an extraordinary inspection by a qualified and competent person. The aim of this inspection is to identify and rectify any damage in good time in order to guarantee the safe use of the scaffolding system.

Exceptional occurrences can include:

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

### Assembly, modification and dismantling work

Assembly, modification or dismantling of scaffolding systems may only be carried out by qualified specialists under the supervision of an authorized person. The qualified specialists must have received appropriate training for the work to be carried out with regard to specific risks and dangers.

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

The scaffolding must be inspected before the initial use by a qualified person in order to ensure correct and safe functioning. The result of the inspection must be documented in an inspection record.

The contractor must ensure that the personal protective equipment required for the assembly, modification or dismantling of the system, e.g.

- safety helmet,
- safety shoes,
- safety gloves,
- safety glasses,

is available and used as intended.

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

The contractor must

- provide safe working areas for site personnel which are to be reached through the provision of safe access ways. Areas of risk must be cordoned off and clearly marked.
- ensure the stability during all stages of construction, in particular during assembly, modification and dismantling operations.
- ensure and prove that all loads are safely transferred.

### Utilisation

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

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

## System-specific

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

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

The load-distributing support used, such as planking, must match the respective base. If several layers are required, planks are to be arranged crosswise.

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

Wedge connections are to be securely fixed using a 500 g hammer.

## Storage and transportation

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

Do not drop the components.

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

During the moving procedure,

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

Always guide pre-assembled scaffolding bays, scaffolding units or scaffolding sections with ropes when moving with a crane.

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

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

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

## Lowering Jack HD



### Risk of crushing!

During operations, keep hands and feet away from the cylinder and Lowering Jack.

Permissible load-bearing capacity of up to 200 kN.



- The height of the prop is adjusted only by means of the adjusting nut on the Head Spindle.
- “Slot hole 9” is recommended as the universally suitable basic setting, regardless of the intended use.
- Set up Lowering Jack on an even and sufficiently load-bearing surface, e.g. for load distribution: steel plate 350 x 350 x 15 mm on Class C 12/15 concrete.

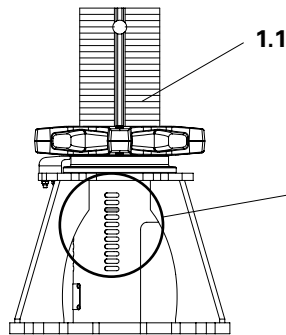


Fig. A1.01

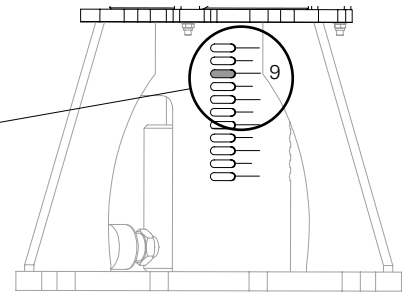


Fig. A1.01a

### Preparation

Screw out Spindle Tube (1.1) until the red pressure ring is visible in “slot hole 9”. (Fig. A1.01 + A1.01a)

## Connector UJC



The connecting bolt secures the inner spherical piece.

### Assembly

1. Place Connecting Plate (2) with Connecting Bolts (2.2) on the Spindle Tube. (Fig. A1.02a)
2. Loosen cotter pin and remove Plate.
3. Remove Connecting Bolts (2.2). Connecting Plate slides downwards and the spherical piece (2.1) is positioned on the Spindle Tube. (Fig. A1.02b)
4. Insert Connecting Bolts into the Connecting Plate.
5. Attach Plate and secure by means of cotter pins. (Fig. A1.02c)

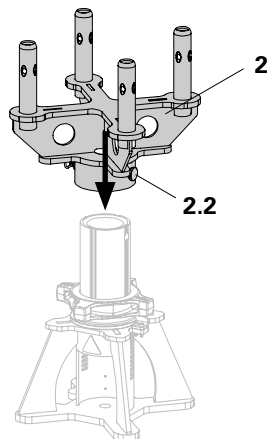


Fig. A1.02a

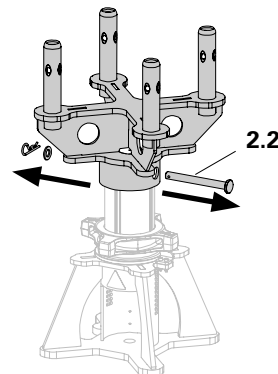


Fig. A1.02b

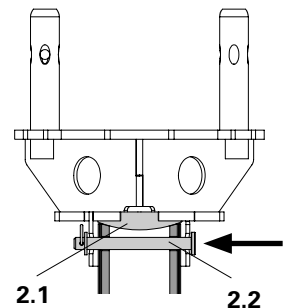


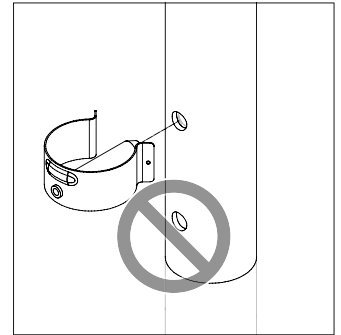
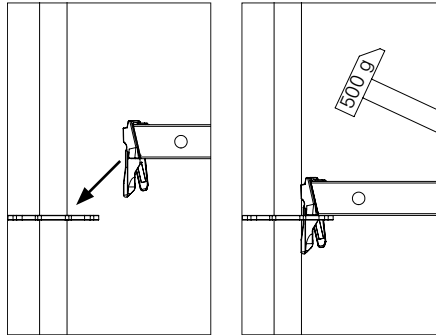
Fig. A1.02c

## Pre-assembly of props

- |   |  |
|---|--|
| 3 | Ledger UH 25 Plus                          |
| 4 | Standard UVR                               |
| 5 | Locking Pin Ø 48/57 /<br>Bolt M10 x 70, Mu |



- The props can be pre-assembled in units or the complete length, e.g. from a working scaffold.
- The prop can be inclined up to an angle of 2° by means of the Connecting Plate.
- Align all drilled holes in the standards in one direction.
- Ledger spacing: 50 cm.



## Assembly

1. Assemble Standards UVR (4) and Ledgers (3) up to the required height in forming a prop or unit. (Fig. A1.03)
2. Use a 500 g hammer to firmly secure all wedges.
3. Position the unit on the Spigots of the Connecting Plate (2). (Fig. A1.04)
4. Place the pre-assembled units on the Spigots of the bottom Standards.
5. Tightly connect Standards UVR with Locking Pins (5).
6. Secure prop against tipping, see A3.

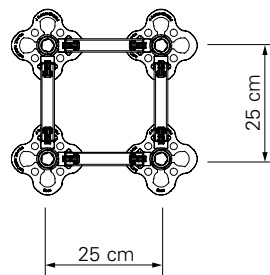
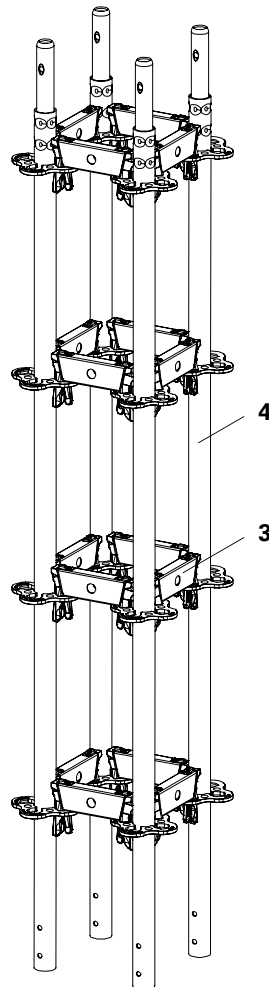


Fig. A1.03

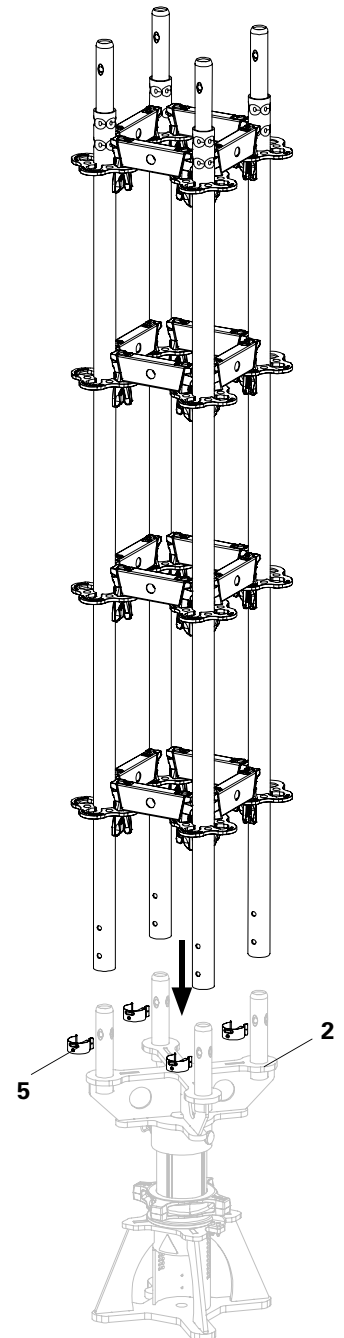


Fig. A1.04

## Head Spindle TR 110-80/55

6	Head Spindle TR 110-80/55	1x
5	Locking Pin Ø 48/57 / Bolt M10 x 70, Mu	

Usable spindle length 55 cm.



- The height of the prop is adjusted only by means of the adjusting nut on the Head Spindle.
- The Head Spindle can be uniaxially tilted up to 3°.
- Assembly takes place with personnel positioned in a safe working area, e.g. working scaffold.

### Assembly

1. Position Head Spindle (6) on the Spigots of the Standards UVR.
2. Tightly connect Standards UVR and Head Spindle with Locking Pins Ø 48/57 (5). (Fig. A1.05)
3. Secure prop against tipping, see A3.



### Building redevelopment

If there is not enough clearance for the installation of the Head Spindle from above during vertical assembly, then the Head Spindle can be mounted from the side.

### Assembly

1. Remove Ledgers (3) up to the leg joint on three sides of the prop.
2. Remove Locking Pins Ø 48/57 (5) from two opposite-positioned Standards.
3. Turn the two free Standards UVR by 45°. (Fig. A1.06a)  
→ Head Spindle (not spindled out) can be mounted from the side.
4. Push the Spindle Tube (6.1) through between the rosettes of turned Standards and attach Head Spindle on the Standards. (Fig. A1.06)
5. Turn back Standards.
6. Tightly connect leg joints and Head Spindle with Locking Pins.
7. Install remaining Ledgers.

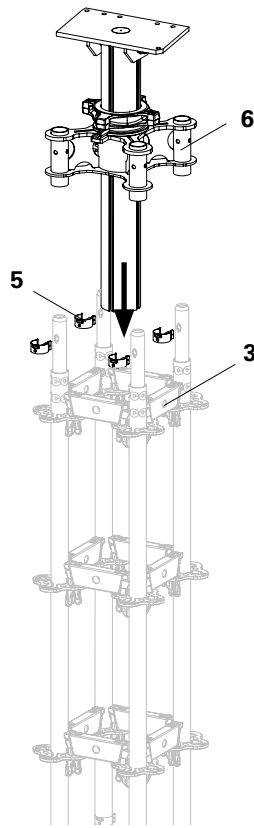


Fig. A1.05

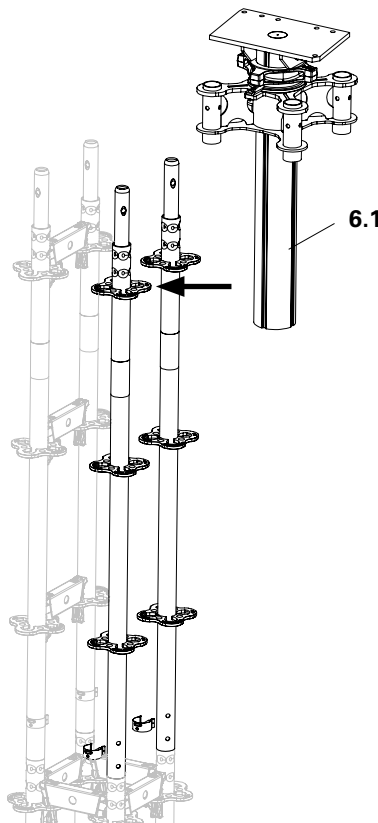


Fig. A1.06

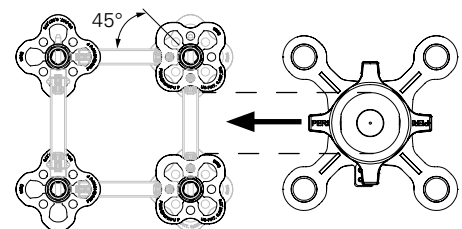


Fig. A1.06a



## Pre-assembly of props

2	Connector HD	1x
3	Ledger UH 25 Plus	
4	Standard UVR	
5	Locking Pin Ø 48/57 / Bolt M10 x 70, Mu	
6	Head Spindle TR 110-80/55	1x



- The prop can be pre-assembled in units or the complete length.
- Align all holes in the Standards in one direction.
- Ledger spacing: 50 cm.

## Assembly

1. Assemble Standards UVR (4) and Ledgers (3) to form prop according to the required height. (Fig. A2.01)
2. Use a 500 g hammer to firmly secure all wedges.
3. Position Connector (2) on the Spigots of the Standards and tightly connect by means of Locking Pins (5). (Fig. A2.02)
4. Attach Head Spindle TR 110-80/55 (6) to the Spigots of the Standards and tightly connect with Locking Pins (5). (Fig. A2.03)

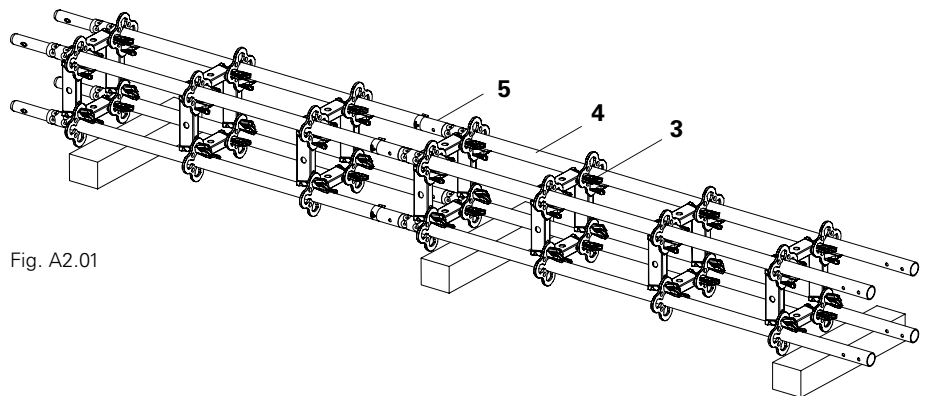
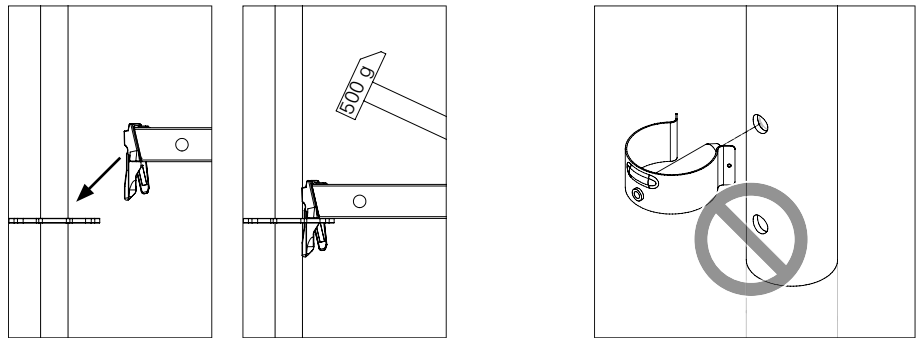


Fig. A2.01

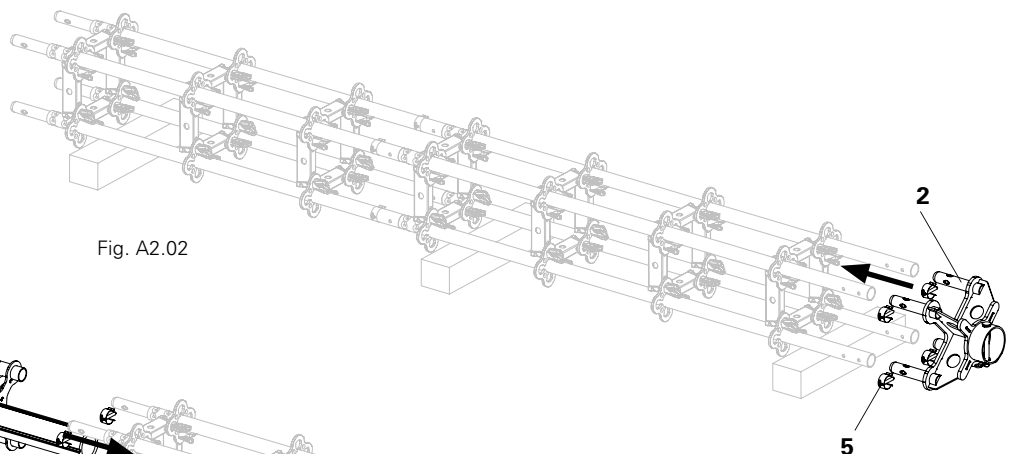


Fig. A2.02

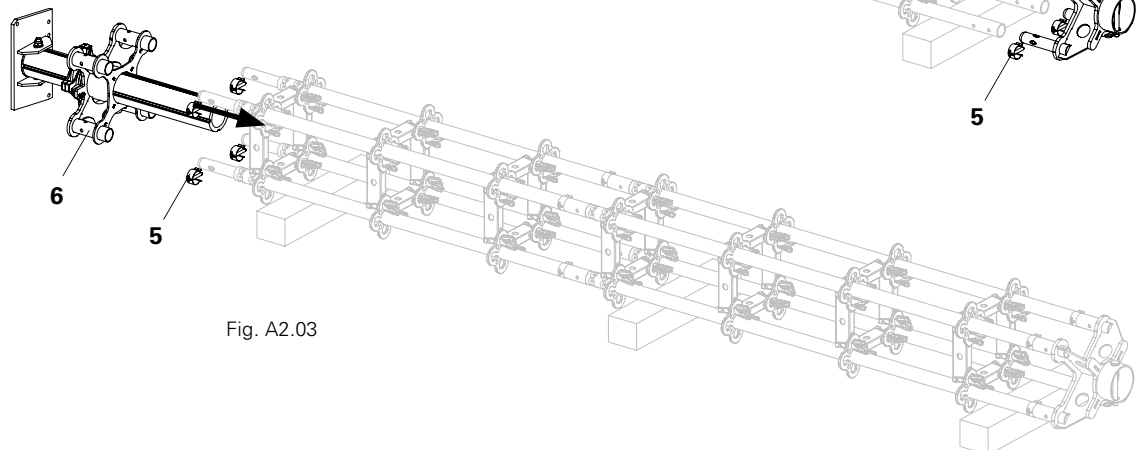


Fig. A2.03

## Prop erection

1 Lowering Jack HD 1x



- The height of the prop is adjusted only by means of the Adjusting Nut on the Head Spindle.
- Set up Lowering Jack on an even and sufficiently load-bearing surface, e.g. for load distribution: steel plate 350 x 350 x 15 mm on Class C 12/15 concrete.



- Are all connections tight?
- Are all ledgers securely in place?

### Preparation

Screw out Spindle Tube (1.1) until the red pressure ring is visible in "slot hole 9".  
(Fig. A2.04)

### Erection

1. Surround prop below the Head Spindle, e.g. with textile tape. (Fig. A2.05)
2. Attach prop to crane and raise to a vertical position. (Fig. A2.06)
3. Position prop with Connecting Plate (2) on the Spindle Tube (1.3) of the Lowering Jack.
4. Release cotter pins and remove plate.
5. Remove Connecting Bolts (2.2).  
Connecting Plate slides downwards and spherical piece is positioned on the Spindle Tube.
6. Insert Connecting Bolts into the Connecting Plate.
7. Attach plate and secure with cotter pins. (Fig. A2.06a)
8. Secure prop against tipping, see A3.
9. Release prop from crane.

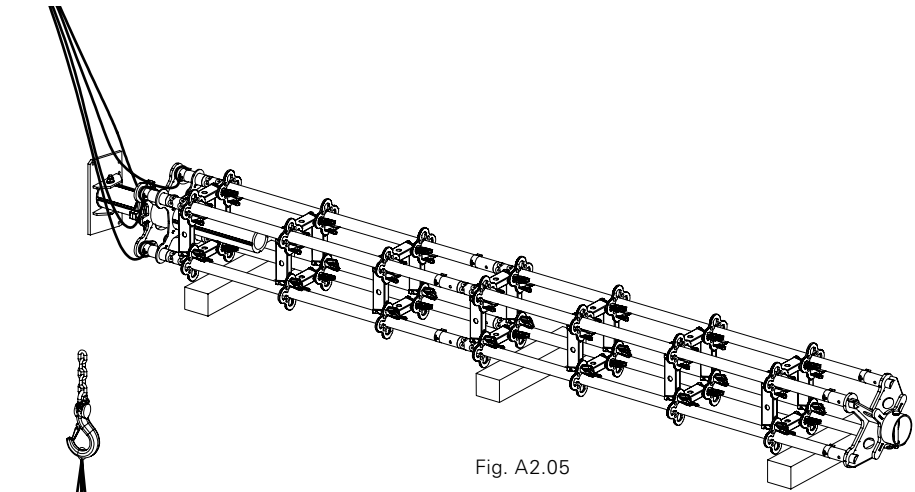


Fig. A2.05

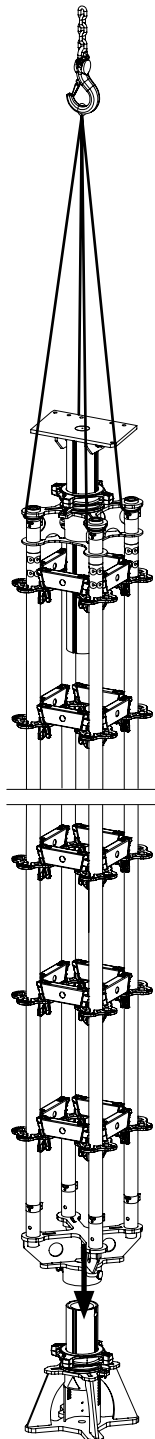


Fig. A2.06

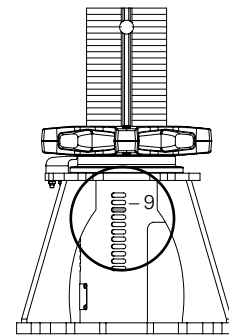


Fig. A2.04

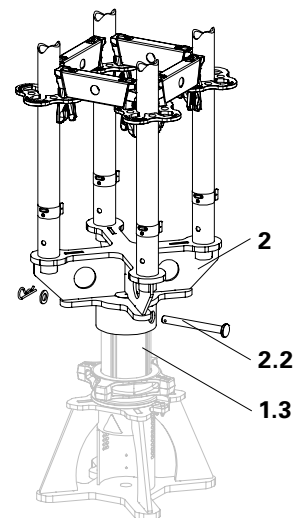


Fig. A2.06a



- During assembly and dismantling, the heavy-duty props are to be secured against tipping by means of temporary assembly aids.
- With longer heavy-duty props, additional support holders are required at higher positions.

## Support with Push-Pull Props

8	Push-Pull Prop	3x
9	Brace Connector HDR	3x
10	Base Plate RSS	3x
11	Anchor Bolt 14/20 x 130	3x



**For providing stability, mount 3 Push-Pull Props as assembly aids!**

### Assembly

1. Connect the tube coupler of the Brace Connector HDR (9) to the Standard UVR. (Fig. A3.01)
2. Fix Push-Pull Prop (8) with bolts and cotter pins. (Fig. A3.01a)
3. Fix Base Plate RSS (10) to the foundations by means of Anchor Bolts (11). (Fig. A3.01b)
4. Fix Push-Pull Prop to the Base Plate with bolts and cotter pins. (Fig. A3.01b)
5. Release prop from crane. (Fig. A3.01)

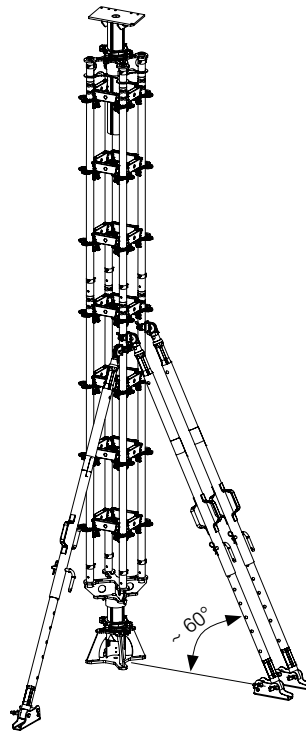


Fig. A3.01

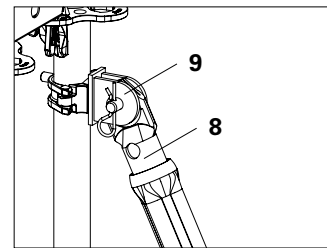


Fig. A3.01a

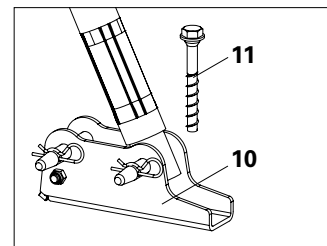


Fig. A3.01b

## Brace props with Ledgers

12	Ledgers UH Plus	2x
----	-----------------	----



**For providing stability, mount Push-Pull Props and Ledgers!**

### Assembly

1. Mount Push-Pull Props, see above.
2. Attach Ledgers (12) to rosetts and secure with hammer. (Fig. A3.02)

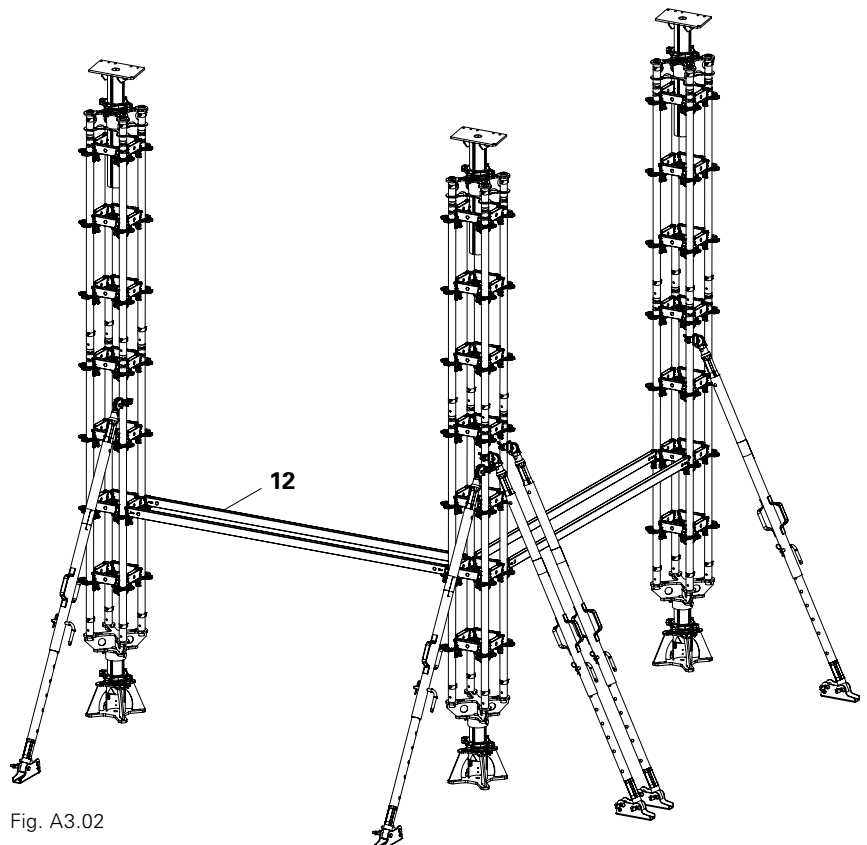


Fig. A3.02



Alternatively, the props can also be secured against falling or horizontal movement during assembly operations using existing structural parts, e.g. walls.

## Rosett Heavy-Duty Prop



### Risk of tipping!

**No horizontal movement of individual props!**

### Dismantling

The prop can be dismantled when in a vertical or horizontal position.

#### Dismantling horizontally:

1. Attach prop to crane.
2. Remove Lowering Jack HD.
3. Lift prop with the crane and lay on timbers.
4. Release Locking Pins.
5. Remove Head Spindle TR and Lowering Jack HD.
6. Release Ledgers by means of a hammer and remove.
7. Place components in designated transport container.

#### Dismantling vertically:

Dismantling vertically is carried out from top to bottom with personnel positioned in a secure working area, e.g. on a working scaffold.



If there is not enough clearance for the installation of the Head Spindle from above during vertical assembly, then the Head Spindle can be mounted from the side.

### Removing the Head Spindle

1. Lower Head Spindle (6).
2. Remove Ledgers (3) up to the leg joint on three sides of the prop.
3. Remove Locking Pins  $\varnothing 48/57$  (5) from two opposite-positioned Standards.
4. Turn the two free Standards UVR by  $45^\circ$ .  
→ Head Spindle can be removed from the side.
5. Lift Head Spindle and remove Spindle Tube (6.1) from the side between the rosettes of the turned Standards. (Fig. A4.02a + A4.02b)

### Connector HD

1. Remove Connector (2) from the Spindle Tube. (Fig. A4.01a)
2. Remove spherical piece (2.1).
3. Turn over Connector and insert spherical piece.
4. Secure Connecting Bolts (2.2) with plate and cotter pins. (Fig. A4.01b)

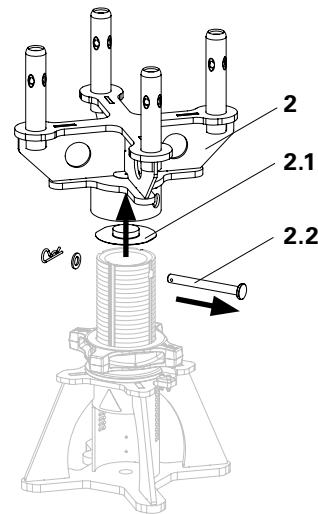


Fig. A4.01a

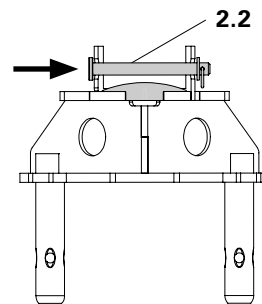


Fig. A4.01b

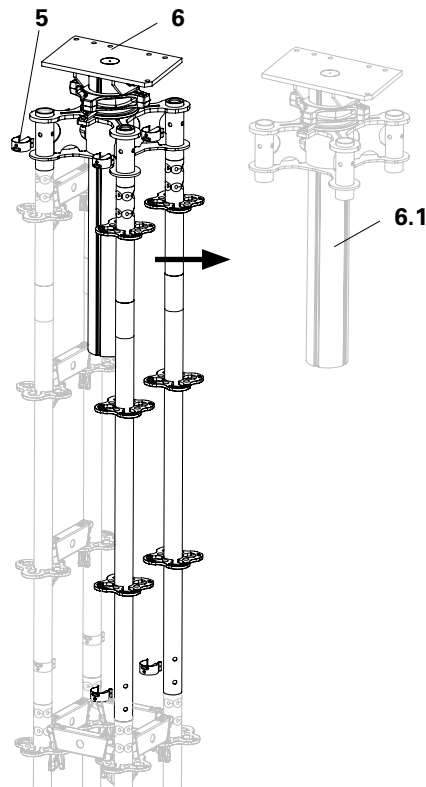


Fig. A4.02a

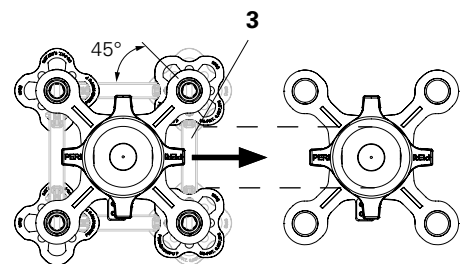


Fig. A4.02b

## Load-controlled preloading



- Always follow the Instructions for Use for the Hydraulic Unit HD!
- Permissible load-bearing capacity of up to 200 kN!
- Take pre-stressing plan into consideration!
- Remove assembly aids!



- Illustrations are without Connector and Heavy-Duty Prop.
- Cylinder stroke is limited to max. 10 mm through the adjusting nut and hold-down device.
- Monitor load distribution on the pressure gauge.

### Prerequisites

- Prop or Main Beam Area with Lowering Jack is perpendicular under the component to be supported, and the red pressure ring is visible in "slotted hole 9".
- The pump is connected with the hydraulic cylinder. The cylinder is retracted.
- The pump valve is closed. (Fig. A5.01 + A5.02)

### Pre-stressing the prop

1. Insert hydraulic cylinder into the Lowering Jack (1).
2. Operate pump lever until the cylinder rests on the red pressure ring (1.1) of the Spindle Tube. (Fig. A5.02a)
3. Build up pressure with the pump lever until the predetermined force is shown on the pressure gauge; see static and prestressing plan. Monitor free path on the hold-down device and pressure gauge. (Fig. A5.03)
4. Rotate adjusting nut downwards in a clockwise direction by hand until the adjusting nut rests on the plate. (Fig. A5.04)
5. Repeat steps 3 and 4 until the required force has been reached.
6. Rotate adjusting nut downwards in a clockwise direction by hand until the adjusting nut rests on the plate.
7. Open pump valve. Hydraulic cylinder retracts and the load transfer takes place via the adjusting nut.

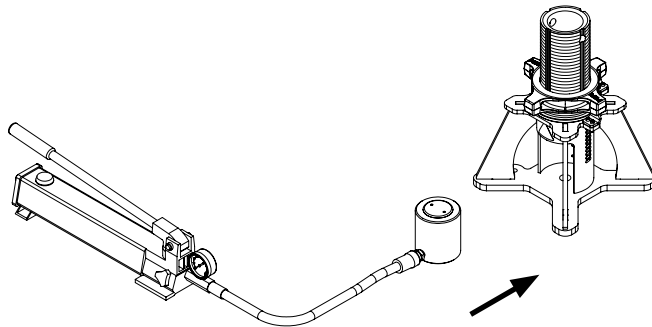


Fig. A5.01

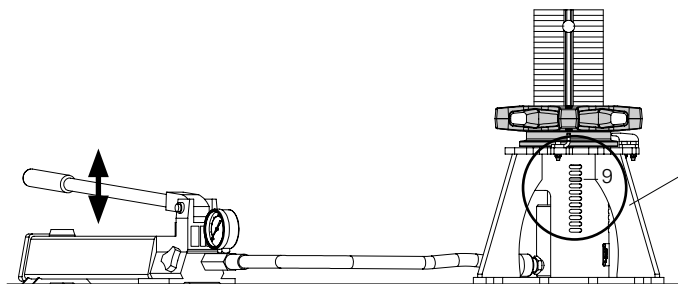


Fig. A5.02

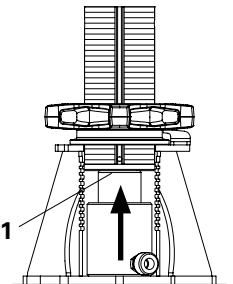


Fig. A5.02a

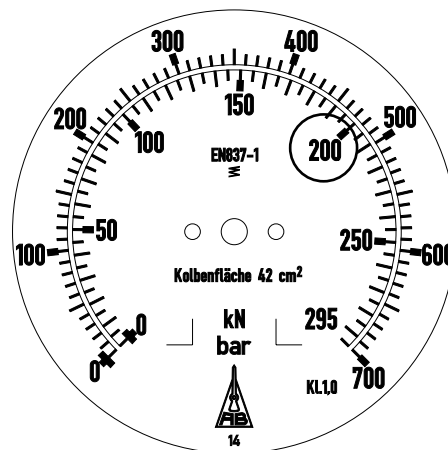


Fig. A5.03

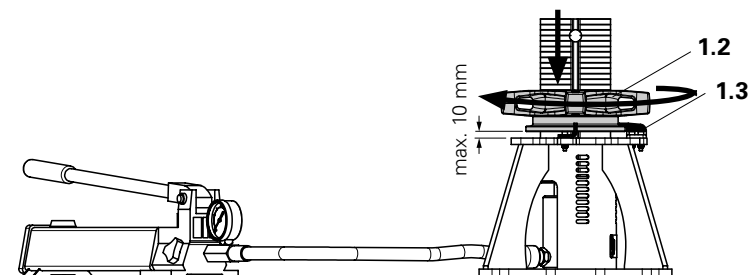


Fig. A5.04

## Load-controlled lowering



- Always follow the Instructions for Use for the Hydraulic Unit HD!
- Permissible load-bearing capacity of up to 200 kN!
- With multi-part supports, ensure that all props are lowered uniformly!
- Take into consideration the lowering plan!
- Remove assembly aids!



- Illustrations are without Connector and Heavy-Duty Prop.
- Cylinder stroke is limited to max. 10 mm through the adjusting nut and hold-down device.
- Monitor load distribution on the pressure gauge.

### Prerequisites

- The pump is connected with the hydraulic cylinder.
  - The pump valve is closed.
- (Fig. A5.05)

### Preparation

1. Insert hydraulic cylinder into the Lowering Jack (1).
  2. Operate pump lever until the cylinder rests on the red pressure ring (1.1) of the Spindle Tube.
- (Fig. A5.06)

### Release the adjusting nut and lower

1. Operate the pump lever until the adjusting nut (1.2) is free (1 – 2 pump strokes).
2. Monitor pressure gauge: max. 200 kN.
3. Turn the adjusting nut upwards by hand in a counter-clockwise direction until the locking nut rests against the hold-down device. (Fig. A5.07)
4. Carefully open the pump valve (7.1) on the pump and monitor the pressure gauge indicator. The cylinder retracts and is lowered by max. 10 mm together with the adjusting nut and prop.
5. Close pump valve.
6. Repeat procedure until the predetermined force is shown on the pressure gauge; see static and pre-tensioning plan. (Fig. A5.08)

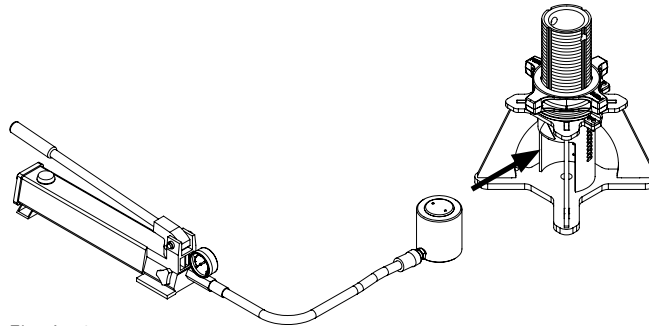


Fig. A5.05

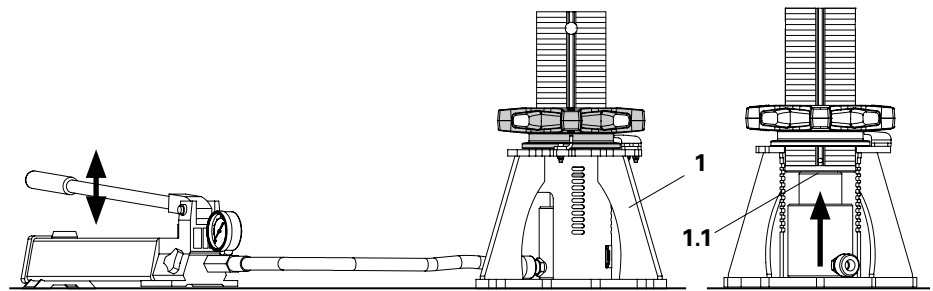


Fig. A5.06

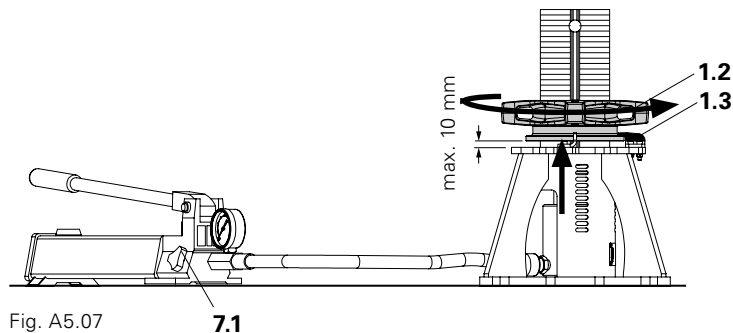


Fig. A5.07

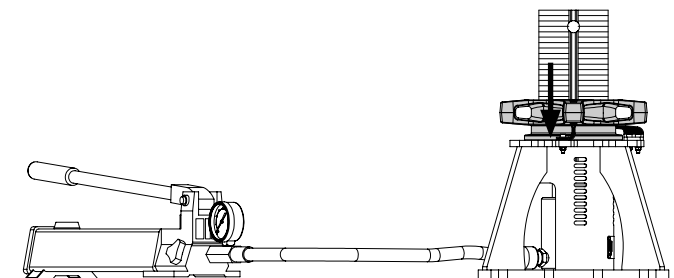


Fig. A5.08

## Displacement-controlled lowering

### Hydraulic lowering



- Always follow the Instructions for Use for the Hydraulic Unit HD!
- With multi-part supports, ensure that all props are lowered uniformly!
- Take into consideration the lowering plan!
- Remove assembly aids!



- The lowering range of the hydraulics is max. 62 mm.
- Cylinder stroke is limited to 10 mm. This corresponds to the spacing of the slotted holes in the Lowering Spindle. (Fig. A5.09)

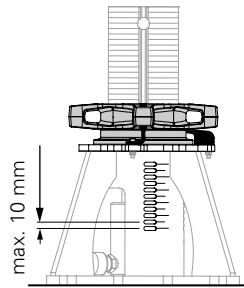


Fig. A5.09

### Prerequisites

Load-controlled as in the lowering procedure.

### Hydraulic lowering

1. Operate pump lever until the cylinder rests on the red pressure ring (1.1) of the Spindle Tube.
2. Operate the pump lever until the adjusting nut (1.2) is free (1 – 2 pump strokes).
3. Turn the adjusting nut upwards by hand in a counter-clockwise direction until the locking nut rests against the hold-down device.
4. Carefully open the pump valve (7.1) on the pump and monitor the slotted holes on the Lowering Jack.
5. Close the pump valve when the red pressure ring (1.1) of the Spindle Tube appears in the next slotted hole. (Fig. A5.10)
6. Repeat procedures 3 and 4 until the Prop or Main Beam Area has been lowered by the predetermined dimension.

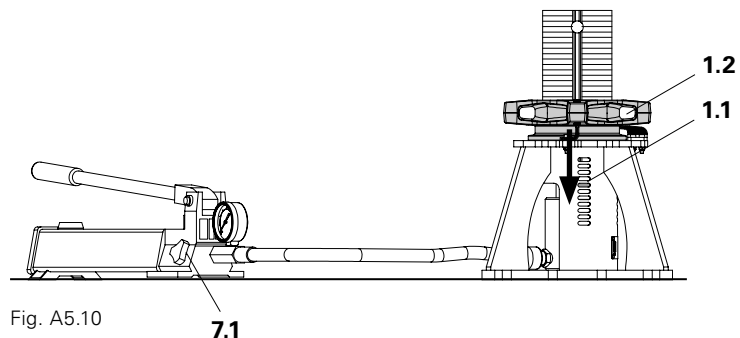


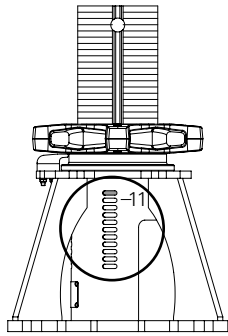
Fig. A5.10

## Displacement-controlled lowering

### Lowering with the Wing Nut Spanner HD



- The lowering range via the Lowering Jack is 100 mm (starting position “slotted hole 11”).
- With a load  $\leq 60$  kN, lowering can take place by means of the Wing Nut Spanner HD without the use of hydraulics.
- The lowering range for extending the formwork superstructure is carried out via the adjusting nut of the spindle head.



### Lowering

1. Remove cylinder from the Lowering Jack and place lowering unit in its case.
2. Turn adjusting nut (1.2) downwards using the Wing Nut Spanner HD (13). (Fig. A5.11a)
3. Spindle in the Head Spindle. (Fig. A5.11b)

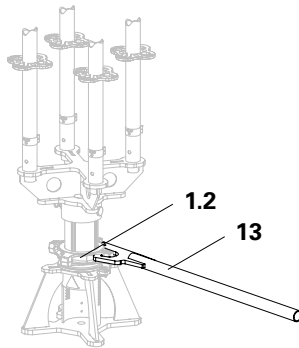


Fig. A5.11a

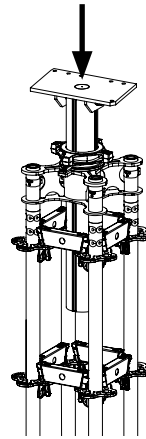


Fig. A5.11b



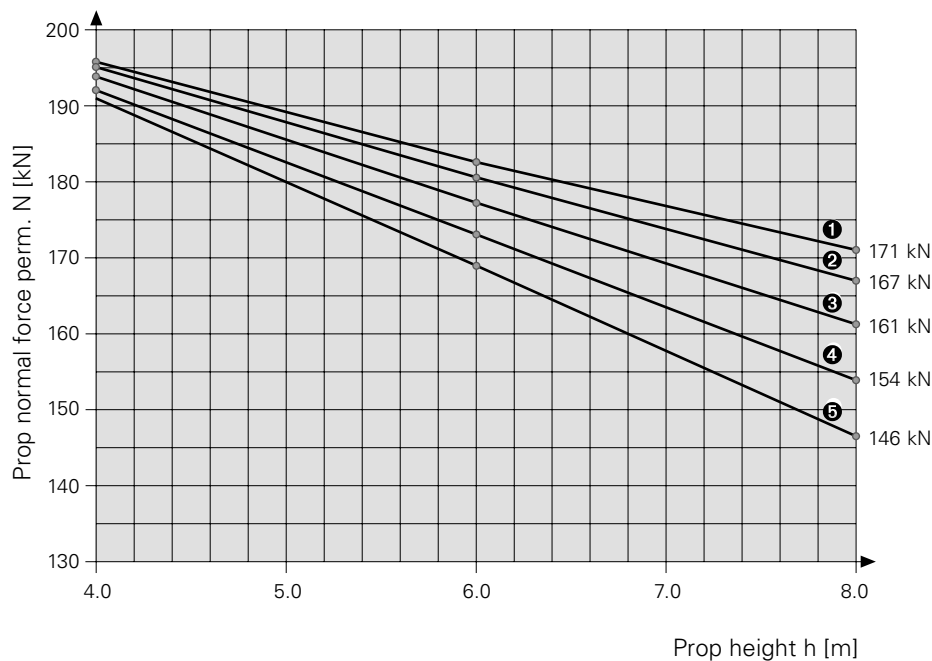


## Permissible load-bearing capacity per prop

Restrained at the top; without intermediate support.

### Wind load with dynamic pressure $q$

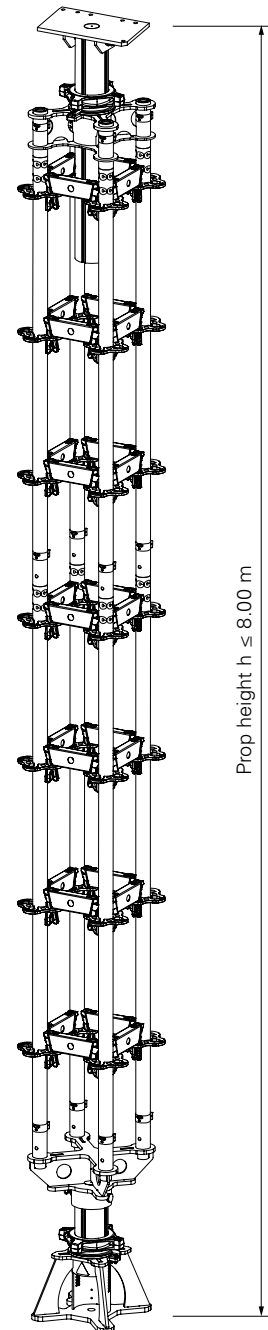
- ❶ without wind
- ❷  $q = 0.2 \text{ kN/m}^2$  Wind
- ❸  $q = 0.5 \text{ kN/m}^2$  Wind
- ❹  $q = 0.9 \text{ kN/m}^2$  Wind
- ❺  $q = 1.3 \text{ kN/m}^2$  Wind



Intermediate values as a result of other wind loads may be determined by linear interpolation between the carrying capacity curves.

### Note:

All tables in the PERI Design Tables or in the PERI brochures which are not separately marked feature permissible load-bearing capacities. After multiplication using  $\gamma_F = 1.5$ , the permissible load-bearing capacity can also be converted into a design value of the resistance  $R_d$  for the method with partial safety factors.



# B2 Prop heights with material list

Prop height [cm] min. max.		Lowering Jack HD	Connector UJC	Head Spindle TR	Standard UVR					Ledger UH 25 Plus	Locking Pin Ø 48/57	Weight [kg]
					50	100	150	200	300			
128	183	1	1	1	4					4	8	78.6
178	233	1	1	1		4				8	8	93.5
228	283	1	1	1			4			12	8	108.5
278	333	1	1	1				4		16	8	123.4
328	383	1	1	1	4			4		20	12	141.7
378	433	1	1	1		4		4		24	12	156.6
428	483	1	1	1			4	4		28	12	171.6
478	533	1	1	1				8		32	12	186.5
528	583	1	1	1			4		4	36	12	201.9
578	633	1	1	1		8			4	40	16	220.0
628	683	1	1	1		4	4		4	44	16	235.0
678	733	1	1	1			8		4	48	16	250.0
728	783	1	1	1			4	4	4	52	16	264.9
778	833	1	1	1				8	4	56	16	279.8

## Note:

- When assembling, attention is to be paid to the symmetrical arrangement of the leg joints.
- When supporting with assembly heights  $h > 6$  m, the Standard UVR 300 must be installed in the centre.

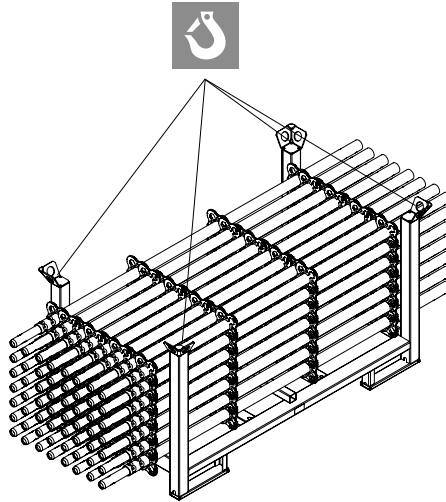


- **Follow Instructions for Use for PERI pallet and stacking devices!**
- **Transportation units must be correctly stacked and secured!**

## Storage

PERI pallets and stacking devices are suitable for lifting by crane or forklift. When using a crane, 4-sling lifting gear is used to move the pallets.

During fork-lift operations, the pallets can be moved either by a fork-lift truck or by using the lifting trolley. All pallets can be lifted using the longitudinal as well as front sides.

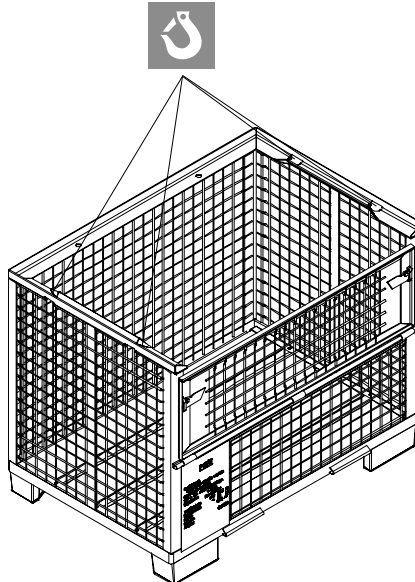


## Transport



- **Ensure loads are correctly secured during transport!**
- **Use tension belts or steel bands.**

The number of pallets that can be transported depends on the respective national transport regulations.



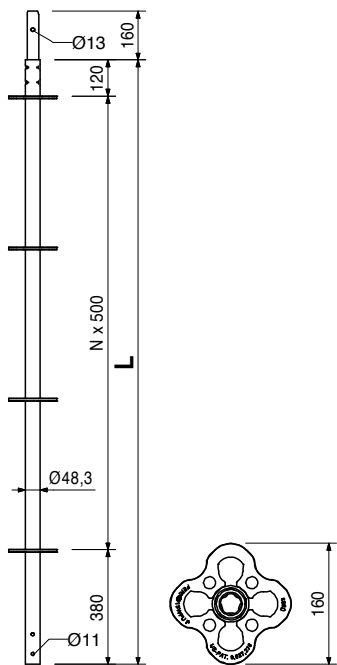
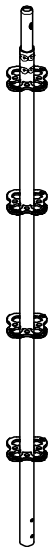
## Hydraulic Unit HD

When transporting or placing in storage, the hydraulic components – hose, cylinder and hand pump – must be separately stored and transported in the designated aluminum case.

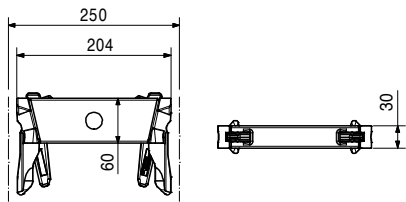
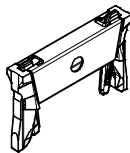




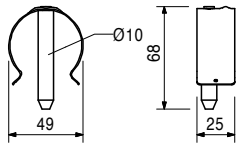
Item no.	Weight kg		L
102859	3.080	Standards UVR	500
101306	5.380	Standard UVR 50	1000
102860	7.690	Standard UVR 100	1500
100009	9.990	Standard UVR 150	2000
100012	14.700	Standard UVR 200	3000
100013	19.200	Standard UVR 300	4000
		Standard UVR 400	



114613	1.420	Ledger UH 25 Plus
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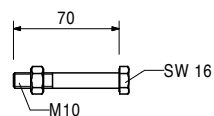
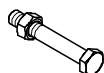
111053	0.059	Locking Pin Ø 48/57
		As tension-proof connection of standards with a diameter of 48 up to 57 mm.



Item no.	Weight kg
100719	0.060

## Bolt ISO 4014 M10 x 70-8.8 MU

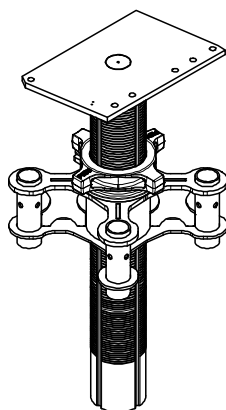
As tension-proof connection of standards for suspended scaffolds or lattice girders.



126435	25.800
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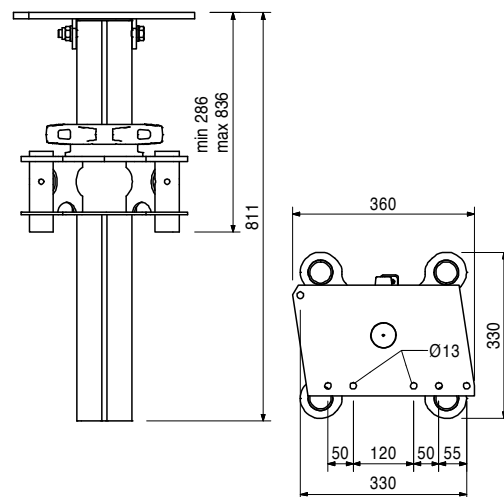
## Head Spindle TR 110-80/55

Head Spindle for Heavy Duty Prop PERI UP.  
With integrated chord couplings. Can be tilted up to 3° along one axis.



### Note

Loads > 50 kN to be released with the Hydraulic Unit HD.



022027	3.600
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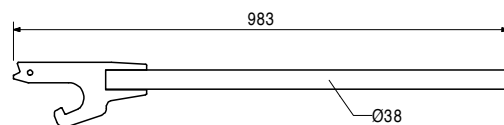
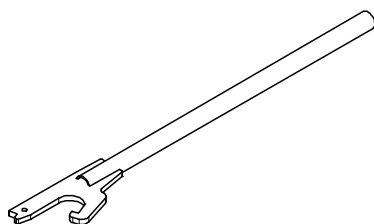
Accessories

## Wing Nut Spanner HD

022027	3.600
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## Wing Nut Spanner HD

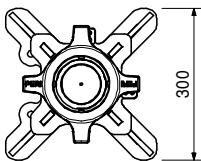
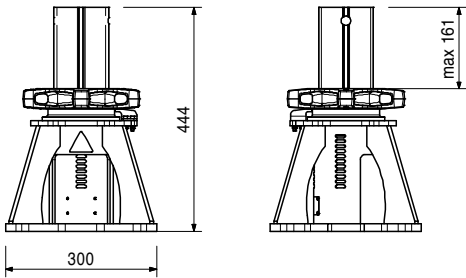
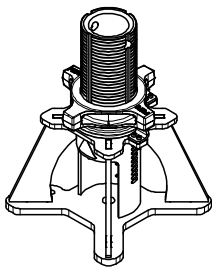
For easy release of the Head Spindle HDK 45, the Head Spindle TR 110-80/55 and the MULTIPROP slab prop.



Item no.	Weight kg
126436	21.400

**Lowering Jack HD**  
For the release of high loads up to 200 kN.  
Displacement- and load-controlled lowering as well  
as prestressing of the support.

**Note**  
Loads > 50 kN to be released with the Hydraulic  
Unit HD.

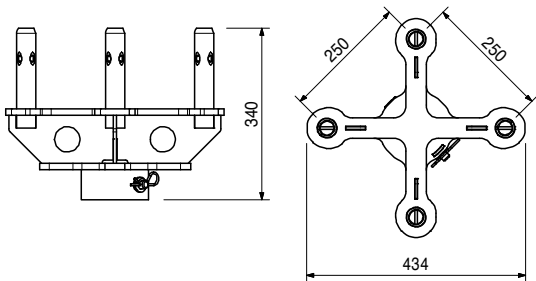
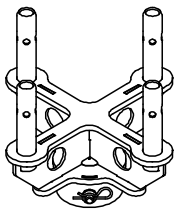


126438	18.000
126437	12.800

Accessories  
**Hydraulic-Unit HD**  
**Connector UJC**

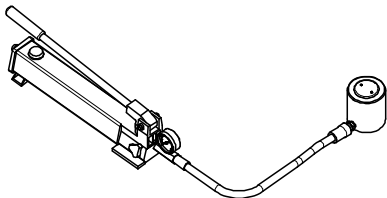
126437	12.800
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**Connector UJC**  
For connecting the standards UVR in increments  
of 25 x 25 cm. Can be pivoted up to 2° on all  
sides.

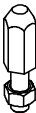
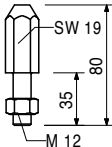
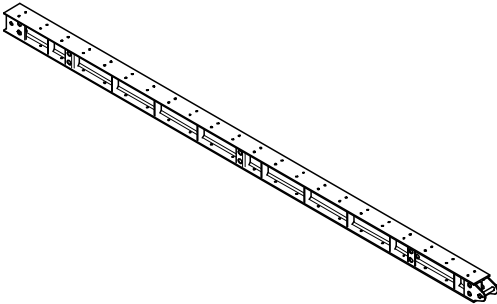
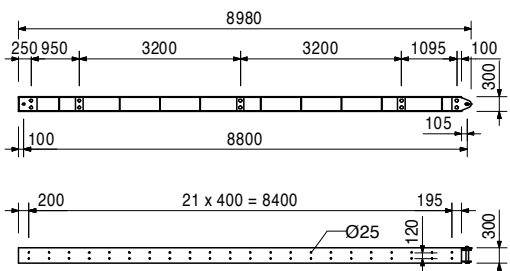
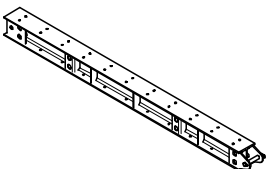
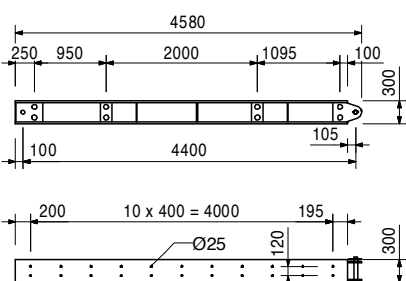
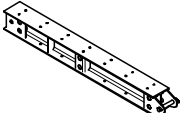
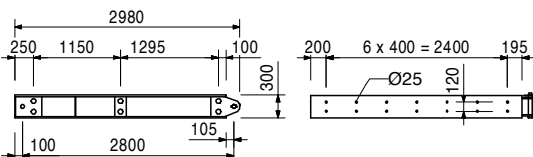


126438	18.000
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**Hydraulic-Unit HD**  
Bearing capacity up to 200 kN (to be read directly  
on the manometer). Cylinder stroke up to 62 mm.

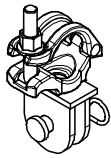
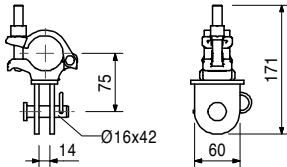


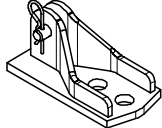
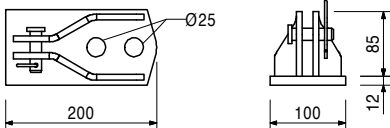


Item no.	Weight kg		
022013	0.137	<b>Centring Bolt HD M12, galv.</b> For the HD 200 system.	<b>Complete with</b> 1 pc. 710330 Nut ISO 4032 M12-8, galv.
			
022008	1130.000	<b>Main Beam HDT 880</b> System steel girder for use with HD 200 main beam areas and special constructions. Profile HEB 300.	<b>Complete with</b> 1 pc. 105435 Bolt Ø 50 x 330 1 pc. 722457 Dowel Pin Ø 10 x 70, galv. 1 pc. 710618 Cotter Pin 8, galv.
			
022009	582.000	<b>Main Beam HDT 440</b> System steel girder for use with HD 200 main beam areas and special constructions. Profile HEB 300.	<b>Complete with</b> 1 pc. 105435 Bolt Ø 50 x 330 1 pc. 722457 Dowel Pin Ø 10 x 70, galv. 1 pc. 710618 Cotter Pin 8, galv.
			
022010	379.000	<b>Main Beam HDT 280</b> System steel girder for use with HD 200 main beam areas and special constructions. Profile HEB 300.	<b>Complete with</b> 1 pc. 105435 Bolt Ø 50 x 330 1 pc. 722457 Dowel Pin Ø 10 x 70, galv. 1 pc. 710618 Cotter Pin 8, galv.
			

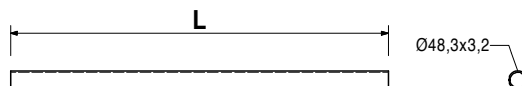
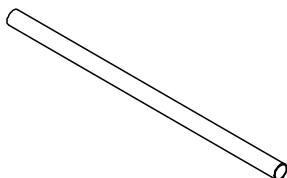
# PERI UP Flex Heavy Duty Prop HD

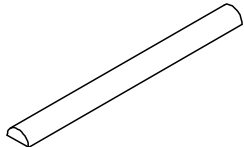
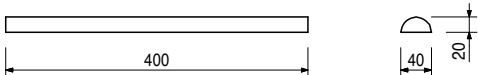
**PERI**

Item no.	Weight kg		
022016	1.300	<b>Brace Connector HDR</b> For connecting push-pull props and kicker braces to components Ø 48 mm.	<b>Complete with</b> 1 pc. 027170 Pin Ø 16 x 42, galv. 1 pc. 018060 Cotter Pin 4/1, galv.
			

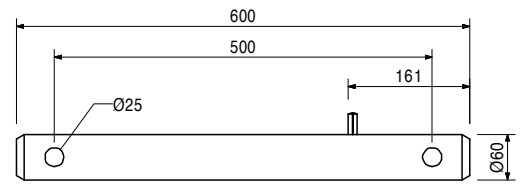
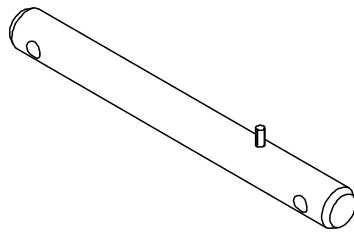
028080	2.970	<b>Connector Kicker/Push-Pull Prop, galv.</b> For connecting push-pull props and kicker braces to Main Beam HDT.	<b>Complete with</b> 1 pc. 018060 Cotter Pin 4/1, galv. 1 pc. 027170 Pin Ø 16 x 42, galv.
			

			L
026415	3.550	<b>Scaffold Tube Steel Ø 48.3 x 3.2</b>	
026417	0.000	<b>Scaff. Tube Steel Ø 48.3 x 3.2, special length</b>	
026411	3.550	<b>Cutting Cost Scaffold Tube</b>	
026412	7.100	<b>Scaff. Tube Steel Ø 48.3 x 3.2, L = 1.0 m</b>	1000
026413	10.650	<b>Scaff. Tube Steel Ø 48.3 x 3.2, L = 2.0 m</b>	2000
026414	14.200	<b>Scaff. Tube Steel Ø 48.3 x 3.2, L = 3.0 m</b>	3000
026419	17.750	<b>Scaff. Tube Steel Ø 48.3 x 3.2, L = 4.0 m</b>	4000
026418	21.600	<b>Scaff. Tube Steel Ø 48.3 x 3.2, L = 5.0 m</b>	5000
		<b>Scaff. Tube Steel Ø 48.3 x 3.2, L = 6.0 m</b>	6000

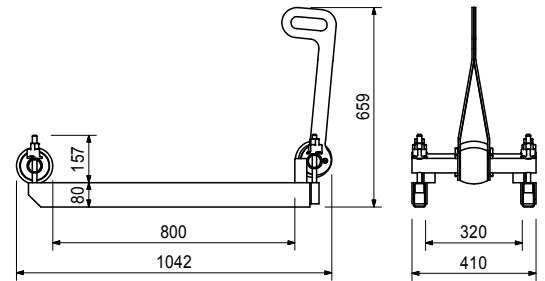
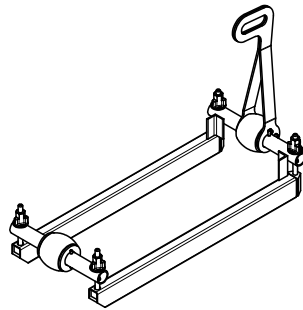


022025	1.970	<b>Centering Bar 40 x 20 x 400</b> For centering crossbeams on the Main Beam HDT.	
			

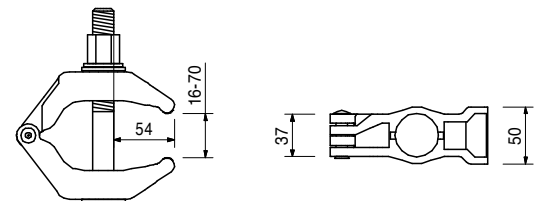
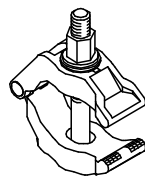
Item no.	Weight kg	
022011	13.200	<b>Double Anchor Tie Yoke HDD</b> For anchoring with Tie Rod DW 15 and DW 20.



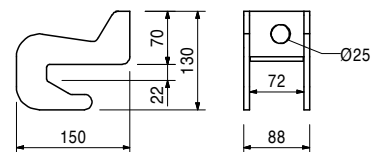
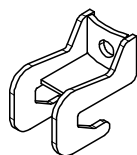
022021	31.900	<b>Trolley HD</b> For moving longitudinal girders on the Main Beam HDT.	<b>Technical Data</b> Permissible load-bearing capacity 2.5 t.
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106183	2.200	<b>Main Beam Clamp HD 70 mm, galv.</b> For connecting crossed girders.	<b>Note</b> Take official approval into consideration!
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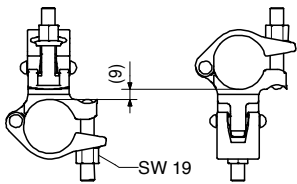
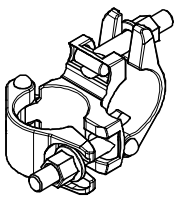


022026	1.780	<b>Steel Beam Clamp IPB 300 - 1000</b> For providing protection against tipping.
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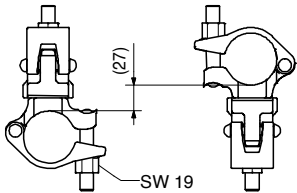
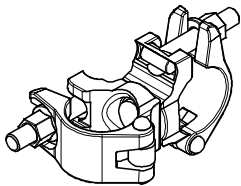
Item no.	Weight kg
017020	1.120

**Standard Coupler NK 48/48, galv.**  
For Scaffold Tubes Ø 48 mm.



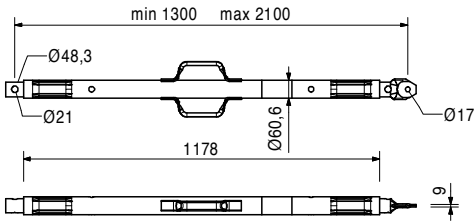
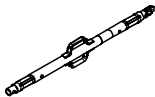
017010	1.400
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**Swivel Coupling DK 48/48, galv.**  
For Scaffold Tubes Ø 48 mm.



117466	10.600
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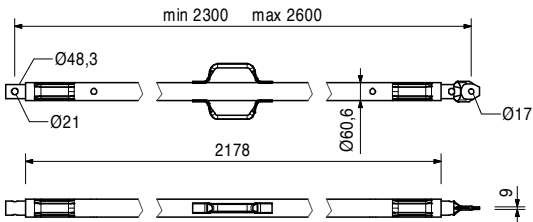
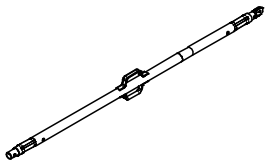
**Push-Pull Prop RS 210, galv.**  
Extension length L = 1.30 – 2.10 m.  
For aligning PERI formwork systems and precast concrete elements.



**Note**  
Permissible load see PERI Design Tables.

118238	12.200
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**Push-Pull Prop RS 260, galv.**  
Extension length L = 2.30 – 2.60 m.  
For aligning PERI formwork systems and precast concrete elements.



**Note**  
Permissible load see PERI Design Tables.

# PERI UP Flex Heavy Duty Prop HD



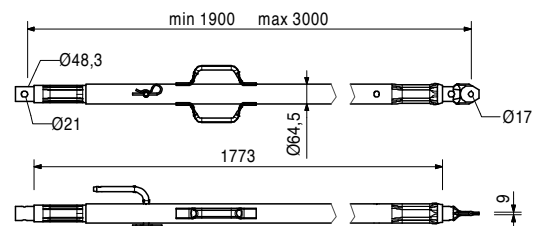
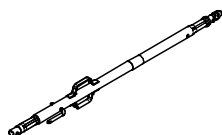
Item no.	Weight kg
117467	15.500

## Push-Pull Prop RS 300, galv.

Extension length L = 1.90 – 3.00 m.  
For aligning PERI formwork systems and precast concrete elements.

### Note

Permissible load see PERI Design Tables.



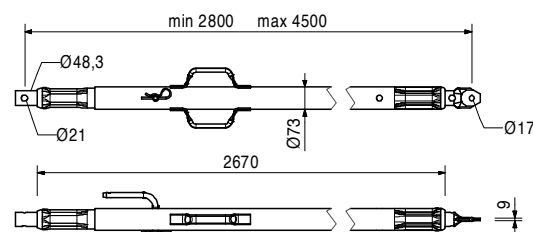
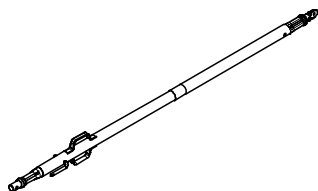
117468	23.000
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## Push-Pull Prop RS 450, galv.

Extension length L = 2.80 – 4.50 m.  
For aligning PERI formwork systems and precast concrete elements.

### Note

Permissible load see PERI Design Tables.



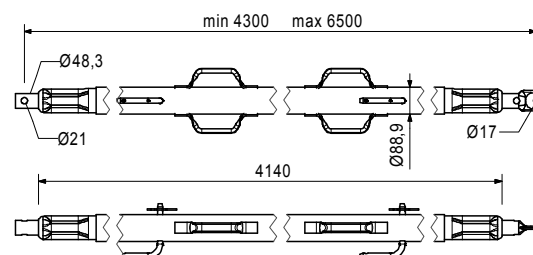
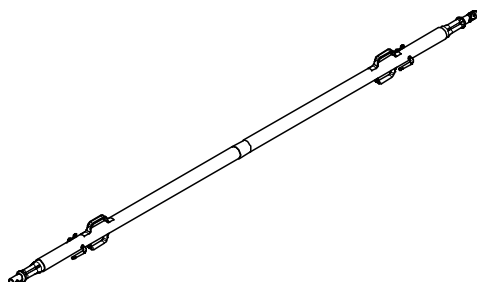
117469	40.000
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## Push-Pull Prop RS 650, galv.

Extension length L = 4.30 – 6.50 m.  
For aligning PERI formwork systems and precast concrete elements.

### Note

Permissible load see PERI Design Tables.



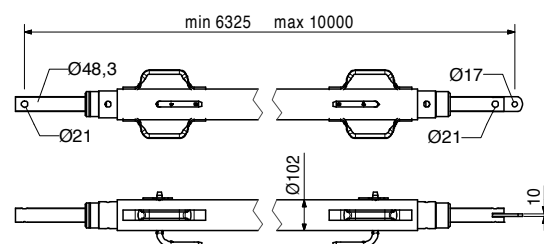
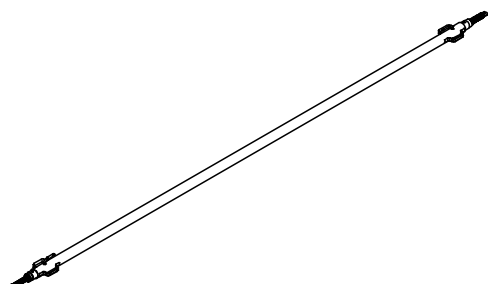
028990	115.000
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## Push-Pull Prop RS 1000, galv.

Extension length L = 6.40 – 10.00 m.  
For aligning PERI formwork systems.

### Note

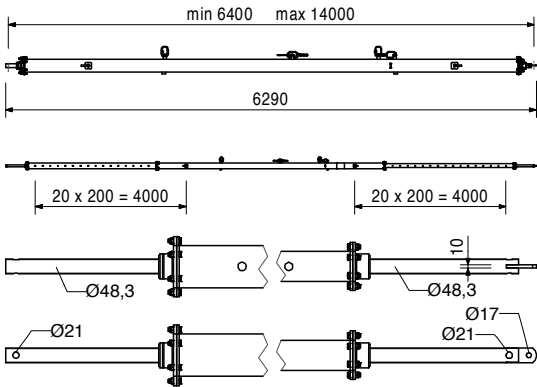
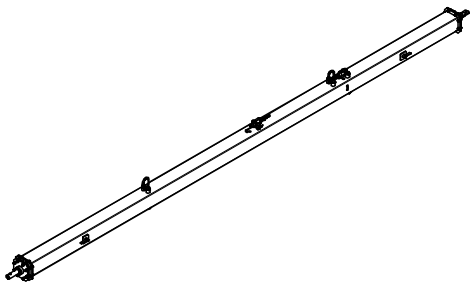
Permissible load see PERI Design Tables.



Item no.	Weight kg
103800	271.000

**Push-Pull Prop RS 1400, galv.**  
Extension length L = 6.40 – 14.00 m.  
For aligning PERI formwork systems.

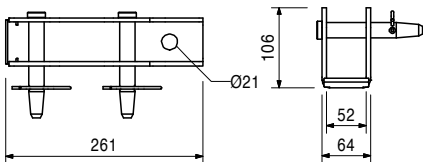
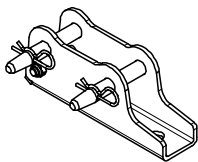
**Note**  
Permissible load see PERI Design Tables.  
Chain can be operated from bottom.



117343	3.250
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**Base Plate-2 for RS 210 – 1400, galv.**  
For assembly of Push-Pull Props RS 210, 260, 300, 450, 650, 1000 and 1400.

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



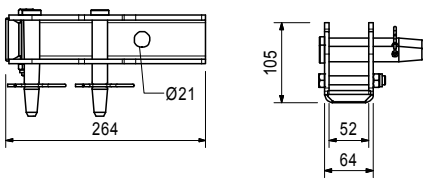
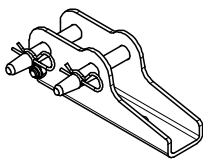
Accessories  
**Anchor Bolt PERI 14/20 x 130**

124777	0.210
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126666	3.070
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**Base Plate-3 for RS 210 - 1400**  
For assembly of Push-Pull Props RS 210, 260, 300, 450, 650, 1000 and 1400.

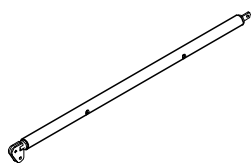
**Complete with**  
2 pc. 105400 Pin Ø 20 x 140, galv.  
2 pc. 018060 Cotter Pin 4/1, galv.  
1 pc. 113063 Bolt ISO 4014 M12 x 80-8.8, galv.



Item no.	Weight kg
028010	17.900

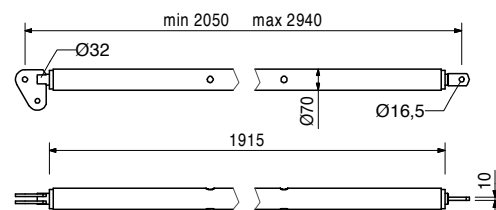
## Push-Pull Prop RSS I

Extension length L = 2.05 – 2.94 m.  
For aligning PERI formwork systems.



## Note

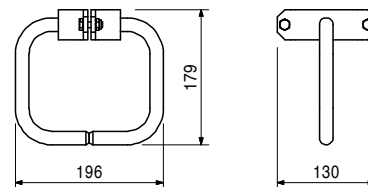
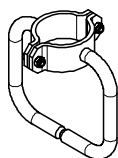
Permissible load see PERI Design Tables.



113397	1.600
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## Spindle Handle RSS / AV

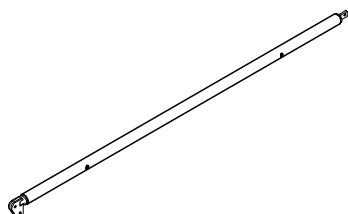
Spindle Handle for screwing on Push-Pull Props RSS I, RSS II, RSS III and Kickers AV 210 and AV 190 complete with 2 bolts and nuts M8.



028020	22.000
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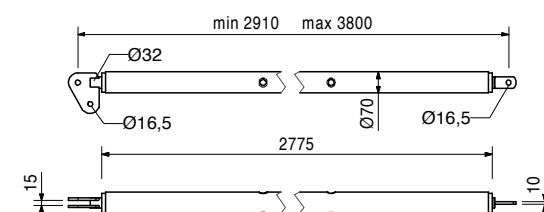
## Push-Pull Prop RSS II

Extension length L = 2.91 – 3.80 m.  
For aligning PERI formwork systems.



## Note

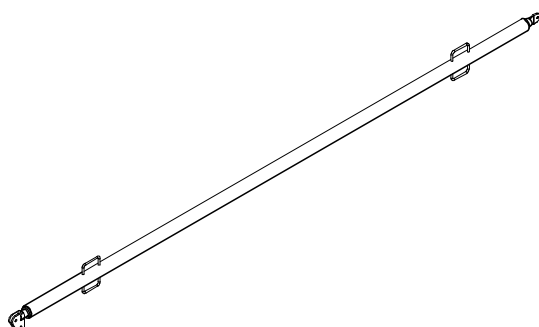
Permissible load see PERI Design Tables.



028030	38.400
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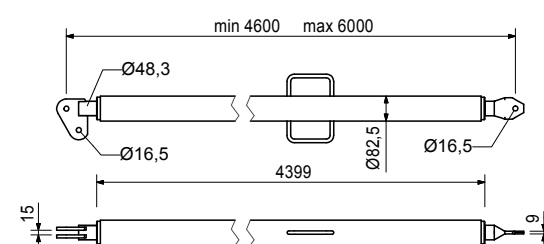
## Push-Pull Prop RSS III

Extension length L = 4.60 – 6.00 m.  
For aligning PERI formwork systems.



## Note

Permissible load see PERI Design Tables.

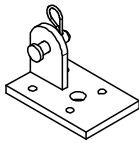


PERI UP Flex Heavy Duty Prop HD

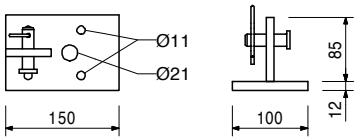


Item no.	Weight kg
106000	1.820

**Base Plate-2 for RSS, galv.**  
For assembly of RSS Push-Pull Props.



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

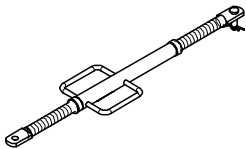


Item no.	Weight kg
124777	0.210

Accessories  
**Anchor Bolt PERI 14/20 x 130**

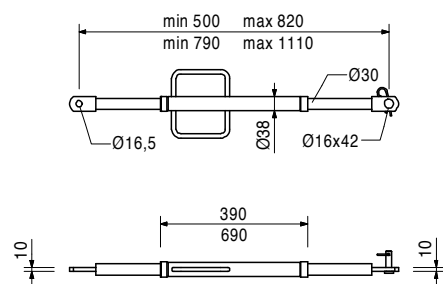
Item no.	Weight kg
057087	3.720
057088	4.410

**Kickers AV**  
**Kicker AV 82**  
**Kicker AV 111**  
For aligning PERI formwork systems.



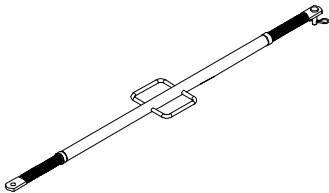
min. L	max. L
500	820
790	1110

**Complete with**  
1 pc. 027170 Pin Ø 16 x 42, galv.  
1 pc. 018060 Cotter Pin 4/1, galv.  
**Note**  
Permissible load see PERI Design Tables.

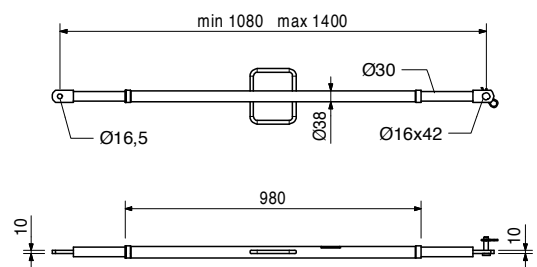


Item no.	Weight kg
028110	5.180

**Kicker AV 140**  
Extension length L = 1.08 – 1.40 m.  
For aligning PERI formwork systems.



**Complete with**  
1 pc. 027170 Pin Ø 16 x 42, galv.  
1 pc. 018060 Cotter Pin 4/1, galv.  
**Note**  
Permissible load see PERI Design Tables.





# PERI UP Flex Heavy Duty Prop HD



Item no.	Weight kg
108135	12.900

## Kicker AV 210

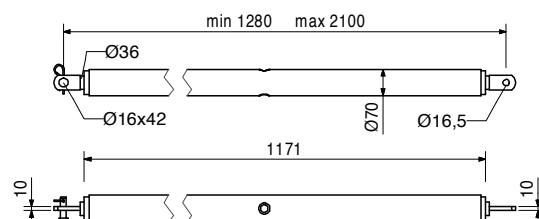
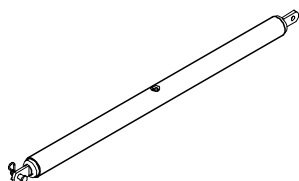
Extension length L = 1.28 – 2.10 m.  
For aligning PERI formwork systems.

## Complete with

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

## Note

Permissible load see PERI Design Tables.



028120	17.000
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## Kicker AV RSS III

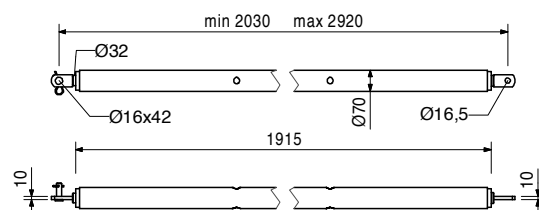
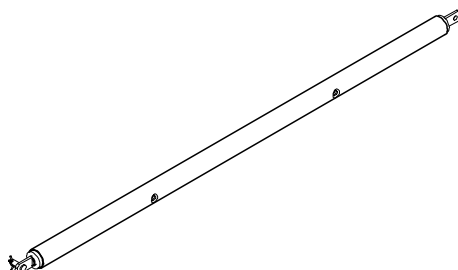
Extension length L = 2.03 – 2.92 m.  
For aligning PERI formwork systems.

## Complete with

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

## Note

Permissible load see PERI Design Tables.



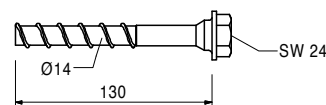
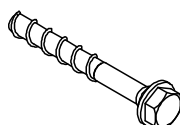
124777	0.210
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## Anchor Bolt PERI 14/20 x 130

For temporary fixation to reinforced concrete structures.

## Note

See PERI data sheet!  
Drilling Ø 14 mm.



**The optimal System  
for every Project and  
every Requirement**



**Wall Formwork**



**Column Formwork**



**Slab Formwork**



**Climbing Systems**



**Bridge Formwork**



**Tunnel Formwork**



**Shoring Systems**



**Construction Scaffold**



**Facade Scaffold**



**Industrial Scaffold**



**Access**



**Protection Scaffold**



**Safety Systems**



**System-Independent Accessories**



**Services**



**PERI GmbH**  
**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