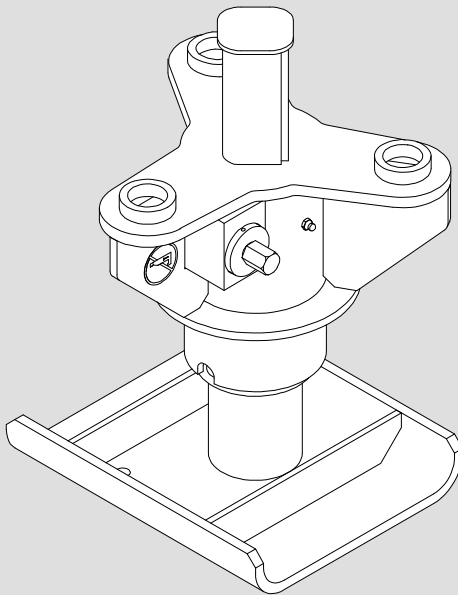


Lowering Device HDA

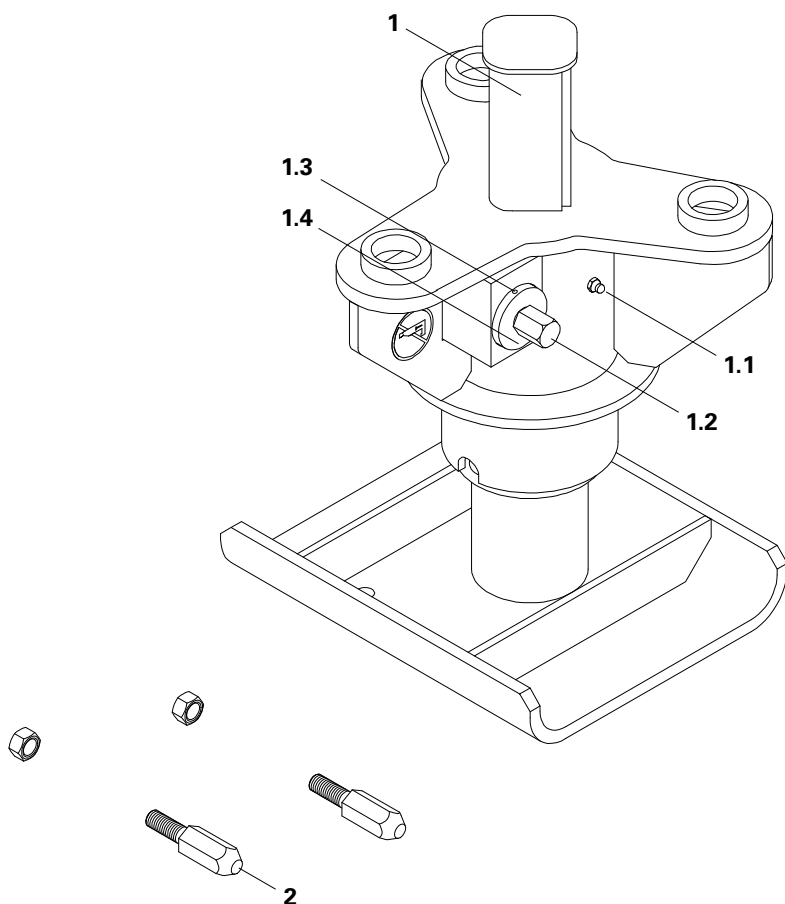
Item no. 022003

Translation of the Original Instructions for Use



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Overview



- (1) Lowering Device HDA
- (1.1) Lubricating Nipple
- (1.2) Driving Bolt (hexagonal, SW 19)
- (1.3) Shear Pin
- (1.4) Centering Disk
- (2) Centering Bolt M12
with Hex. Nut (2x)

Key



Safety Instructions



Tip



Note



Visual check



Load-bearing point



Safety helmet



Safety shoes



Safety gloves



Safety glasses



Misapplication

Dimension specifications

Dimensions are usually given in mm. Other units of measure, e.g. cm, are shown in the illustrations.

Load details are usually given in kg. Other measurement units, e.g. t, 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

Safety instructions

The safety instructions alert site personnel to the risks involved and provide information on how to avoid these risks.

Safety instructions are featured at the beginning of the chapter ahead of the instructions, and are highlighted as follows:



Danger

This sign provides warning of an extremely dangerous situation whereby failure to observe the danger notice will result in a person's death or serious and irreversible injury.



Warning

This sign provides warning of a dangerous situation whereby failure to observe the danger notice will result in a person's death or serious and irreversible injury.



Important

This sign provides warning of a dangerous situation whereby failure to observe the danger notice will result in a slight and irreversible injury.



This sign provides warning of situations whereby failure to observe the information will result in material damage.

Safety Instructions

General

When using the PERI Lowering Device HDA, the Instructions for Use and markings are to be taken into consideration!

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

The contractor must ensure that the Instructions for Use provided by PERI are available at all times for the users and that they are fully understood!

The contractor can only assign those persons to independently use lowering devices who are actually familiar with the task!

The PERI Lowering Device is used accordingly so that persons are never put at risk in any way!

Do not exceed the permissible lowering load of the PERI Lowering Device!
All persons using the Lowering Device must check the equipment during use for obvious defects (e.g. deformations, cracks, breaks, incomplete markings)!

Do not use a Lowering Device if it is damaged!

The PERI Lowering Device may not be used in the case of illegible or missing markings!

The contractor must ensure that the personal protective equipment required for the assembly, modification or dismantling of the system is available and used as intended.

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

After extraordinary events such as:

- storms,
- earthquakes,
- accidents

or longer downtimes at the place of use, the Lowering Device HDA and its components are to be inspected by an authorized person for signs of damage, stability, and functionality.

Safety Instructions

Product-specific

Observe storm warnings! Depending on the type of load and the surface area subjected to wind attack, the decision whether sufficient safety is in place when moving the load is taken on the jobsite.

The operator may begin to move the load only if he is completely satisfied that the load has been correctly attached.

Ensure that the load is in a safe and secure position before releasing the Lowering Device HDA!

Always lift up or set down loads smoothly without any jerking!

Before moving, remove or secure any loose components!

Persons are not allowed to remain under the load being lifted!

Transporting persons on the load is prohibited!

Project-specific static calculations in which the force to be applied has been determined as well as a lowering plan must be available!

Intended Use

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

When lowering HD 200 Heavy-Duty Props, the Lowering Device HDA may only be subjected to vertical loads. Only Main Beams HDT as base girders as well as Prop Segments HDS/HDSS may be mounted on the Lowering Device HDA.

The Lowering Device HDA has been designed to accommodate a max. lowering load of 200 kN. The base plate can be pivoted up to 3° on all sides.

The Lowering Device HDA is mounted using the specified positions. Installation and position are provided in the corresponding assembly instructions of the system.

It is not permitted to transport persons when operating the Lowering Device HDA. These Instructions for Use contain information for ensuring proper handling and correct application, inspection and maintenance.

These Instructions for Use provide the basis for the risk assessment. The risk assessment shall be compiled by the contractor. The Instructions for Use do not replace the risk assessment!

Application of the Lowering Device HDA:

- Within the permissible lowering load, max. 200 kN.
- Within the permissible temperature limits of -20 °C to +60 °C.
- In good working order.
- When correctly assembled.

Instructions for Use

The use in a way not intended or deviating from the intended use according to the Instructions for Use represents a misapplication with a potential safety risk.

Changes to PERI components are not permitted.

Only PERI original components may be used. The use of other products and spare parts represents a misapplication with associated safety risks.

Target Groups

Contractor

These Instructions for Use are intended for contractors who

- assemble, modify and dismantle the shoring or
- use it for, e.g. concreting operations or
- for other operations, e.g. carpentry or electrical work.

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 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 and competent 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.

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

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 in the language of the user.
- 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 concerned as well as the personnel.
- 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!

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

Storage and Transportation

Store and transport the Lowering Device HDA so it cannot unintentionally change its position or be damaged in any way.

Do not drop the Lowering Device HDA.

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.

Do not place any loads on the Lowering Device HDA.

Use original PERI storage and transport systems, e.g. wire boxes.

Store in a dry, clean and corrosion-protected condition at temperatures from -20°C to $+60^{\circ}\text{C}$.

The Lowering Device HDA must be protected against the effects of the weather and aggressive materials if safety is then likely to be affected!

During transport, intermediate storage or when remaining on the load, ensure that it remains free of dirt and that its functionality is not affected.

For the Lowering Device HDA, only use original PERI storage and transport systems, e.g. wire boxes.

Transportation position



The Lowering Device HDA is to remain unloaded during storage or transportation!

Lowering

1. Hammer mechanism of the drill is to be switched off otherwise the shear pin will break!
2. In order to completely retract the Lowering Device HDA, turn the Driving Bolt (1.2) counterclockwise as far as possible. (Fig. 1)

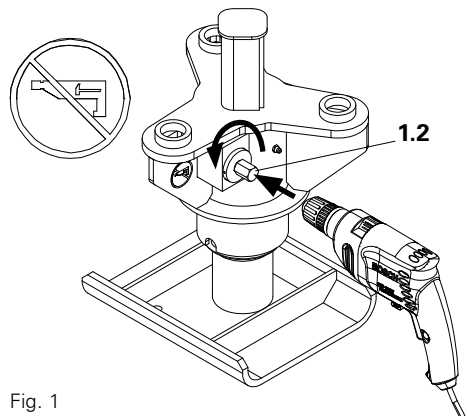


Fig. 1

Additional Technical Documentation

- Instructions for Use:
 - Pallets and Stacking Devices
- Instructions for Assembly and Use:
 - HD 200 Heavy-Duty Prop
- Brochures:
 - HD 200 Heavy-Duty Prop

Identification Markings



Danger

- **Do not use the Lowering Device HDA if the type plate is missing or illegible!**
- **Attach new type plate!**



Fig. 2

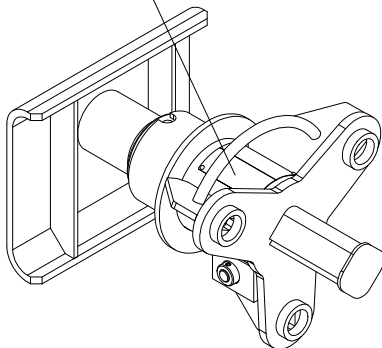


Fig. 3

Care and Maintenance Instructions

The Lowering Device HDA has been designed for long-term use on construction sites.

In order to ensure a cost-effective, technically sound and safe use over a long period, it is important to take a value-preserving approach.

Repairs which require welding or deformation of components are only allowed to be carried out by PERI.

If corrective maintenance or the replacement of worn components is required, only PERI original parts are to be used as spare parts.

Maintenance

Lubricate the Lowering Device HDA before each use with multi-purpose grease, e.g. AVIALITH 2 F or equivalent via the Lubricating Nipple (1.1). When used under water, also grease after dismantling.



Lowering Device HDA is always unloaded when maintenance is carried out!

Lubrication

1. Hammer mechanism of the drill is to be switched off otherwise the shear pin will break!
2. In order to completely retract the Lowering Device HDA, turn the Driving Bolt (1.2) counterclockwise as far as possible.
3. Apply lubrication on the Lubricating Nipple (1.1) using a grease gun.
4. In order to completely extend the Lowering Device HDA, turn the Driving Bolt clockwise as far as possible.
5. In order to completely retract the Lowering Device HDA, turn the Driving Bolt counterclockwise as far as possible. (Fig. 4)
→ The Lowering Device HDA is completely lowered and ready to be transported.

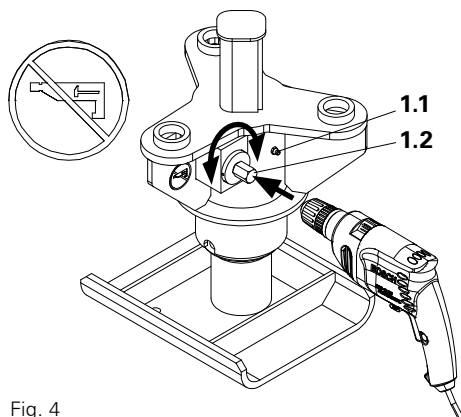


Fig. 4

Inspections

1. General

The procedure described in this section is based on the current German regulations for testing and inspections. The points listed form the minimum requirements for the inspection.

The respective regulations of the individual states and countries where this product is used must be taken into account.

If no country-specific regulations are available, it is recommended to proceed according to German rules and regulations.

The contractor is responsible for determining the type, scope and intervals for the required tests relating to the provision of the Lowering Device HDA. As a result of these checks, any safety-related defects are to be systematically identified and remedied.

2. Purpose

Due to the check carried out before the initial operations as well as regularly occurring inspections of the Lowering Device HDA, it can be ensured that operational and functional reliability is guaranteed.

3. Responsibility

The contractor must ensure that the Lowering Device is put into operation only if it has been inspected by a qualified person.

4. Inspection

4.1 Safety check

It has to be verified whether all defects have been rectified or non-functioning products have been replaced. The inspection includes a visual and functional check.

4.2 Visual check

- Deformation, wear and lengthening of the components.
- Corrosion damage.
- Mechanical damage.
- Availability of all components.
- Cracks, bending, flattening, notches on welding seams and components.
- Only original PERI components may be used.
- Indications of impermissible heating or contact with fire.
- Markings must be legible.

4.3 Functional check

- Retracting and extending the Lowering Device HDA to the minimum and maximum lengths.
- Checking the free movement of the Driving Bolt.
- The Base Plate can be pivoted by 3° on all sides.

Implementation of anything beyond the usual scope of inspection is subject to the discretion of the competent person and can extend to additional checks.

4.4 Measures

If any defects are determined during the safety inspection, they must be eliminated according to the instructions provided by the competent person. A new inspection is to be subsequently carried out.

4.5 Inspection before starting work operations

- Check whether the lowering load of the Lowering Device HDA is sufficient for the weight of the load.
- Check the Lowering Device HDA for defects.
- Availability of all components.

Technical Data

- Lowering range: 100 mm
(10 turns correspond to 2.3 mm)
- Dead load: 31 kg
- Lowering load: 200 kN
- Inclination of the Base Plate: max. 3°

Assembly



Lowering Device HDA is always unloaded when extended!

Preparation

1. Hammer mechanism of the drill is to be switched off otherwise the shear pin will break!
2. Lubricate lowering device before every use, see "Maintenance".
3. In order to completely extend the Lowering Device, turn the Driving Bolt (1.2) clockwise as far as possible. (Fig. 5)
→ Lowering Device is extended and ready for use.

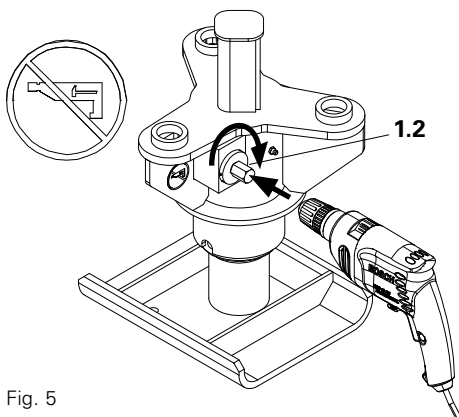


Fig. 5

Assembly on the Prop Segment

1. Place Prop Segment (3) on timbers.
Chord couplings (3.1) must be free. (Fig. 6)
2. In order to open the chord couplings, press and hold down the safety hook (3.2), turn the gripping plate (3.3) counterclockwise by 90° and then release the safety hook. (Fig. 7)
→ Safety hook locks in position in the notch (3.5). (Fig. 8)
3. Insert hammer head pieces (3.4) into the ends of the Lowering Device HDA. (Fig. 9)
4. In order to close the chord couplings, press and hold down the safety hook, turn the gripping plate clockwise by 90° and then release the safety hook. (Fig. 10)
→ Safety hook locks in position in the notch. (Fig. 11)



Chord couplings must be engaged and securely in position!
The gripping plate end runs parallel to the side wall of the prop section! (Fig. 11)

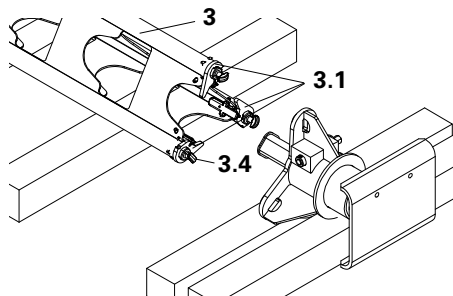


Fig. 6

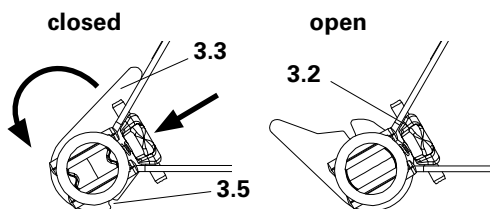


Fig. 7

Fig. 8

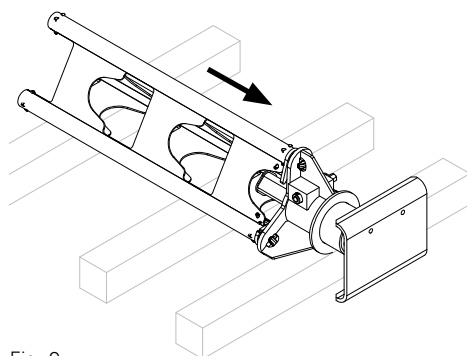


Fig. 9

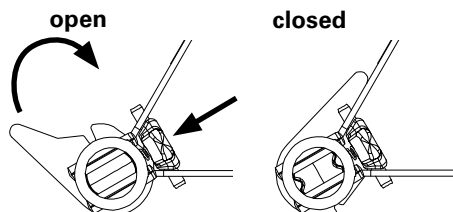


Fig. 10

Fig. 11

Lowering Device HDA

Translation of the Original Instructions for Use

Assembly



Danger!

- Danger to life through tipping over of shoring!
- If assembly is carried out vertically, secure the system against tipping over! (Fig. 12)
- Do not exceed the permissible lowering load of 200 kN!

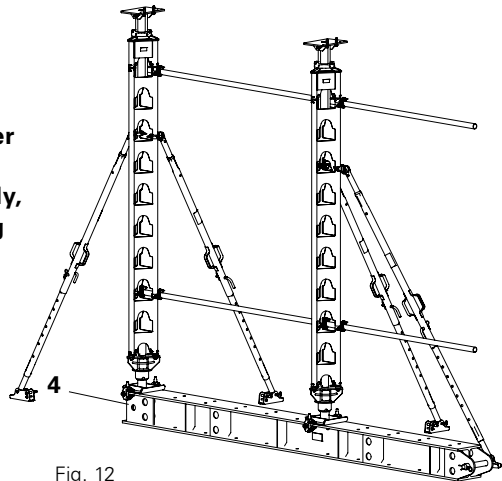


Fig. 12

Assembly on Main Beam HDT

1. Insert two Centering Bolts M12 (2) from below through the holes and secure using two hex. nuts by turning in a clockwise direction. (Fig. 13a)
2. Align the Lowering Device HDA on the bottom Main Beam HDT (4) to the respective holes, see Project Plan.
3. Secure with two Main Beam Clamps (5). (Fig. 14)

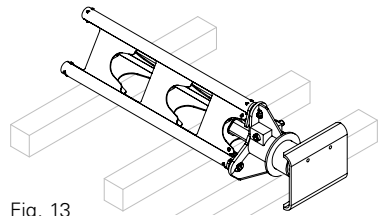


Fig. 13

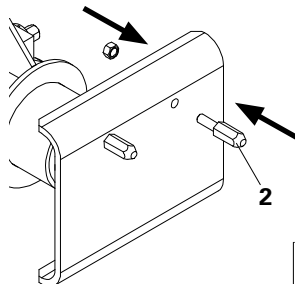


Fig. 13a

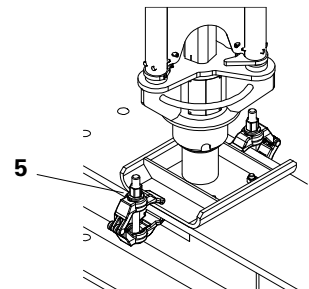


Fig. 14

Lowering Device HDA

Translation of the Original Instructions for Use

Replacing the Shear Pin HDA



Warning
Risk of injury!



1. Remove Driving Bolts (1.2) by hand.
2. Position the Centering Disk (1.4) by twisting so that the Shear Pin is pointing upwards. (Fig. 15)
3. Insert Driving Bolts so that the holes of the Driving Bolts are flush with the holes of the Centering Disk. (Fig. 16)
4. Remove Shear Pin (1.3) with centre punch (D) (2.5 mm). (Fig. 17)
5. New Shear Pin is inserted until it is positioned in the Driving Bolt.
6. Hammer in Shear Pin with the centre punch (> 2.5 mm) until the Shear Pin is flush with the surface of the Centering Disk.
7. Lubricate the Lowering Device, see "Maintenance".

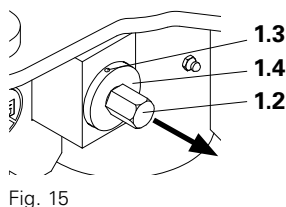
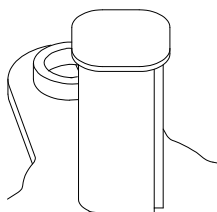


Fig. 15

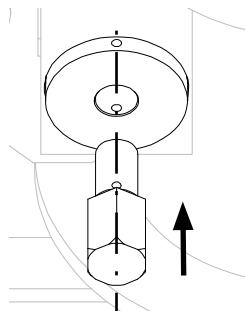


Fig. 16

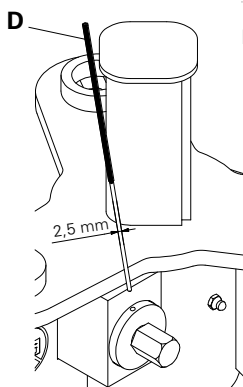


Fig. 17

Lowering



Danger!

- **Danger to life through tipping over of shoring!**
- **Secure the system against tipping over!**
- **When lowering under load, the use of a drill is prohibited! Use crank, ratchet or wrench! (Fig. 18)**
- **Lowering procedure only takes place if the person in charge has given instructions to do so!**



A project-specific static and lowering plan are required!

Lower the Lowering Devices HDA sequentially in small increments (10 turns = 2.3 mm) to avoid overloading the individual Lowering Device!

Lowering under load

1. In order to lower the 200 Heavy-Duty Props, lower the Lowering Devices sequentially in small increments by turning the Driving Bolts (1.2) counter-clockwise. Take the lowering plan into consideration! (Fig. 18)
2. Re-adjust the Push-Pull Props (7) after every lowering procedure. (Fig. 19)
3. Tighten the diagonal bracing (6) after every lowering procedure by means of the cam nuts (8). (Fig. 20)

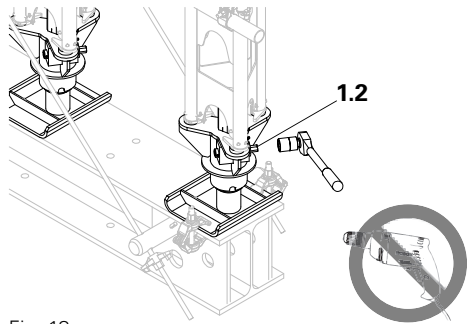


Fig. 18

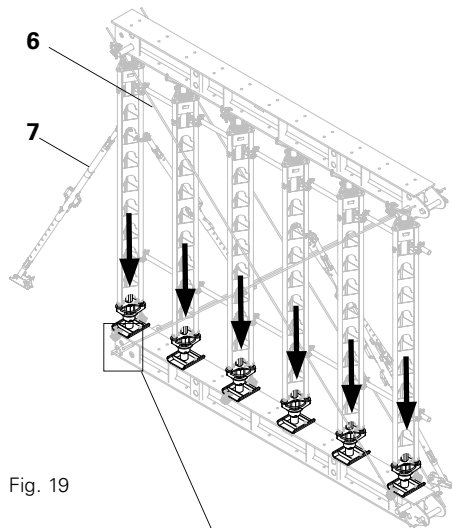


Fig. 19

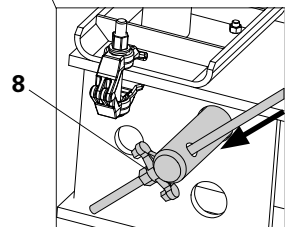


Fig. 20

Load-free lowering

1. Hammer mechanism of the drill is to be switched off otherwise the shear pin will break!
2. In order to lower the 200 Heavy-Duty Props, lower the Lowering Devices sequentially in small increments by turning the Driving Bolts (1.2) counter-clockwise. Take the lowering plan into consideration! (Fig. 21)
3. Re-adjust the Push-Pull Props (7) after every lowering procedure. (Fig. 19)
4. Tighten the diagonal bracing (6) after every lowering procedure by means of the cam nuts (8). (Fig. 20)
5. Repeat procedure until the main beam area has been lowered by approx. 10 cm.



Check the perpendicular position of the props!

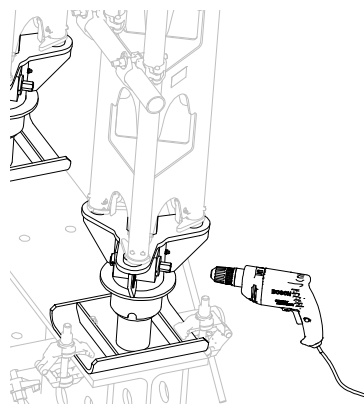


Fig. 21

Dismantling



Danger!

- **Danger to life through tipping over of shoring!**
- **Secure shoring, e.g. with Push-Pull Props! (Fig. 22)**



Dismantling of Main Beam HDT

1. Remove the Main Beam Clamps (5). (Fig. 23)
2. Remove Lowering Device from the Main Beam HDT.
3. Release the hex. nuts of the Centering Bolts M12 (2) by turning counterclockwise, and then remove Centering Bolts M12 from the holes. (Fig. 24a)

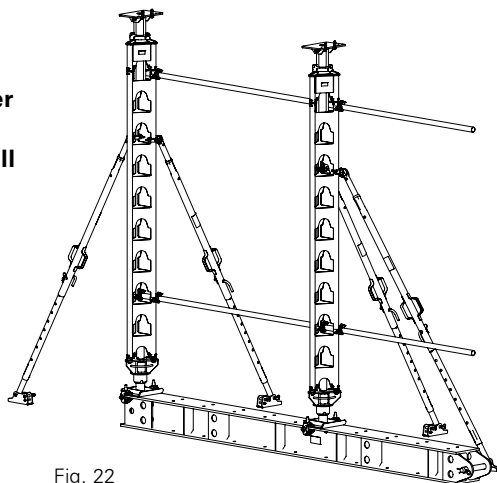


Fig. 22

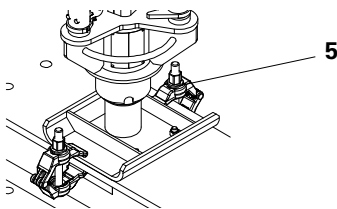


Fig. 23

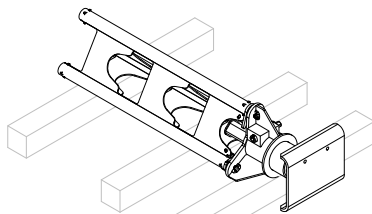


Fig. 24

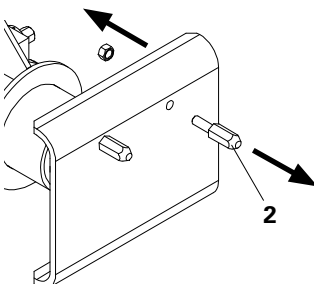


Fig. 24a

Dismantling the Prop Segment

1. Place the Prop Segment (3) with Lowering Device HDA on timbers. (Fig. 25)
2. In order to open the chord couplings (3.1), press and hold down the safety hook (3.2), turn the gripping plate (3.3) counterclockwise by 90° and then release the safety hook. (Fig. 26)
→ Safety hook locks in position in the notch (3.5). (Fig. 27)
3. Separate the Lowering Device HDA from the Prop Segment. (Fig. 28)
4. Lubricate the Lowering Device HDA, see "Maintenance".

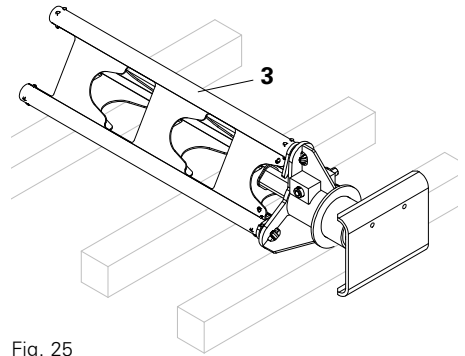


Fig. 25

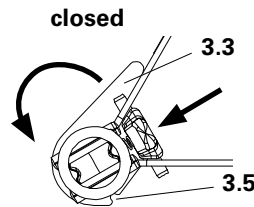


Fig. 26

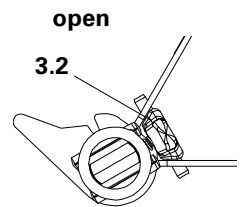


Fig. 27

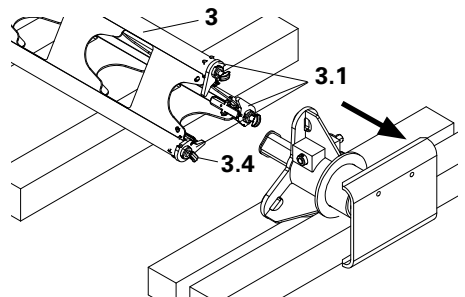


Fig. 28

Disposal

The disposal of the Lowering Device HDA must be arranged by an authorized person.

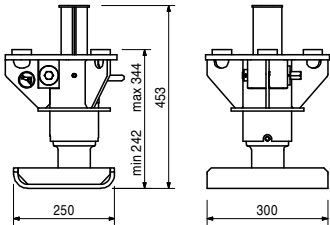
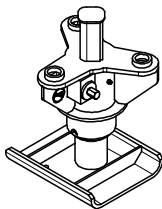


Important

- **Separate materials correctly and according to type.**
- **The materials are to be disposed of according to local regulations and guidelines.**

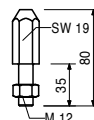


Item no.	Weight kg		
022003	32,100	Lowering Device HDA For easy release of high loads on the Heavy Duty Prop HD 200. Lowering height max. 10 cm. Tilting in any direction by 3°.	Note Follow relevant assembly instructions for the system.



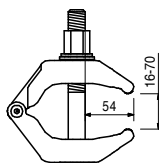
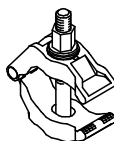
		Accessories	
022018	0,002	Shear Pin HDA	

Item no.	Weight kg		
022013	0,137	Centering Bolt HD M12, galv. For the HD 200 system.	Complete with 1 x 710330 Nut ISO 4032 M12-8, galv.



022018	0,002	Shear Pin HDA For assembly in the Lowering Device HDA.	
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106183	2,200	Main Beam Clamp HD 70 mm, galv. For connecting beams running crosswise.	Note Observe construction approval!
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The optimal System for every Project and every Requirement



Wall Formwork



Column Formwork



Slab Formwork



Climbing Systems



Tunnel Formwork



Bridge Formwork



Shoring Systems



Construction Scaffold



Facade Scaffold



Industrial Scaffold



Access



Protection Scaffold



System-Independent Accessories



Services



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