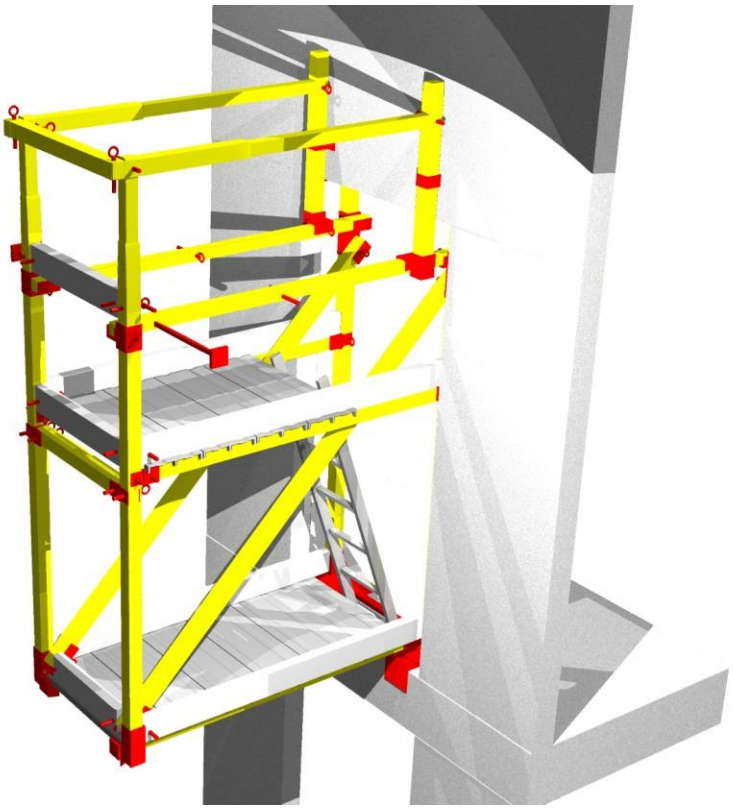
Assembly and Usage Instructions



Stingl - *mobil PANO*
- elevated base platform -

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1 General

1.1 Introduction

These instructions for assembly and use are only valid for the STINGL *mobil PANO* working scaffold, which is assigned to the “GS symbol” listed according to section 1.3.

The area of validity for the documentation encompasses the safety notes specified in these instructions for assembly and use, as well as the rules and regulations regarding use of the STINGL *mobil PANO* working scaffold.

Users are responsible for:

> Compliance with local, regional and national regulations
> Adherence to the rules (laws, regulations, guidelines, etc.) for safe operation listed in the instructions for assembly and use
> Ensuring that the instructions for assembly and use are available to all operating personnel and that the specifications, notes and warnings, and safety instructions, are followed down to the last detail.

1.2 Manufacturer

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74182 Obersulm
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1.3 Licence

The following STINGL MOBIL PANO working scaffold has been tested and certified by TÜV Rheinland. Certificate Number S 60158422.

1.4 Guarantee

The scope, period and form of guarantee are stated in the sales and delivery conditions of the manufacturer. For guarantee claims based on deficiencies in the documentation, the Assembly and Usage Instructions valid at the time of delivery shall apply (see Section 1.5). The following applies beyond the scope of the sales and delivery conditions: No liability is assumed for damage to the delivered folding scaffolding that occurs as a result of one or more of the following reasons:

> Ignorance of and non-compliance with these instructions for assembly and use

> Insufficiently qualified or inadequately trained operating personnel

> Usage of non-original parts.

The operator is responsible for ensuring that:

> Safety regulations are adhered to according to Section 2

> Non-intended use of STINGL *mobil PANO*, incorrect assembly and non-permitted use is forbidden

> Intended use of STINGL *mobil PANO* is guaranteed, and that the work platform is operated according to the contractually agreed terms of use.

1.5 Edition No. and/or Date of Issue

The date of issue of the German edition of these instructions for assembly and use is 20th April 2006.

1.6 Copyright and Property Rights

> The copyright for these instructions for assembly and use remains with the manufacturer.

> The working scaffold STINGL *mobil PANO* has been patented with patent number PCT 202700; 229243.

> Any infringements of the above specifications will entail full compensation for damages!

2 Safety

2.1 Basic principles

Only **trained personnel who are familiar with the instructions for assembly and use of the Stingl mobil *PANO*** are permitted to perform assembly. Assembly can be performed by a single technician. Ignorance of and non-compliance with the specified safety instructions can lead to serious injury or death. Therefore, please pay attention to the safety instructions before assembly, use or dismantling of the scaffold.

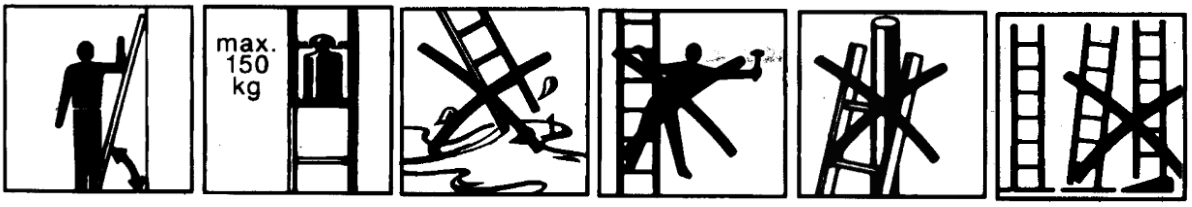
- Never move a STINGL work platform if there are persons or items on it.
- If you have doubts about whether the STINGL work platform is suitable for your desired work, please contact the manufacturer. Do not take any risks!
- Never use a STINGL work platform that been damaged, or that has been assembled incorrectly.
- Never try to assemble parts using excessive force.
- Never replace original STINGL work platform components with parts from other manufacturers.
- Every user of the STINGL work platform must be familiar with the safety instructions, which are regulated in BGR 175 and DIN 4420-1 (German trade association regulations for work on assembly scaffolding in lift shafts, and on work scaffolding and safety scaffolding).
- You must observe the German health and safety regulation for construction work (BGV C 22) §12.

2.2 Safety Regulations

1. STINGL MOBIL PANO is only to be assembled, used, re-assembled or dismantled under instruction from competent technical personnel. It is only to be operated by experienced, trained personnel.
2. Check the following features of the work area:
    - Surface conditions
    - Strength of load-bearing parts
    - Distance to power lines
    - Sufficient clearance above
    - Wind conditions
    - Whether any covering is required
    - Protective covering due to poor weather conditions

    These features must be checked and taken into account as appropriate.
3. Do not assemble or use STINGL mobil PANO near power lines or electric cables until these have been isolated, switched off or secured against accidental contact by some other method.
4. Ensure that the lift is not in operation when the platform is in use.
5. Check the individual components for damage, ageing or wear before using the platform. Do not use damaged, aged or worn parts. You must also check the material every **2 years**, starting from the date of purchase.

6. Every STINGL MOBIL PANO platform that is damaged or weakened must be removed from operation immediately and may only be returned to use once the damaged or weakened parts have been completed replaced.
7. You may not change the original parts. The operator must ensure that assembly, re-assembly or dismantling can be performed without posing any risk to workers.
8. All persons that use, assemble, re-assemble or dismantle a STINGL work platform must wear protective headgear.
9. To protect workers, personal safety equipment (such as belt and fall protection equipment) must be used.
10. Use of the STINGL work platform on snow, ice or any other slippery surface is forbidden. However, an exception may be made if an on-site safety officer determines that no danger is posed to workers, or that the workers' safety is guaranteed by personal safety equipment.
11. If swinging suspended loads are being moved next to a STINGL MOBIL PANO, appropriate safety measures must ensure that these do not come into contact with the work platform as this would endanger work safety.
12. Use of STINGL MOBIL PANO during a storm or strong winds is forbidden. However, an exception may be made if an on-site safety officer determines that no danger is posed to workers, or that the workers' safety is guaranteed by fall protection equipment or a wind shield. Wind shields are only to be used if the work platform is secured against the prevailing wind.
13. Tools, materials or other foreign bodies may not be piled up in a dangerous fashion on the platform. Check the assembly of the work platform before use. Pay particular attention to the following points:
    - The platform must be level and plumb
    - The threshold brackets must lie flat and secure on the threshold
    - The platform must be fully planked
    - The three-part safety railing must be installed
    - Safe access to the work platform must be guaranteed
    - Before opening the door, the platform must be correctly anchored and the triangular structural elements must be placed under tension, under the planks.
    - No obstructions or electrical connections are permitted within a radius of 4 m.
14. To access the upper platform, only use the aids for climbing and descent that are permitted according to EN131. Do not climb on the scaffolding components. If no suitable aids for climbing/descent are available, insist that these are provided.
15. Note the following pictograms when using the aids for climbing/descent:



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16. Pay attention to the rungs when climbing or descending. Hold on with both hands.
17. Do not carry any items and loads when climbing or descending. Only release your grip when you are standing safely. Always hold on to the scaffolding frame or the ladder rail with one hand.
18. Do not work with slippery rungs.
19. Do not overload the STINGL MOBIL PANO platform with persons and objects. Do not load the scaffolding with more than the permitted load weight. Only use STINGL MOBIL PANO according to the manufacturers' instructions.
20. No provisional constructions (such as ladders, bridges or podiums) intended to increase the working height are permitted.
21. Do not remove any parts from a completely assembled STINGL mobil PANO during use unless a qualified person is present. Replace any removed or damaged parts immediately.
22. Always heed the legal safety regulations and accident avoidance guidelines. Only qualified and training technical staff may assemble the work platform.

2.3 Important Notes and Precautions for Assembly of STINGL *mobil PANO*

The scaffolding platform corresponds to load class 4 according to DIN EN 12811-1, parts 1-3, and is licensed for a surface-related working weight of max. 3.0 kN/m² (max. 2 persons per work platform).

- The STINGL *mobil PANO* work platform is only to be attached to sufficiently stable parts of buildings and structures. These parts must be able to absorb or pass on the resultant stresses and loads.
- The lintel must be able to absorb lateral forces of at least 3.5 kN.
- The threshold must be able to absorb lateral forces of at least 4.2 kN and vertical forces of at least 6.6 kN.
- The threshold bracket, or the threshold bracket with adjustable feet, must be securely attached to the cross beam of the work platform. Any unevenness in the threshold can be levelled out with the adjustable feet. Never use destabilising objects or aids such as polystyrene or loose gravel to level out the unevenness.
- The vertical wall to the left and/or right of the doorway must be made of concrete (concrete quality at least B15, wall thickness D 100 mm).
- The foremost vertical girder must exceed the height of the doorway by at least 100 mm. The clear height (from the top edge of the floor to the lower edge of the ceiling) must be at least 2350 mm.

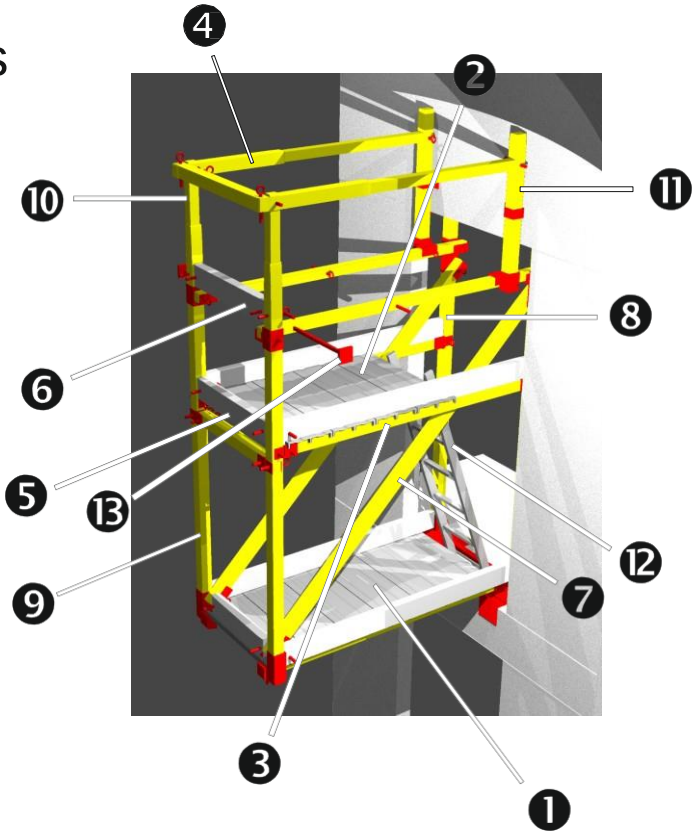
- Before accessing the work platform, at least 2 telescopic spaces must be mounted according to the installation instructions and these must be extended until they make contact with the surrounding shaft wall, T-girders or guide rails. If the spacers are under tension between the work platform and existing structural guide rails, replacement adapters are available.
- Ensure that the telescopic poles can be braced against the shaft wall at right angles to the work platform. The gap between the outer measure of the work platform and the shaft wall may not exceed 1000 mm. Note the following maximum shaft widths when using the work platform.

  Platform width 1000 mm: Maximum shaft width 3100 mm
- Note the minimum doorway widths. The minimum doorway width corresponds to the platform width (panel width) plus 100 mm.
- The three-part safety railing (consisting of handrail, midrail and foot rail) must be attached to all open sides and ends of the platform.
- All locking pins are to be secured with a splint.
- One set of instructions for assembly and use provided by the manufacturer must always be available during assembly or re-assembly, usage or dismantling of the platform.
- Safety equipment for persons, such as safety belts, fall protection gear, suitable anchor points etc. must be used in accordance with local safety regulations during assembly, usage and dismantling of the work platform.
- Take care when assembling or dismantling scaffolding parts such as inner and outer tubes. Inner tubes can slip easily and may cause injury or damage.

3 Model-specific specifications

3.1 Overview of model

1 Lower platform
2 Raised platform
3 Upper horizontal bar
4 Upper circumferential handrail
5 Circumferential footbar
6 Circumferential midrail
7 Diagonal triangle sides
8 Front vertical triangle sides
9 Lower vertical rail stanchions, rear
10 Upper vertical rail stanchions, rear
11 Upper vertical rail stanchions, front
12 Leading ladders
13 Telescopic rods



3.2 Identification Markings

The nameplates for the work platforms described in these instructions for assembly and use are affixed to the front, vertical, right-hand side of the triangle and on the front of the upper rear handrail.

Scaffold class 4
Maximum area load: 3,0 kN/m²
Manufacturer: Stingl GmbH Version: PANO

3.3 Usage range

3.3.1 Intended use

The work platforms described in this installation and usage manual may only be used as work platforms for lift shafts, in accordance with the overview for the model - see section 3.1.

3.3.2 Non-intended use

Any improper use - that is, any deviation from the specifications stated in section 3.3.1. on the work platforms described in this installation and usage manual - is classed as non-intended use. This is also the case if the standards and guidelines listed in these instructions for assembly and use.

4 Erection instructions

4.1 General

Caution:
You may only begin to erect a work platform after reading and understanding the SAFETY RULES listed in section 2 in full. Only carry out the tasks listed below after reading section 2.

You mount the tube sections by inserting locking pins. Safety pins prevent the locking pins from accidentally coming loose. The locking bins must be inserted from the inside to the outside of the platform. The pre-assembly of the triangular structural parts must take place at a suitable location outside the lift shaft.

We recommend that you get help from another person to erect and disassemble the work platform.

You must be extremely careful when handling the component parts (see section 2).

Caution:
Read the relevant task specification (for example, as described in section 4.2) in full before beginning to erect the scaffold. Carry out the erection tasks step-by-step after reading the specification.

4.2 Basic setup

4.2.1 Preparation

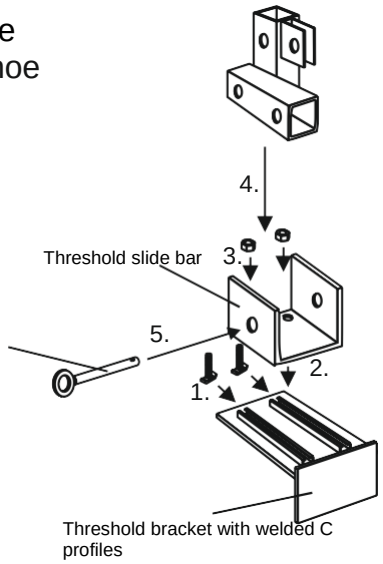
Unpack all component parts of the work platform to be erected, and remove any packing material according to the instructions where necessary. Check that all component parts of the work platform are present, as described in section 6.

Read through the erection instructions listed in section 4.1., and refer to them whenever necessary when carrying out the steps below.

4.2.2 Erection

4.2.2.1 Mounting the threshold shoe

Example:
Left-hand unit



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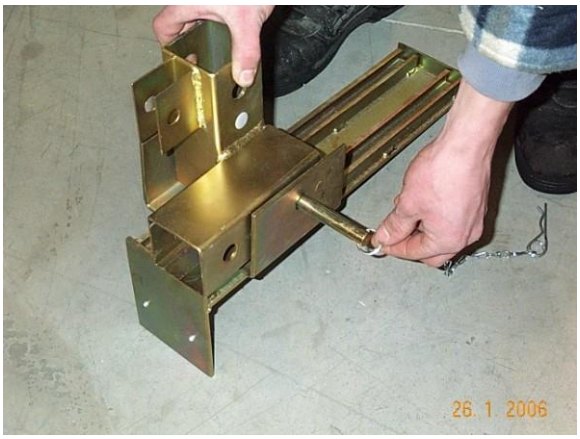

Example: Right-hand unit

4.2.2.2 Mounting the threshold shoe

The position of the slide bar on the threshold bracket is determined using the right-hand unit in this example

The threshold slide (fig. 2/pos. 1) must be set to the correct measurement along the C profile rails using the front vertical side of the triangle, taking the shaft wall thickness in the door area into account.

Additional information:

- Observe the markings indicating whether components are right-hand or left-hand components
- Colour marks indicate the centre of the platform (inner)
- Insert bolts from the inside to the outside

Fig. 1: Front right vertical triangle side

The front vertical triangle side (fig. 1 / pos. 1) must be placed into the threshold joint (fig. 2/pos. 1) from above and fastened with a short locking pin.

Personal safety equipment (belt, fall protection equipment) must be put on before the technician approaches the lift shaft with the unit at the latest. You must ensure that the technician is secured by means of a suitable suspension point.

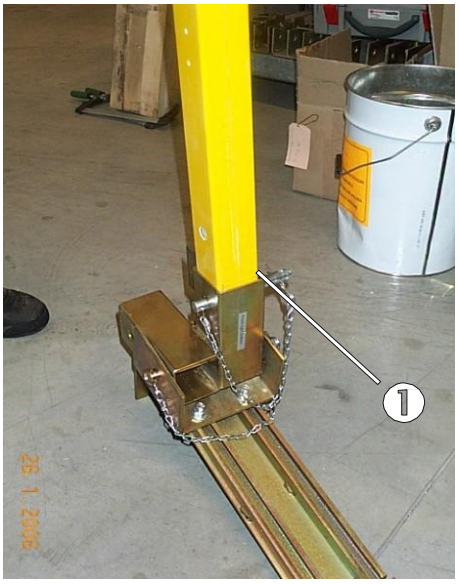

Fig. 2: Front right vertical triangle side, placed into assembled threshold joint

Place the front right vertical triangle side (fig. 3/pos. 1) incl. threshold bracket (fig. 3/pos. 2) on the threshold of the lift shaft (fig. 4/pos. 1) and move the front piece that should protrude above the lintel (fig. 5/pos. 1) into a vertical position by moving the threshold joint. Bolt into place.

Fig. 3: Front vertical triangle side, placed into assembled threshold joint

The surface of the threshold bracket must lie flat to the threshold (fig. 4/pos. 1).

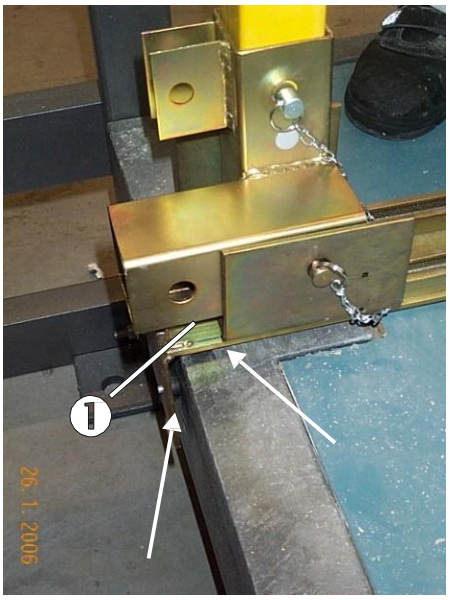

Fig. 4: Threshold bracket placed on the threshold

The front triangle side must protrude at least 100 mm above the upper lintel, and must lie flat to the lintel (fig. 5 / pos. 1). Additional assembly steps involve taking the unit to a secure work area away from the lift shaft. The lift shaft should now be secured in accordance with local guidelines.

Proceed in the same way for the left-hand unit.

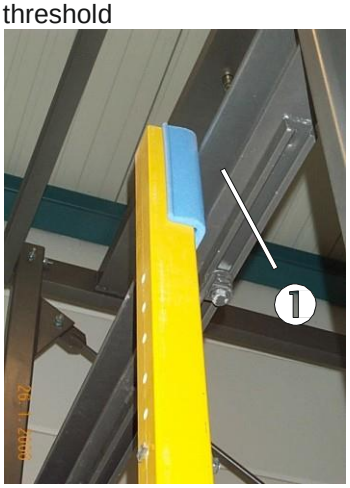

Fig. 5: Front vertical triangle side must be propped above the lintel.

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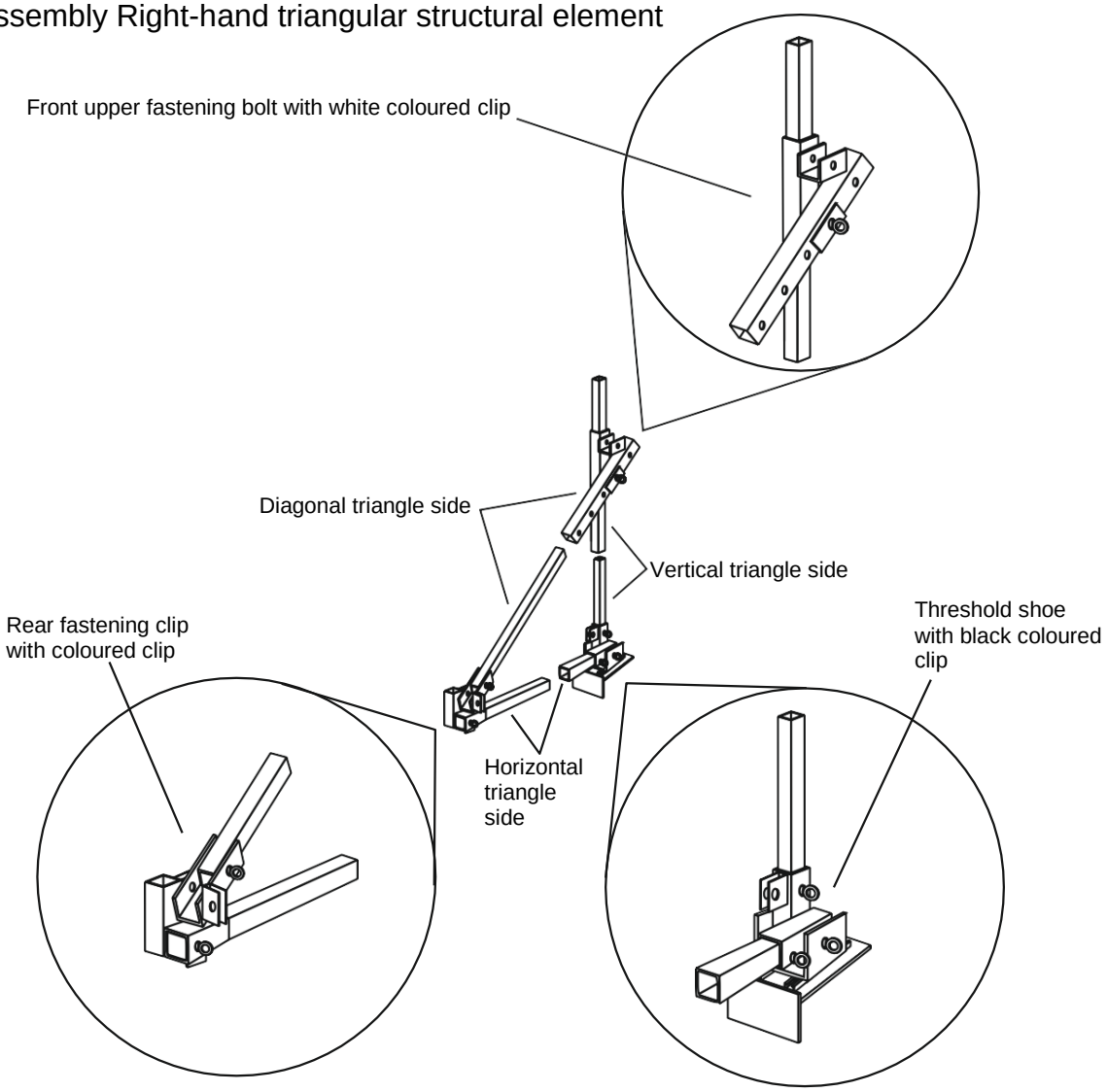
4.2.2.3 Pre-Assembly Right-hand triangular structural element



The fastening clips shown above are connected to the triangle sides according to the coloured markings and secured with at least one pin according to the detailed illustrations. Secure the pin in position with a safety splint. When mounting the diagonal triangle sides,
ensure that the securing pin is fitted correctly and is secured, according to the locking mesh labelling or the desired platform depth.
Various platform depths can be realised with the same diagonal triangle side.
The delivered package includes triangle side pairs of various lengths, to be used for various platform depths (see the parts list on page 49). The end of the tube with the larger gap between holes fits into the threshold shoe and the other end is set into the rear fastening clip and secured.

If the wall thickness for the lintel < 200 mm, use the next smallest pair of horizontal triangle sides. For example, if the shaft depth is 1500 mm, the horizontal triangle side pair with a length of 1450 mm is to be used instead of 1700 mm.

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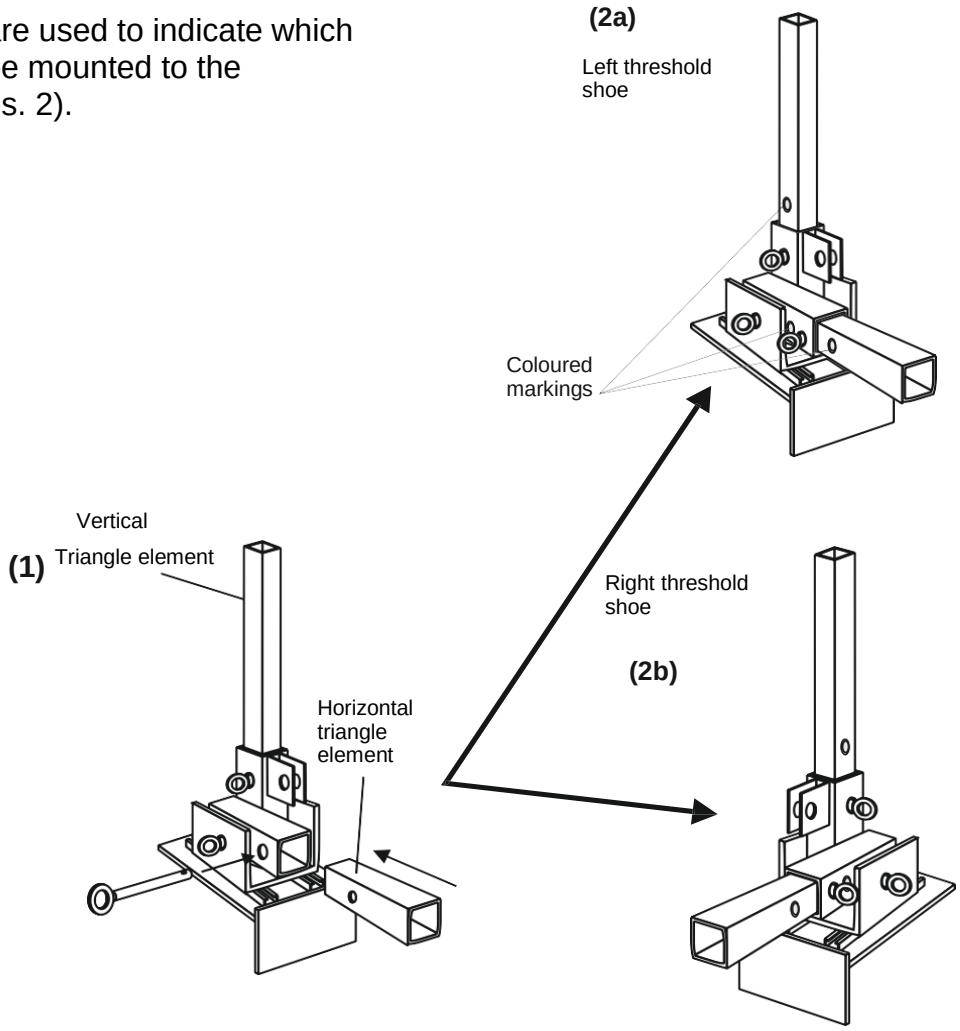
The horizontal side of the triangle must now be added to the threshold bracket (fig. 5/pos. 1) You must keep the required platform depth in mind in order to be able to determine the correct length of the horizontal profile. To mount the part, insert a small locking bolt and secure with the safety pin. You must make sure that the chains are laid correctly (fig. 7/pos. 1).

The grey colour markings are used to indicate which ends of the profiles are to be mounted to the threshold bracket (fig. 7/ pos. 2).



Assembled unit: The left threshold bracket is a reversed version of the right threshold bracket when assembled.

Fig. 6: Vertical and horizontal sides of triangles, connected to the left-hand threshold bracket

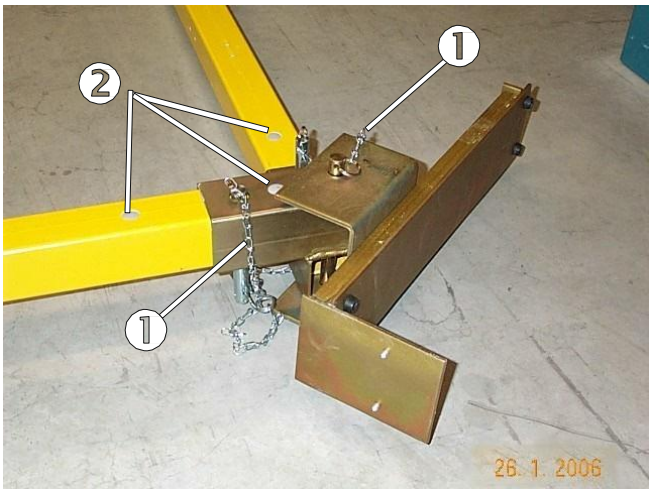


Fig. 7: Check that the chains are laid correctly

The fastening bolt is placed at the other end of the horizontal side of the triangle and is secured with a long bolt (fig. 8/pos. 1). You can use the black marker to check that the fastening bolt has been placed in the right place. The marker must be visible and facing upwards.

The longer piece of the two-piece clamping belt and the snap hook must be hooked to the lower D-loop (fig. 8/pos. 2).

The diagonal side of the triangle is attached to close the triangle, using the coloured markings as a guide.
The tube end with the black marker is mounted onto the horizontal triangular structural part and is secured using a short bolt (fig. 9/pos. 1). The bolt chain must laid so that it falls onto the diagonal side of the triangle from above.
The tube end with the white colour marking is connected to the vertical triangle structural part at the required place (platform depth) and is secured with a long locking pin (fig. 10 / pos. 1).

After the triangular structural part has been constructed, the loose end of the belt must be loosely but securely attached to the vertical side of the triangle (fig. 11/pos. 1).

4.2.2.4 Assembly of the left-hand triangular structural part

The left-hand triangular structural part is a reverse version of the right-hand triangular structural part when assembled.

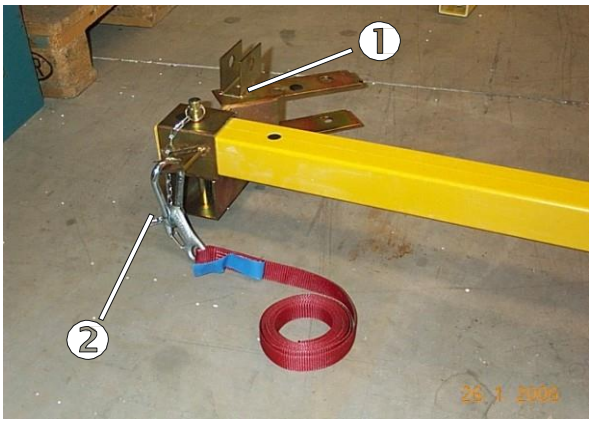


Fig. 8: Attaching the horizontal profile

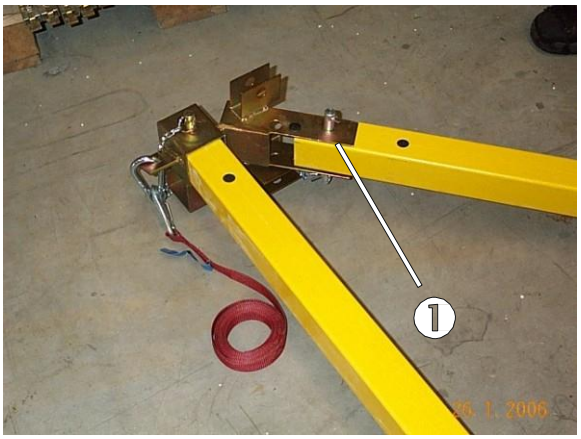


Fig. 9: Attaching the diagonal profile

Fig. 10: Setting the platform depth

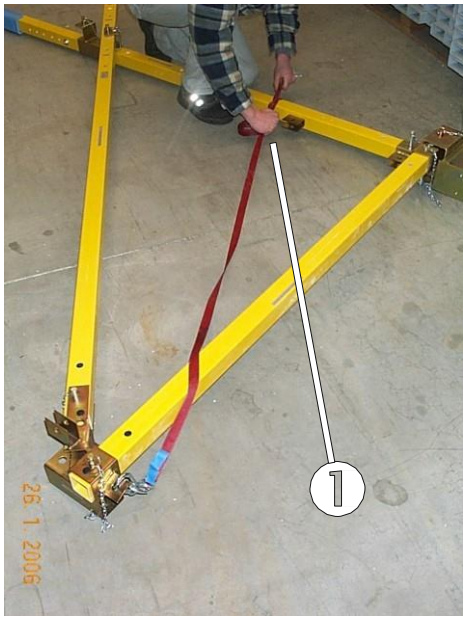


Fig. 11: Attaching the tension belt


Right-hand triangular structural part, assembled

4.2.2.5 Positioning of the triangular structural parts in the lift shaft

After the triangular structural part has been assembled, the rest of the erection takes place at the lift shaft. The triangles can be lifted by the diagonal sides, with the diagonal sides horizontally aligned when the triangles are lifted (fig. 12/ pos. 1), and then transported to the threshold in question. Personal safety equipment absolutely must be used for any further work that takes place at the lift shaft.

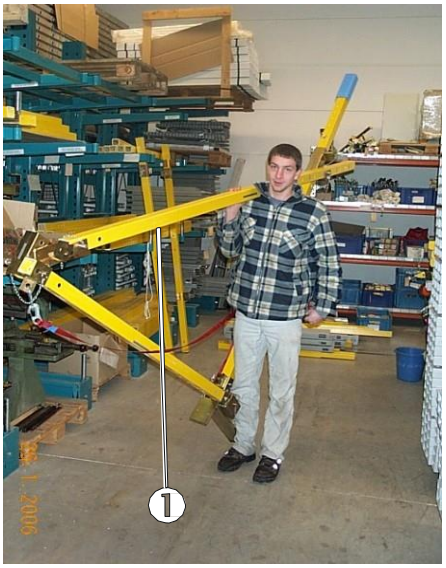


Fig. 12: Transporting the triangular structural part

The horizontal alignment of the diagonal side allows the triangular structural part to be transported to the threshold safely and easily (fig. 13/pos. 1).

Fig. 13: Placing it on the threshold

The triangle is placed up to the edge of the threshold and lowered towards the centre of the shaft until the vertical side of the triangle lies flat against the upper lintel (fig. 14/pos. 1).

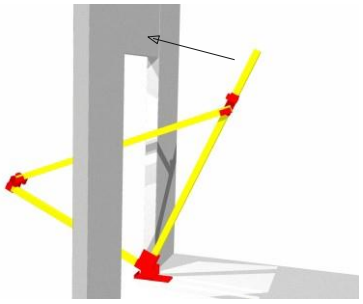


Fig. 14: Tipping the triangle element to the intel

Fig. 15: Lifting the triangular structural part

4.2.2.6 Laying the floor panels

When the two triangular structural parts have been installed, you can lay the first two floor panels onto the horizontal sides of the triangle, one after the other. However, before doing so, the gap between the triangles must be straightened using the first panel. You do this by slightly lifting and moving a triangular structural part (fig. 15/ pos. 1).

Once the gap has been straightened you can move the first standard panel, which has two U-shaped milled edges (not an ascent panel!) to the end of a platform by gently pushing it in the direction of the end of rear wall of the shaft (fig. 16/pos. 1). Make sure that the milled edges are facing the lower horizontal sides of the triangle. You must also make sure that the straps are still hanging free and have not been trapped or blocked by the panel you just laid. This is also the case for the second panel (fig. 17/pos. 1).

Fig. 16: Laying the first standard panel

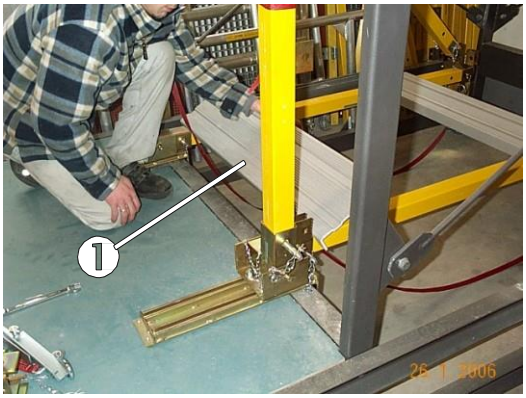


Fig. 17: Laying the second panel

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In the next step, the lower cross beam is mounted onto the threshold bracket behind the horizontal sides of the triangle to stabilize and connect the triangular structural parts (fig. 18/pos. 1).
You must make sure that the cross beam is aligned so that the beam protrudes over the inner side of the right-hand and left-hand shaft or door opening by at least 100 mm. The pre-assembled Z brackets can be moved horizontally along the bar by loosening the T-head bolts.

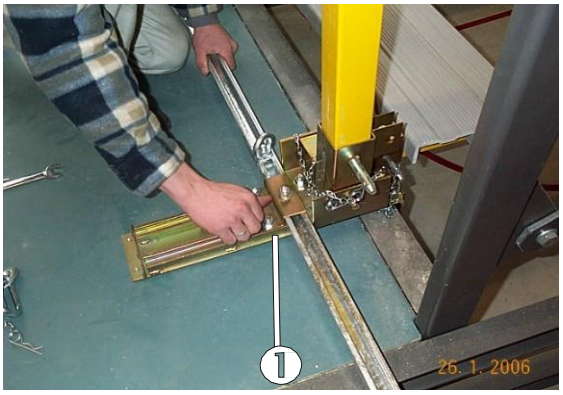

Fig. 18: Attaching the cross beam

Only then is the cross beam attached to both the left-hand and right-hand threshold brackets using two T-head bolts on each side. After being attached to the C profile, the bolts must be tightly fixed into place by turning them 90° (fig. 19/pos. 1). The notching at the end of the screw must be at 90°, i.e. across the length of the C profile.
This step must be carried out for both threshold brackets.

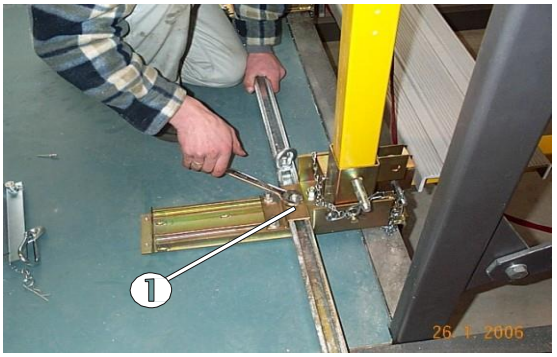

Fig. 19: Attaching the T-head bolts

Furthermore, eye screws must now be fixed to the up-facing, open cross beam next to the threshold brackets (in the direction of the centre) for the purpose of hooking on the tension belts later on.
You must make sure that you screw the bolts tightly here, too (fig 21 and 22/pos. 1)

Fig. 20

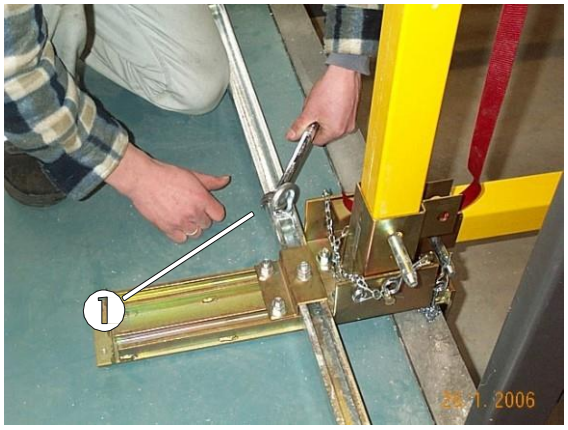

Fig. 21: Tightening the eye screws

Fig. 22

4.2.2.7 Stabilisation of the scaffolding using tension belts

In the next step, the short pieces of the two-piece tension belts are hooked onto the left-hand and right-hand eye screws using snap hooks (fig. 23 and fig. 24 / pos. 1).

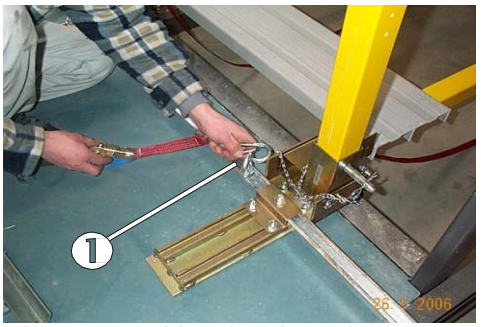

Fig. 23: Attaching the short piece of the tension belts

Fig. 24: The short pieces are then attached using a snap hook.

The long pieces of the tension belts, which are attached to the vertical sides of the triangles (fig. 25/pos. 1) are then crossed and fed into the ratchet of the short piece (fig. 26/pos. 1), pulled tight and placed under slight tension by means of 2-3 ratchet movements (fig. 27/pos. 1).

Fig. 25: Loosening the second half of the tension belt

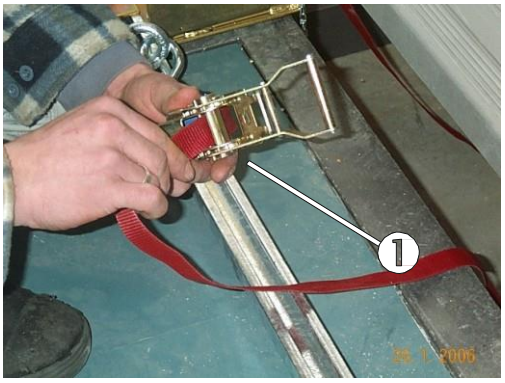

Fig. 26: Inserting the end of the belt

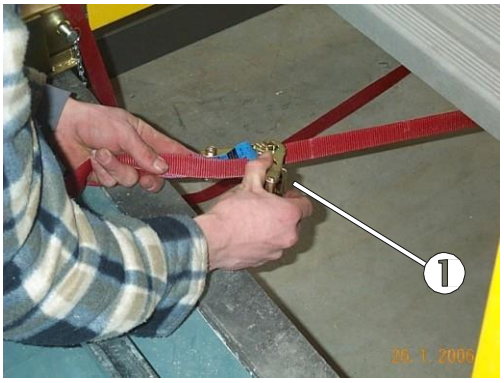

Fig. 27: The ratchet on the clamping belt is used to generate light preliminary tension

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Before inserting and tensioning the second belt, the second front panel must be placed about 30 to 40 cm away from the threshold (fig. 28 and 29/pos. 1).

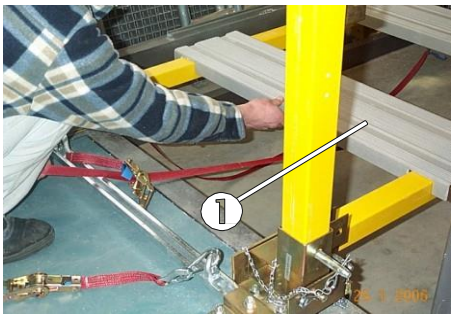

Fig. 28: Alignment of front panel


Fig. 29: Required gap of panel from ratchet

Because the tension changes, the belts should only be subjected to slight preliminary tension. The final tensioning is only applied after the panel has been laid flat (fig. 30/pos. 1).

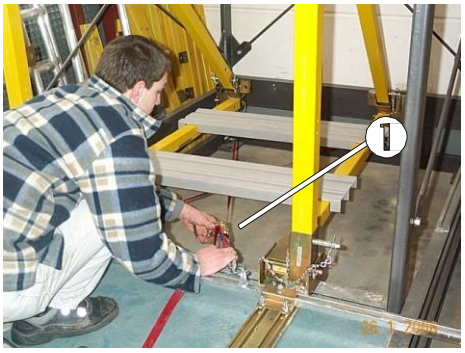

Fig. 30: Pre-tension the belts

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When the tension belts have been placed crosswise at loose tension, the other panels can be laid to the front of the two triangular structural parts and pushed to the rear (fig. 32/pos. 1).

Fig. 32: Laying the other floor panels

After the last but one panel has been laid, the tension belts are placed under maximum tension using the ratchet (fig. 33/pos. 1). You should make sure that the tension force is equally distributed over both belt threads.

Fig. 33: Equal application of maximum tension force

When the belts have been placed under maximum tension, the ratchet lever must be applied and the excess belt allowed to trail into the shaft. This can prevent accidents/tripping (fig. 34/pos. 1).

Fig. 34: Apply ratchet and trail the excess tension belt down the lift shaft

The last and last but one panel are slightly tipped up against each other and then pressed downwards. The resistance should be slight. If the resistance is too great, the belts must be slightly loosened so that the panels can be pushed down.
The belts should be tightened again afterwards (Fig. 35 / pos. 1).

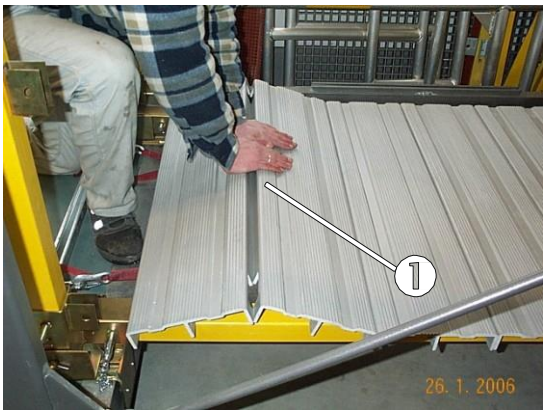

Fig. 35: Lay the last panels on the bottom platform

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The final panel must lie flush with the hinge of the threshold bracket on the horizontal side of the triangle (fig. 36/pos. 1).

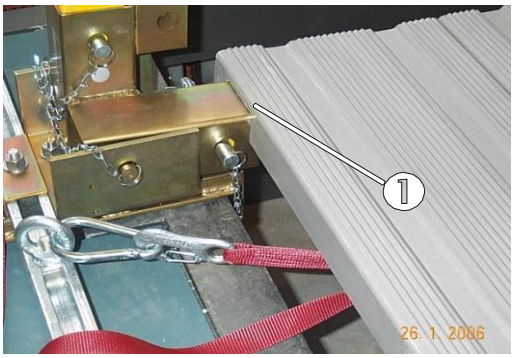


Fig. 36: Correct position of the final floor panel

Due to the tension on the belts, it should no longer be possible to move the panels lengthwise along the platform (fig. 37/pos. 1).

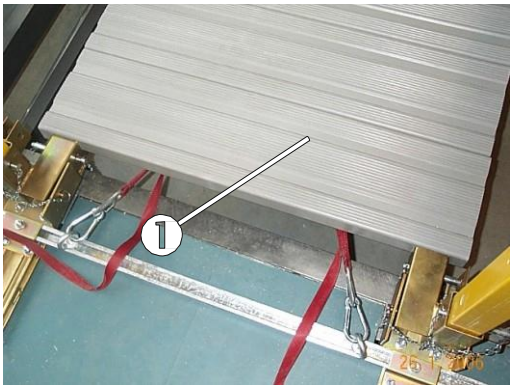


Fig. 37: Attaching the short piece of the tension belts

4.2.2.8 Vernier adjustment of triangle sides

In the next step, the front sides of the triangles must be aligned vertically (fig. 38 and 39/pos. 1).

Fig. 38: Aligning the front vertical side of the triangle (right-hand side)

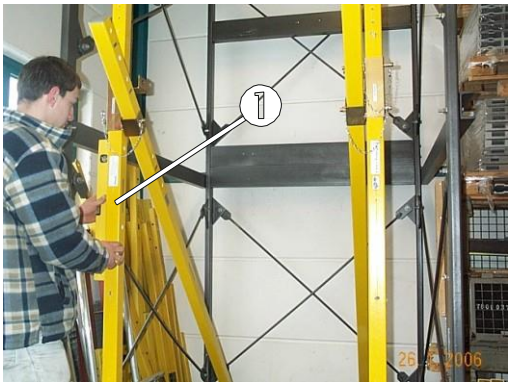


Fig. 39: Aligning the front vertical side of the triangle (left-hand side)

D

The upper cross beam (C profile rail) is screwed on to both vertical sides of the triangles at head height. The open section should face towards the centre of the shaft. Taking into account the inner dimensions of the door/shaft opening, the profile rail is to be attached to the appropriate hole of the 3 drilled holes by gently tightening an HS 28/15 M10x80 T-head bolt with hexagonal nut and large washer (fig. 40/pos. 1).

Fig. 40: Attaching the upper cross beam

You can gently tighten each of the hexagonal nuts using a flat wrench. The large washer serves to ideally distribute the force generated (fig. 41/pos. 1).

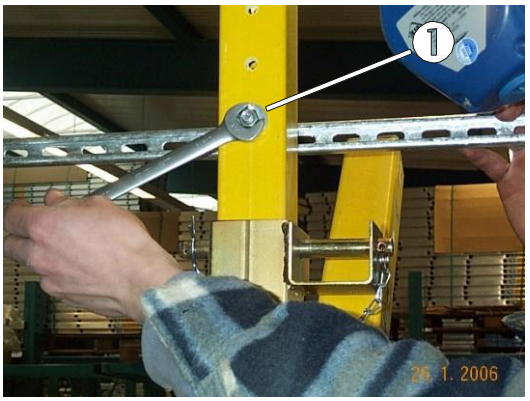


Fig. 41: Inserting the washer to distribute the force

The next step explains how to attach the L angle sections along the lower and upper C profile rails using a bolt (fig. 42/pos. 1). HS 28/15 M10x30 mm T-head bolts are used for the upper rail, and HS 40/22 M12x30 bolts are used for the lower rail. The L angle that is intended for the lower cross beam has a curved projecting edge that must be placed into the C rail during assembly. When the hexagonal nut has been tightened, the projection should prevent distortion. The L angle must lie with one side piece on the C profile rail and the other on the wall/door soffit. Only then is the nut tightened.

Fig. 42: L angle for bracing the platform in the doorway

The second L angle that has a projecting edge is laid in the same way on the other shaft/door soffit (fig. 43/pos. 1).

Fig. 43: Attaching the second L angle

The same method is applied for the L angle for the upper cross beam (fig. 44/pos. 1). However, this L angle has no projecting edge. Make sure that this L angle is laid on the door/shaft soffit, too. The rubber pads on the L angles protect the subsurface when the angles are attached.

Fig. 44: L angle for the upper cross beam

D

4.2.2.9 Mounting drs raised work platform

The next part of the erection process is carried out at the rear of the assembly platform. First, the rear vertical rail stanchions must be placed into the fastening bolts from above and secured using a short locking pin and a safety pin (fig. 45). Note that the short locking pin is inserted from the rear towards the centre of the platform (fig. 46).

Fig. 45: Inserting the rear vertical rail stanchion

Fig. 46: Pin locking device for the rear vertical rail stanchion

Make sure that the locking pin chain hangs downwards (fig. 47/pos. 1).

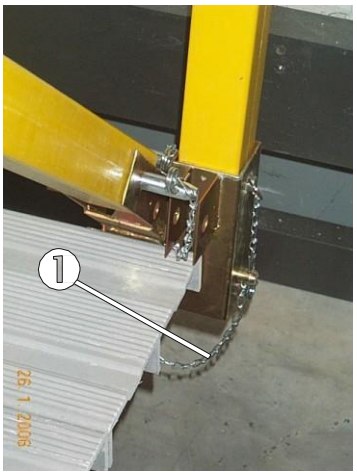


Fig. 47: Make sure the chain falls correctly

The left-hand rear vertical rail stanchion is mounted in a laterally reversed manner and is secured using short locking pins (fig. 48).

Fig. 48: Securing with short locking pins

Pre-assembly of the front handrail A connecting tube is then mounted between the vertical rail stanchions to act as a handrail. First, the X mounts must be attached and secured to the ends of the tubes using short locking pins (fig 49).

Fig. 49: Pre-assembly of the front bar

Make sure that the locking pins are aligned correctly and the chains fall correctly (fig. 50/pos. 1).

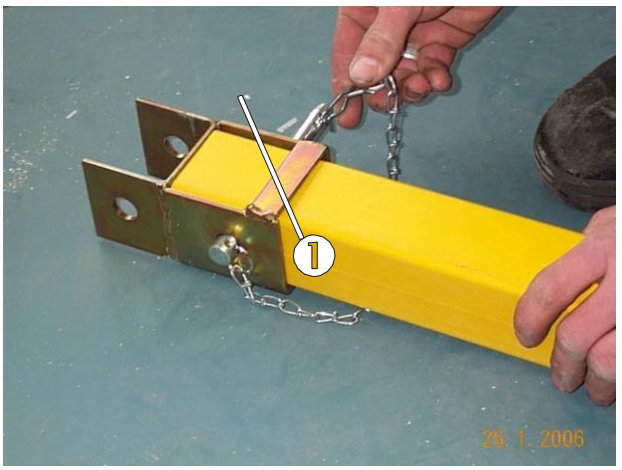
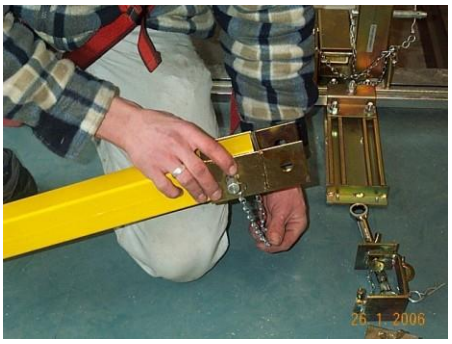


Fig. 50: Alignment of the bolt and the chains



The pre-assembled long bar is now placed from above between the vertical rail stanchions by sloping slightly. It is secured using short locking pins inserted into the upper drilled holes (at waist height) from the front (fig. 51 and 52/pos. 1).

Fig. 51: Mounting the rear long bar

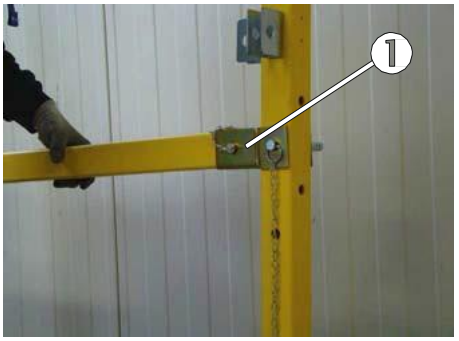
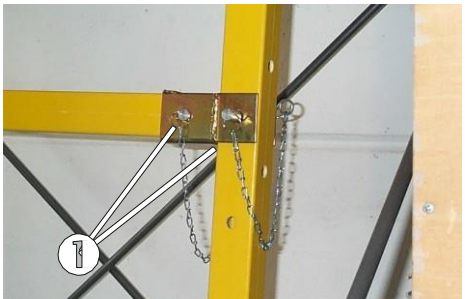


Fig. 52: Locking pins for securing the long bar

Make sure that the locking pins are aligned correctly and the chains fall correctly (fig. 53/pos. 1).



In the next step, the horizontal midrails are mounted lengthwise along the platform at head height. The location points are on the rear vertical rail stanchions (fig. 54/pos. 1) and on the upper tip of the triangle (fig. 54/pos. 2).

Fig. 54: Location points of upper horizontal bars

First, the inner and outer tubes of the horizontal midrail are carefully pulled out to the required length. The extended telescopic tube can now be laid onto the fastening bolts before attaching it, making the mounting process easier. For a platform depth of 1,000 mm, only use the outer tube. You have to unscrew the long locking pin on the rear fastening bolt in order to insert the inner-tube of the telescopic tube. Then secure it again, using the locking pin. The fastening bolt must be held firmly during this process to make sure it doesn't slip down (fig. 55/pos. 1).

Fig. 55: Rear bar must be held into place during mounting process

In the case of the front fastening block, too, the upper of the two long locking pins must first be taken out. They are replaced and secured after the horizontal telescopic tube has been taken out (fig. 56/pos. 1).

Fig. 56: Front fastening bolt for securing the bar

Make sure that the locking pins are correctly aligned and the chains fall correctly

The second, opposite midrail is mounted and secured in the same way (fig. 57/pos. 1).

Fig. 57: Second, opposite midrail

Again, make sure that the locking pins are aligned correctly and the chains fall correctly (fig. 58/pos. 1).

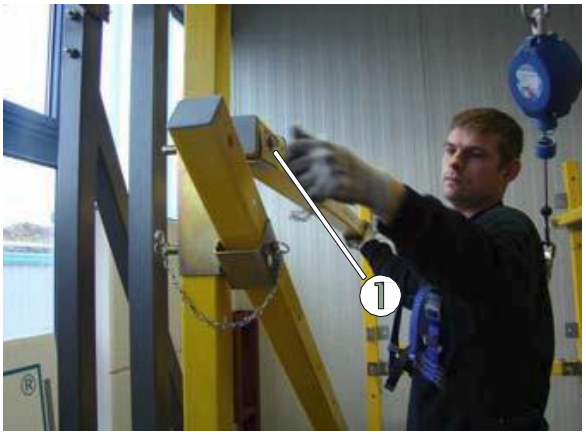


Fig. 58: Correct alignment of locking pins

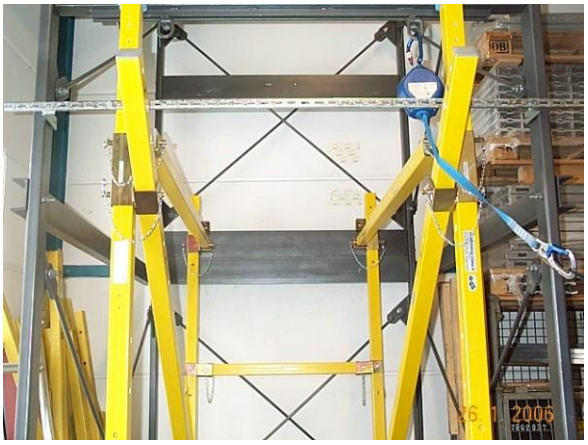


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Fig. 59: Alignment of the rear vertical rail stanchions

Once the rear vertical rail stanchion is horizontal to the platform (fig. 59/pos. 1) the two upper horizontal midrails must be attached to a hole appropriate to the length and secured with a short locking pin (fig. 60/pos. 1).

Fig. 60: Attachment of inner and outer tube with a short locking pin

Next, the missing panel bars are mounted lengthwise. First, the front X mounts are mounted and secured to the vertical triangle sides with a short locking pin, at a height of approx. 1.25 m (fig. 61/pos. 1).

Fig. 61: Mounting the other panel bar

The second X mount for the panel bar is attached and secured to the rear vertical rail stanchion beneath the crossbar that has already been mounted using a short locking pin (fig. 62/pos. 1).

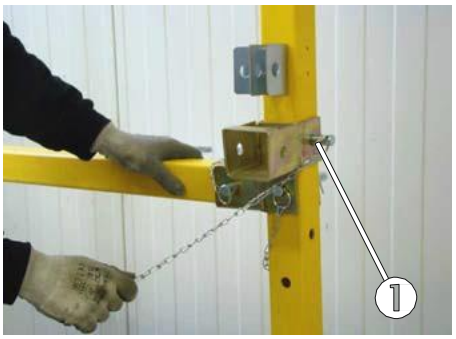

Fig. 62: Mounting the X mounts

Panel bars appropriate to the platform depth (inner and outer tube) can then be placed into the X mounts. If the platform depth is greater than 1500 mm, the long outer tubes (1600 mm long) must be used for the handrail (fig. 63/pos. 1).

Fig. 63: Make sure that you have the correct outer tube

After the panel bars have been positioned, short locking bolts are to be used to secure them (fig. 64/pos. 1).

Fig. 64: Fixing the panel bars

Telescopic rods and an adaptor for fastening the rods are provided for the lateral bracing of the work platform in the lift shaft (fig. 74/pos. 1).

Fig. 66: Telescopic rods (yellow) with adapter

If the distance to the left and the right of the shaft (along the length of the platform) is small, an adapter must be attached beneath the upper horizontal bars and secured with two short locking pins, inserted from the front (fig. 75 / pos.1).

Fig. 67: Attaching the adapter

The adaptor can hold two telescopic rods at once (fig. 76/pos. 1 and 2). The threaded post of the telescopic rod must then be inserted into the adapter (U profile) from the outside and tightened using the wing nut.

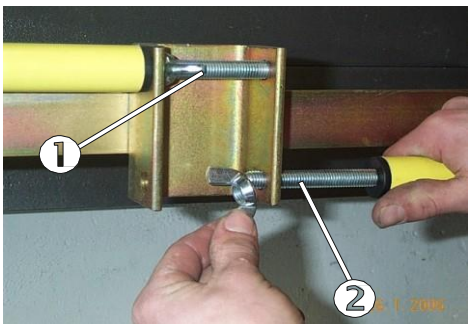

Fig. 68: Attaching the telescopic rods

However, if the distance to the wall of the shaft is larger, the rods can be mounted singly or on both sides and secured to the free drilled hole in the upper horizontal midrail in front of the fastening bolt (fig. 77/pos. 1).

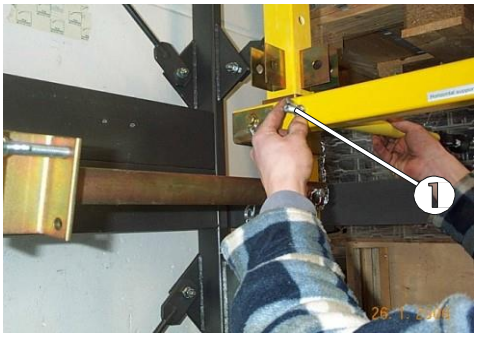

Fig. 69: Alternative way of attaching the telescopic rods

You can release the holding lever (fig. 78/pos. 1) to extend the telescopic rods to a maximum length of 1 m. You snap the holding lever back into place after extending the telescopic rod to the required length.

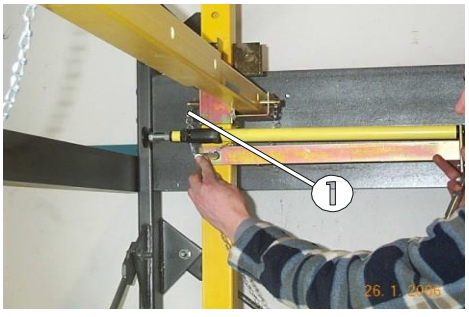

Fig. 70: Releasing and closing the holding lever

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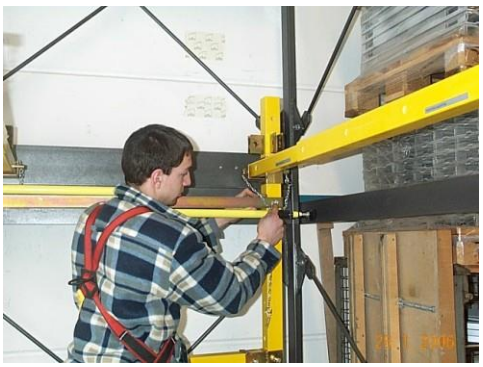


If the telescopic rod is to be attached to the upper horizontal midrail, use the washer that is included in the delivery.

D

You can use a flat wrench to unscrew the adjustable foot at the end of the telescopic rod to a maximum of 80 mm (fig. 79/pos. 1).

Fig. 71: Adjustable foot for vernier adjustment of length

After clamping the base platform in the lift shaft, further assembly can continue.

First, the upper rail stanchions are inserted into the rear vertical stations from above (fig. 72 / pos. 1)

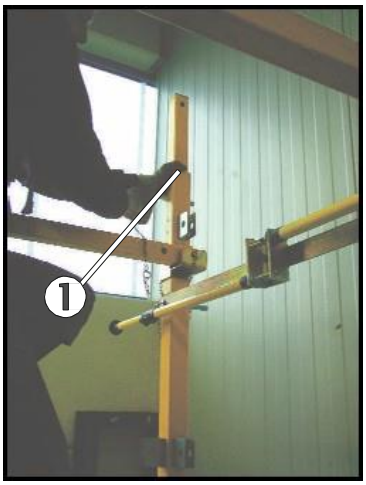


Fig. 72: Upper rear rail stanchion

The inner tube then has to be secured at the front using a short locking pin, so that is cannot be pulled out (fig. 73/pos. 1).

Fig. 73: Securing the upper vertical rail stanchion

The second, opposite upper rail stanchion is inserted from above like the first stanchion. It is then secured with a short locking pin (fig. 74/pos. 1).

Fig. 74: Second, opposite rail stanchion

D

In addition to the stanchion itself, the appropriate fastening bolt is needed for the front vertical rail (upper) stanchion. First, examine the outer tube of the upper horizontal bar to decide where the fastening bolt is to be secured using a long locking pin. The aim is to be able to mount the wall anchor as near as possible to shaft wall inside the shaft. It is to be mounted above the lintel (fig. 75 / pos. 1).

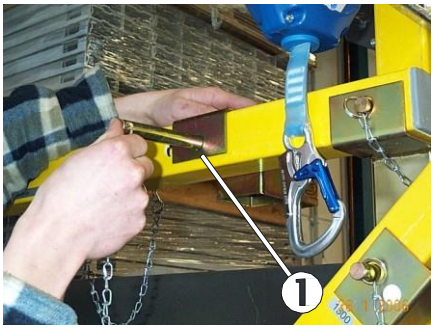


Fig. 75: Determining the correct insertion position

The fastening bolt is then placed so that the upper rail stanchion can be inserted into the square tube of the receptacle and secured with a long locking pin (fig. 76/pos. 1). The rail stanchion must be placed between the horizontal bar and the side wall of the shaft.

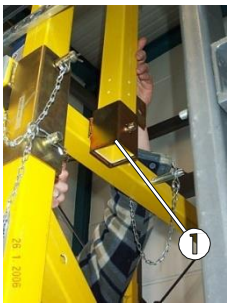


Fig. 76: Positioning the fastening bolt part with the upper rail stanchion

The next step involves starting to lay the floor panels for the actual work platform. You begin with the **standard panels** which have U-shaped milled edges at the end. Starting from the rear, the panels are laid down and pushed back so that the milled edges
reach the upper horizontal bars (fig. 77 / pos. 1).

Fig. 77: Laying the upper floor panels

D

Additional panels are added, without leaving gaps, in accordance with the platform depth.

For greater flexibility, you can use also use a narrow floor panel (depth 130 mm) (fig. 78).

Fig. 78

To prevent the panels on the upper platform from slipping, tube clamps must be clamped and secured behind the last floor panel/nearest floor panel to the door (fig. 89/pos. 1).

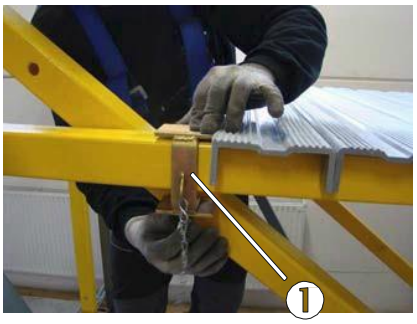


Fig. 82: Tube clamps to prevent the floor panels from slipping

In the next step, you reach the upper platform using the leaning ladder included in the delivery. Here, make sure that the ladder is stable and correctly positioned (fig. 83/pos. 1).

Then attach the upper wall anchors for stabilizing the upper front rail stanchions and the circumferential, three-piece handrail and foot protection.

The upper front vertical rail stanchions must be parallel to the shaft wall, and each must be attached using a wall anchor (fig. 84/pos.1).
The wall anchors can be freely adjusted to the depth. You can either use T-head bolts or wall screw anchor fittings to fix them to the shaft wall.

Fig. 83:

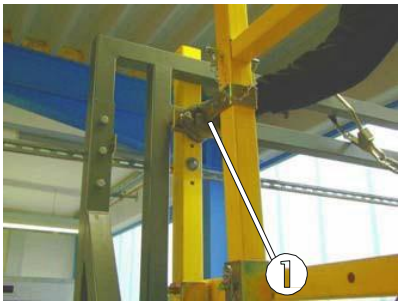
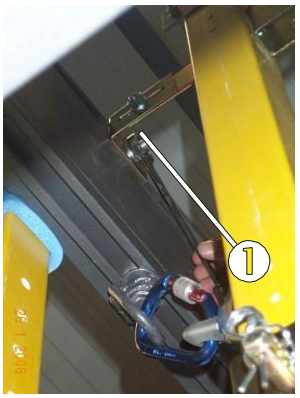


Fig. 84: Attaching the wall anchor

Fig. 85: Using T-head bolts or wall screw anchor fittings for mounting



The upper vertical rail stanchions can then be joined to the handrails provided and secured using short locking pins. The handrails that run along the length of the platform must be placed into the vertical rail stanchions as shown in fig. 86/pos. 1 and fig. 87/pos. 1 and secured with short locking pins.
For the following platform depths, the appropriate handrail inner tubes must be selected:

Platform depth	Inner tube length
1000 mm	760 mm
≥ 1250 mm	1100 mm
≥ 1750 mm	1600 mm

The handrail outer tube remains the same for all platform depths.

Fig. 86: The outer tube of the handrail is placed on top of the rear vertical rail stanchion

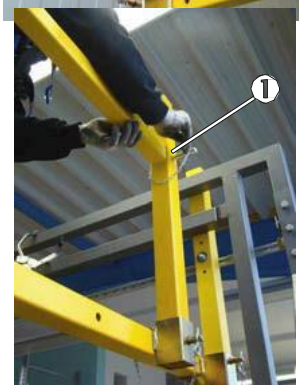


Fig. 87: The inner tube of the hand rail is inserted into the front vertical rail stanchion and secured with a locking pin

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4.2.2.10 Erection of double platform

The upper rear frontal handrail if laid onto the handrail that runs along the length of the platform and is secured from above using a short locking pin at the end of the tube (fig. 89 and fig. 90/pos. 1).

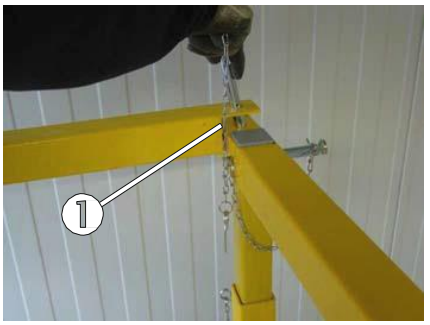


Fig. 89: Laying and securing the upper frontal handrail

Fig. 90: The locking pin is inserted from above

4.2.2.11 Erection of side guard in doorway

When the handrails have been mounted, you can being to mount the foot rail with the U profiles of the vertical triangle side, which are provided for that purpose. These are attached and secured using short locking pins (fig. 91 / pos. 1).

If the platform depth is greater than 1500 mm, the long variant (1250 mm) must be used as foot rail.

Make sure that the locking pins are aligned properly and remember to use safety pins.

Fig. 91: Securing the foot rail

The next assembly step is to attach the rear frontal midrails and toeboards to the U profiles provided for this. The protective rails are also secured using short locking pins.

Make sure that the locking pins are aligned properly and remember to use safety pins.

D

Fully erected “Stingl *mobil* PANO” work platform as raised double platform: Width:1000 mm/Shaft depth 1750 mm

D

5 Maintenance, repair and storage

5.1 Cleaning the scaffolding parts

The parts can be cleaned with water and normal cleaning products that do not contain caustic ingredients.

Warning: Cleaning products must not leach into the water table. Dispose of used cleaning fluids according to relevant environmental protection regulations.

5.2 Inspecting scaffolding parts

Glass reinforced polyester tubes/PVC parts/floor panels
Inspect for deformation, crushing and cracking. If defects are discovered, do not use the parts.

Steel parts/welded seams
Inspect for deformation, crushing and cracking. If defects are discovered, do not use the parts.

Locking pins
Inspect for deformation and completeness (chain and safety pin). If defects are discovered, the locking pins cannot be used.

Tension belts
Inspect for deformation and ensure that metal parts function correctly. Inspect fixings for textile belts: if defects are discovered, the tension belts cannot be used.

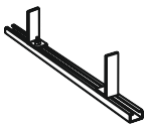
Telescope rods
Inspect for deformation, crushing and cracking. If defects are discovered, do not use the telescope rods.

5.3 Storage

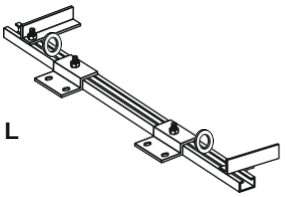
The scaffolding parts must be stored to ensure that none can be damaged. The scaffolding parts must be stored in such a way that they are not affected by weather conditions. The scaffolding parts may not be exposed to UV rays for long periods.
Horizontal storage is preferable.
During transport to or from the storage location, the scaffolding parts must be secured in wooden casings (or similar) to ensure that they cannot slip, fall, or come into contact with one another. Do not throw the scaffolding parts when unloading.

6 Parts List

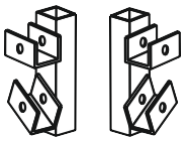
Part 1



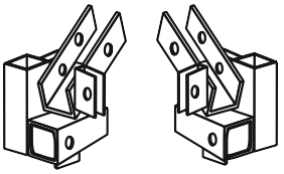
1 piece upper cross beam incl. 2 T-head bolts HS 28/15 M10x80 and 2 L angles



1 piece
Lower cross beam, consisting of mounting rail HM 40/22, 4 T-head bolts
HZS 29/20 M12x30, 4 T-head bolts HS 40/22 M12x30, 2 L angles, 2 Z brackets and 2 ring nuts.

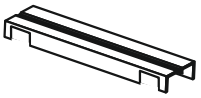


1 piece each, left and right front fastening bolt, upper, incl. bolt

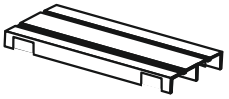


1 piece each, left and right lower rear fastening bolt, incl. bolt

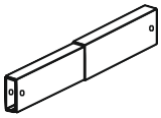
1 piece leaning ladder approx. 1500 mm long



1 piece floor panels 1000 x 130 mm

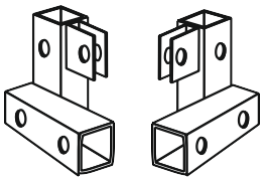


6 piece floor panels 1000 x 250 mm

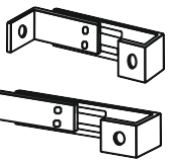


Foot rail or midrail pairs, consisting of inner and outer tube:
2 pairs 1250 mm long
2 pairs 700 mm long (front end)

4 piece floor panels raised platform 1130 x 250 mm

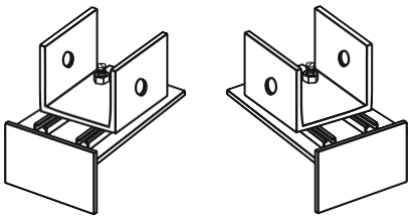


1 piece each, left and right front fastening bolt, lower, incl. bolt

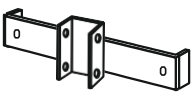


2 pieces each, short and long adjustable spacers

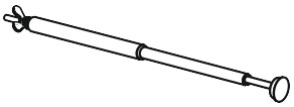
2 pairs each, tension belts for platform width 700 mm or 1000 mm



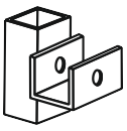
1 piece each, left and right front threshold shoe, lower



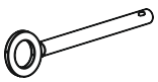
1 Piece
Adapter for telescopic rod (adjustable from 700 - 1000 mm)



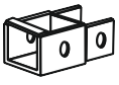
2 pieces telescope rods



2 Piece fastening bolt for upper, vertical rail stanchion



42 pieces locking pins incl. chain and splint lock 145 mm long 3 pieces locking pins incl. chain and splint lock 185 mm



6 pieces X mount for railing/handrail

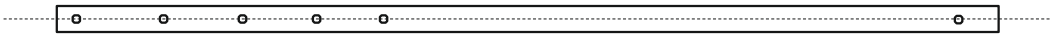
2 pieces tube clamps for tube 60x60 mm

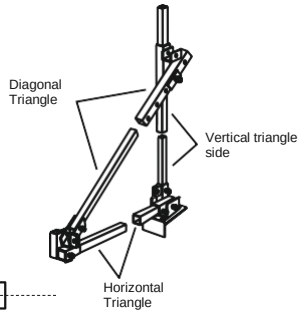
D

Part 2

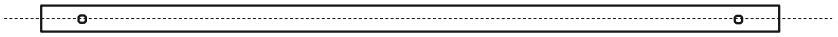
GRP tube profiles
Base platform incl. fall protection

Diagonal triangle side 2 pieces 60x60x2215 mm

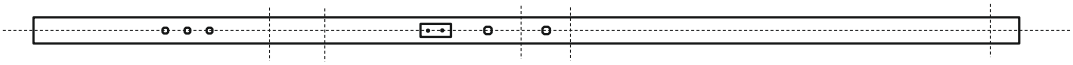




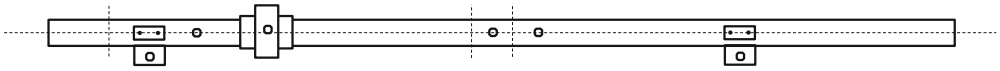
Horizontal triangle side 2 pieces 60x60x1700 mm for shaft depth 1500 mm



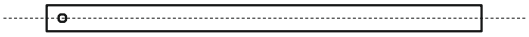
Front vertical triangle side 2 pieces 60x60x2240



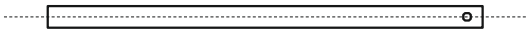
Rear vertical rail stanchion incl. fastening bolt (steel) and bolts 2 pieces 60x60x2050mm



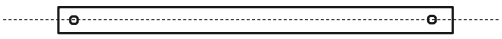
Lower lengthwise handrail 2 pieces 60x60x1000 mm (outer tube)



Lower lengthwise handrail 2 pieces 50x50x1000 mm (inner tube)

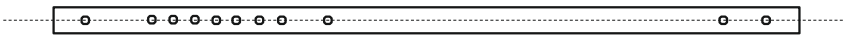


Lower front handrail 1 piece 60x60x915

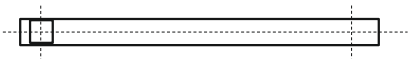


Elevated platform including fall protection

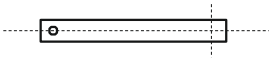
Upper midrail 2 pieces 60x60x1745 mm



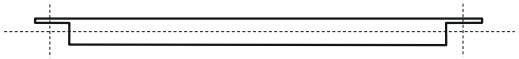
Upper vertical rail stanchion front 2 pieces 60x60x800 mm



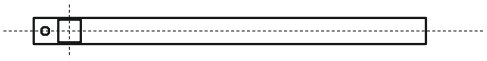
Upper vertical rail stanchion rear 2 pieces 50x50x395 mm



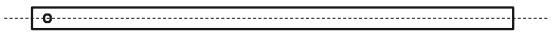
Upper front handrail 1 piece 60x60x1060 mm



Upper lengthwise handrail 2 pieces 60x60x820 mm



Upper lengthwise handrail 2 pieces 50x50x1100 mm



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