

**Tobler**<sup>®</sup>  
Scaffolding. Formwork.



## **AVA**

Instructions for  
assembly and use

## **MATO** |

Facade scaffolding.  
Swiss Research.

**The safe way to  
get higher faster.**

**The safe way to  
get in form faster.**



## Lightweight scaffolding for clever people.

### Cost-effectiveness you can rely on.

MATO 1 façade scaffolding is one of very few systems which can be assembled from just four main components, thanks to its double-rail system. This has a positive effect not only on safety, but also on cost-effectiveness.

The scaffolding frames are available in widths of 70 cm and 100 cm, and all the system components are compatible with each other.

Our products are subject to continuous independent monitoring by the Karlsruhe Institute of Technology (KIT) and the German Institute of Construction Technology (Deutsches Institut für Bautechnik [DIBt]).

### Save up to 30 % in time and money.

Practical experience has shown that using modern lightweight scaffolding instead of conventional heavy systems can save up to 30% in terms of time. This is an important consideration, against a background of constantly increasing costs!

The lightweight method does not just mean considerable advantages when assembling scaffolding. Its low weight means that more can be carried, handling is safer and storage easier.

### As strong as necessary – as light as possible!

MATO 1 is a modern lightweight system, developed specifically for the increased financial demands made on scaffolding. Steel frames with a wall thickness of 2,7 mm or aluminium frames with a wall thickness of 4 mm are used, depending upon the overall height and maximum load. The steel version permits a height of 60 m and above, whilst the aluminium version is suitable for 40 m and above. Frames with a wall thickness of 3,25 mm are available for particularly heavy loads. They are compatible with standard lightweight frames.

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# 1 Preface

- 1.1** These instructions for assembly and use should solely be applied to the use of original MATO 1 construction elements which are indicated with the licence Z-8.1-937 and which are referred to in paragraph 6.1 of the construction elements list.
- 1.2** The assembly, alteration, and dismantling of the scaffolding system must be conducted under the supervision of a qualified person by a specialised employee following instructions having obtained object-oriented risk assessment training.
- 1.3** The MATO 1 steel scaffolding system is licensed as a work and safety scaffold of the load class 1 to 3 according to DIN EN 12811-1:2004-3.

## Scaffolding EN 12810 - 3D - SW06/300 - H2 – B - LS

- 1.4** In these instructions, the assembly, alteration, and dismantling is described for the standard design of the scaffolding system. The stability proof is valid for the standard design issued by the general building supervision approval Z-8.1-937.
- 1.5** Deviations from this instruction might be possible if the safety of the assembly processes (for example the safeguarding against falls, structural safety in the intermediate stage) is assured in the individual cases.
- 1.6** Deviations from this standard design are possible, if in the individual cases; it is assured that the structural safety and usability is in accordance with the technical building clause Z-8.1-937.
- 1.7** The structural safety can be assured with the help of sizing tables or sizing aids which are based on technical building regulations.
- 1.8** It is the responsibility of the contractor responsible for the erection to compile a plan for the assembly, alteration, and the dismantling, depending on the complexity of the scaffolding structures; or to let another qualified person compile it. Additionally, this instruction for assembly can be used and complemented by detailed information about the respective scaffold.
- 1.9** Incomplete scaffolding areas must be labelled with the prohibition sign "*Access forbidden to all unauthorised persons*". The entry to these danger zones must be appropriately marked.
- 1.10** After the completion, the respective scaffolder / scaffolding contractor must examine whether the scaffolding construction is properly assembled and in a safe mode of operation. The examination must be carried out by a for this purpose qualified person, it could also be carried out by a supervisor.

# 1 Preface

- 1.11** After the completion and examination, the scaffold construction has to be labelled. The label must include specifications about the scaffolder/scaffolding contractor, the stand type, the load and width class, and should contain general safety instructions. It should be attached on a clearly visible position on the scaffold.
- 1.12** After the scaffolder/scaffolding contractor has verified the proper condition of the scaffold, it can be delivered to the user. It is advisable to conduct the delivery together with the user and e.g. to document it in an inspection protocol.
- 1.13** The results of the examination should be documented in the form of an inspection protocol and it is advised to store it as a rule for 3 months after the erection period of the scaffold.
- 1.14** Additional assembly and use instructions exist for a number of new components. If these are not available, they can be requested from Tobler AG.
- 1.15.** Publisher of this assembly instruction:

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## 2 Assembly of the Scaffolding

### 2.1 General Specifications

The scaffolding construction components must be tested by visual inspection prior to the installation to ensure that none of the parts are damaged. Damaged scaffolding construction parts must not be installed.

The scaffolding must be assembled in the order described in the following paragraphs.

During the installation, the structural safety must always be ensured – also in the intermediate stages.

Throughout the entire installation works, individual protective equipment must be worn. This includes appropriate clothing, protective footwear, gloves, and a safety helmet with fork chin straps in accordance with EN 397. On the basis of regional requirements further measures may be necessary.

### 2.2 Assembly of the first Scaffolding Bay

#### 2.2.1 Specification of the intended Mounting Points

Prior to the start of the installation works, the designated mounting points must be determined on-site.

The gap between the platforms and the wall to be scaffolded depends upon the installations to be performed, and should be kept as minimal as possible. The width should not exceed 30 cm (11.8inches) (see also paragraph 2.4.2).

#### 2.2.2 Load-distributing Substructure

The scaffolding should only be assembled directly on sufficiently strong, stable surface.

If the surface is not sufficiently strong or stable enough, load-distributing should be provided (see figure 1).

If the ground is on an incline, the substructure must be assembled in a way to prevent it from sliding away, and that a horizontal contact surface is created for the scaffold (for example by installing tapered pins). If the incline has an angle greater than 5°, the local load transmission must be verified and if applicable, appropriate measures should be taken to ensure the required safety.

#### 2.2.3 Base Jack, Base Frame

Under each upright scaffolding a base jack must be placed (see figure 1).

As described in this standard assembly, the permissible extension length of the base jacks adds up to 26,5 cm (from the lower edge of the base plates to the upper edge of the ball screw nut). If the extension length is greater than described, the standard design of the scaffold has must be verified in individual cases.

On top of each spindle pair, one base frame must be plugged in (see figure 1).



Figure 1: Load-distributing Substructure with Scaffolding Planks.

## 2 Assembly of the Scaffolding

### 2.2.4 Height Compensation

If the surface has different heights at different assembly points, or if a certain height of the scaffolding levels has to be reached, scaffolding frames of a height of 0,50 m, 0,70 m, 1,20 m or 1,70 m must be inserted (see figure 2). These scaffolding frames must only be assembled directly above the base frame.

Scaffolding frames with a height of 0,50 m must be strutted one below the other with pipes and couplings.

### 2.2.5 Scaffolding Frames and Gantry Frames

The scaffolding frames are placed vertically on top of the base frames with the intended distance from the wall in order to protect it in case of accident.

### 2.2.6 Railings

A railing should be mounted between the scaffolding frames (see figure 3). At the ends of each railing are holes, which are shifted over the tilt pins of the scaffolding frames. Afterwards, the tilt pins must be locked immediately.

The scaffolding frames and the guard rail posts must be arranged so that the tilt pins are pointed towards the scaffolding platform.

If railing frames are missing, the standard design of the scaffold will be put at risk.

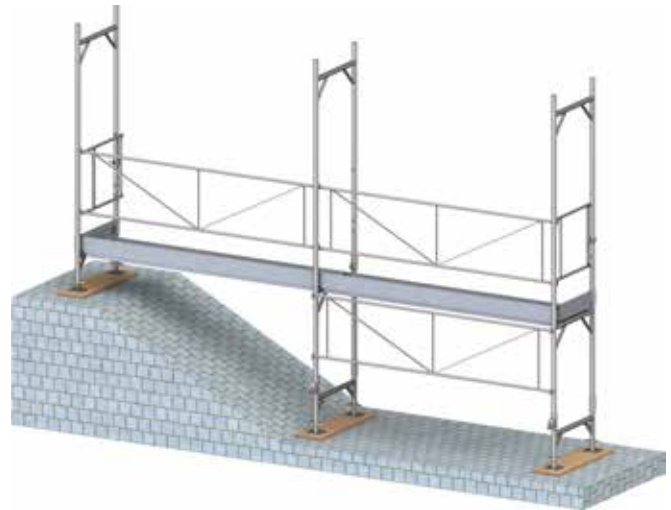


Figure 2: Scaffolding frames with a height of 0,50 m, 0,70 m, 1,00 m, 1,20 m or 1,70 m.



Figure 3: Assembly of the first scaffolding bay.



Figure 4: Shifting the railing over tilt pin.



Figure 5: Securing the railing via tilt pin.



## 2 Assembly of the Scaffolding

### 2.2.7 System Planking

One or two scaffolding frames must be mounted on the scaffolding frames:

- one aluminium plank, 0,64 m wide
- two aluminium planks, 0,32 m wide
- two steel-covered planks, 0,32 m wide
- one aluminium plank with hatch and ladder

After the installation of the planks with a width of 0,32 m it must be verified immediately as to whether the wind protection is closed. If necessary they must be closed instantly.

Planks with a width of 0,64 m will be secured automatically with the overlaying frame, or respectively with their toe board bracket.

On the uppermost level, the planks with a width of 0,64 m must be secured additionally with the wind protection Art. Nr. 1-272012.

### 2.2.8 Adjustment

The first scaffolding bay must be adjusted vertically and horizontally.

Wind protection with 0,32 m planks:



**Figure 6:** Opened wind protection. **Figure 7:** Closed wind protection.



**Figure 8:** First scaffolding bay completely assembled.

## 2 Assembly of the Scaffolding

### 2.3 Assembly of further scaffolding bays of the first level

#### 2.3.1 Normal Field

The assembly of further scaffolding bays is carried as specified in the previous paragraph about the first field. In each scaffolding bay a railing must be installed.

Failure to install the guardrail frames correctly puts the standard design of the scaffolding at risk.

#### 2.3.2 Corner Formation

In the corner of buildings, two scaffolding frames will be connected by using two swivel couplings. In the upper part of the frames, a swivel coupling will be attached adjacent to the cross tube of the scaffolding frame. The other swivel coupling will be attached to the base frame. (see figure 9).



Figure 9: Corner formation.

#### 2.3.3 Braces

In some models additional braces of tubes and swivel couplings are necessary (see paragraph 6.2). These must be installed immediately during the assembly of a scaffolding level.

## 2 Assembly of the Scaffolding

### 2.3.4 Access to the Construction Spaces on the Scaffolding

Prior to construction work on the first scaffolding level, an access must be installed in order to prevent falling hazards at the accesses to the high-situated workspaces on the scaffolding, stairways or internal gangway systems.

#### 2.3.4.1 Stairways



Figure 10: Stairways up to the first scaffolding level.

**Stairways must be installed on the exterior side of the scaffolding (see figure 10).**

- On the designated four mounting points
  - Load-distributing substructure must be installed according to paragraph 2.2.1 and
  - Base jacks mounted according to paragraph 2.2.3
- Two base frames must be plugged onto the base jacks.
- The first scaffolding frame must be mounted onto a base frame and secured to prevent collapse.
- The second scaffolding frame must be mounted onto the empty base frame and secured against falling down (e.g. by connecting the scaffolding frame with the scaffolding).
- The stairway must be hung onto the transverse tube of the base frame and of the scaffolding frame.
- Examining the position of the scaffolding
  - The Base frame and scaffolding frame should be on the level as the scaffolding.
  - The distance from the scaffolding (see figure 10).
  - Repositioning of the stairway if necessary.

## 2 Assembly of the Scaffolding

### 2.3.4.2 Gangways

For the inner gangway aluminium planks with hatch and a ladder must be used (see figure 11).

It should be ensured that the hatches of the planks are arranged offset. They must only be opened to climb through, and must be closed immediately afterwards. Otherwise, the hatches must remain closed.

Beneath this plank the scaffolding bay must be mounted on top of the base frame with planks (see paragraph 2.2.7).

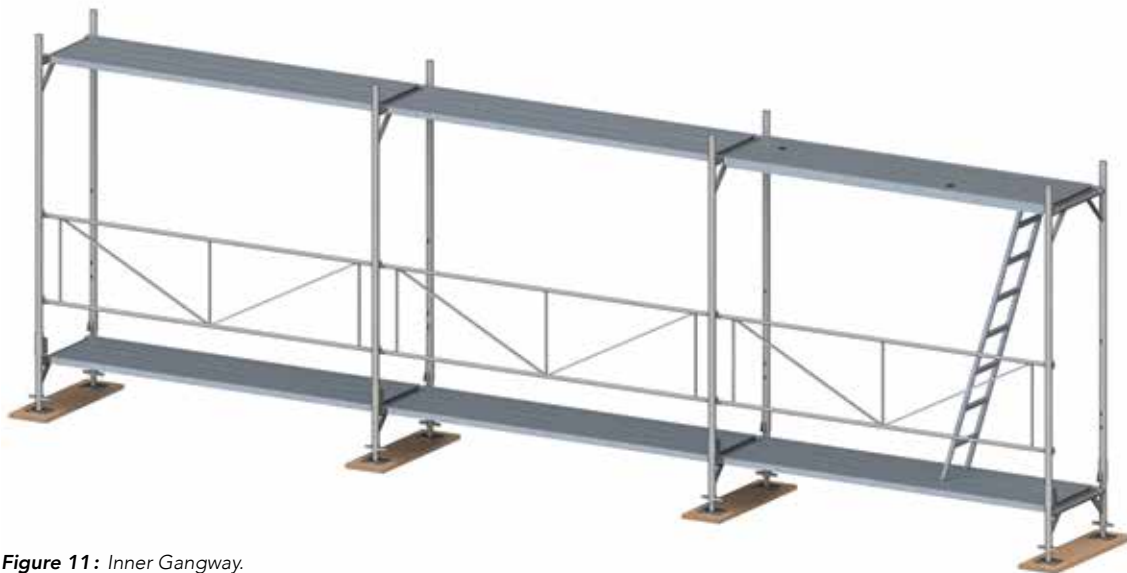


Figure 11: Inner Gangway.

## 2 Assembly of the Scaffolding

### 2.4 Assembly of further Scaffolding Levels

#### 2.4.1 Tilt Stability

There is a danger that tipping may occur on the first level of the bay, on which the vertical transportation takes place. In order to prevent tipping, temporary support may be used. These are 2 m planks. (see figure 12).

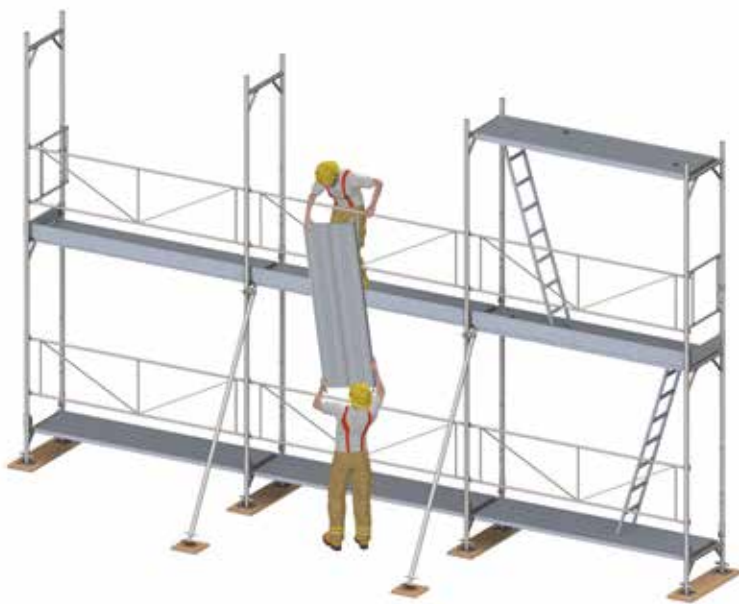


Figure 12: Example of a temporary tilt protection at the first scaffolding level.

If inner brackets are in place on the first scaffolding level, **danger of tipping** may occur when the consoling plates are stepped on.

If applicable, measures may be taken to establish tilt stability, for example, by using appropriate bracing support against the façade.

#### 2.4.2 Protection against Falling

During the assembly of further scaffolding levels, there is danger of falling. The assembly must be performed so that falling hazards are avoided and that all risks are minimised. The scaffolder or scaffolding contractor must determine respective actions and appropriate measures to prevent hazards on the basis of his or her risk assessment. Certain measures to prevent hazards could be for example

- The use of the MATO- 1 assembly safety railing "MSG" (see figure 15),
- The use of appropriate personal protective equipment "PSAgA" (see figure 18).
- A combination of the measures to prevent hazards mentioned above

The use of MSG or PSAgA may be neglected in individual cases if because of constructional and scaffolding specific circumstances the MSG and PSAgA do not offer sufficient protection or cannot be used and

- the assembly is performed by qualified and physically capable persons
- the employer performed for justified exceptional cases a special instruction and
- the drop-off edge is clearly visible for the person.

Measures to prevent falling are not necessary if the assembly and entry area are located in a distance of a minimum of 0,30 m from other load-bearing and sufficiently large areas.

## 2 Assembly of the Scaffolding

### 2.4.3 Vertical Transportation of Scaffolding Construction Parts

#### 2.4.3.1 Construction Hoists

For scaffolding with a scaffolding bay height larger than 8 m (plank height over the installation surface), construction hoists must be used during the assembly and dismantling. Construction hoists also includes manual rope pulley hoists.

Construction hoists are not necessary if the scaffolding bay height is less than 14 m and if the length processing of the scaffold is less than 10 m.

#### 2.4.3.2 Manual Transportation

Scaffolding bays in which vertical transportations are performed manually; all levels of railings must be present. Throughout the hand transportation, at least one person must stand on each scaffolding level (see figure 13 and figure 21).



Figure 13: Example of manual usage of the components and assembly on the highest scaffolding level.

## 2 Assembly of the Scaffolding

### 2.4.4 Assembly of the Scaffolding

The scaffolder/scaffolding contractor defines the fall-protection measures to be taken within the scope of his risk assessment (see section 2.4.2). The following fall-protection measures are foreseen during the assembly of the scaffolding:

#### 2.4.4.1 Result of the Risk Assessment: MSG in the Access bay / PSAgA

##### A) Assembly of the MSG on the access bay from the secured level (see figure 14).



Figure 14: Assembly with the protection of the MSG on the access bay.



Figure 15: Assembly of the scaffolding bay in the access bay with the protection of the MSG.

##### B) Assembly of the next scaffolding bay in the access bay with the protection of the MSG (see figure 15).

- The highest level must be entered through the aluminium planks with the hatch and ladder. The hatch must be closed immediately afterwards.
- The scaffolding frame in the access bay must be plugged into the lower scaffolding frames (see figure 16).
- The scaffolding must be mounted into the access bay (see paragraph 2.2.6).
- The scaffolding frame must be secured with safety pins (see figure 17).



Figure 16: Plugging of a scaffolding frame.



Figure 17: Installation of a safety pin.

## 2 Assembly of the Scaffolding

### C) Further assembly of the scaffolding bay protected by the PSAgA (see figure 21).

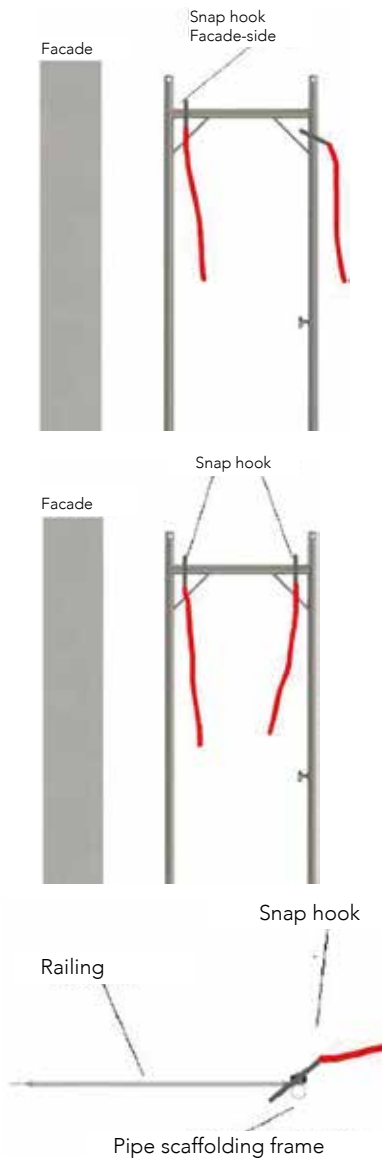


Figure 19: Permissible attachment points for the PSAgA.

#### ATTENTION:

PSAgA must only be used on the second scaffolding level, whereby the attachment points must be at least 5,75 m above the surrounding area.



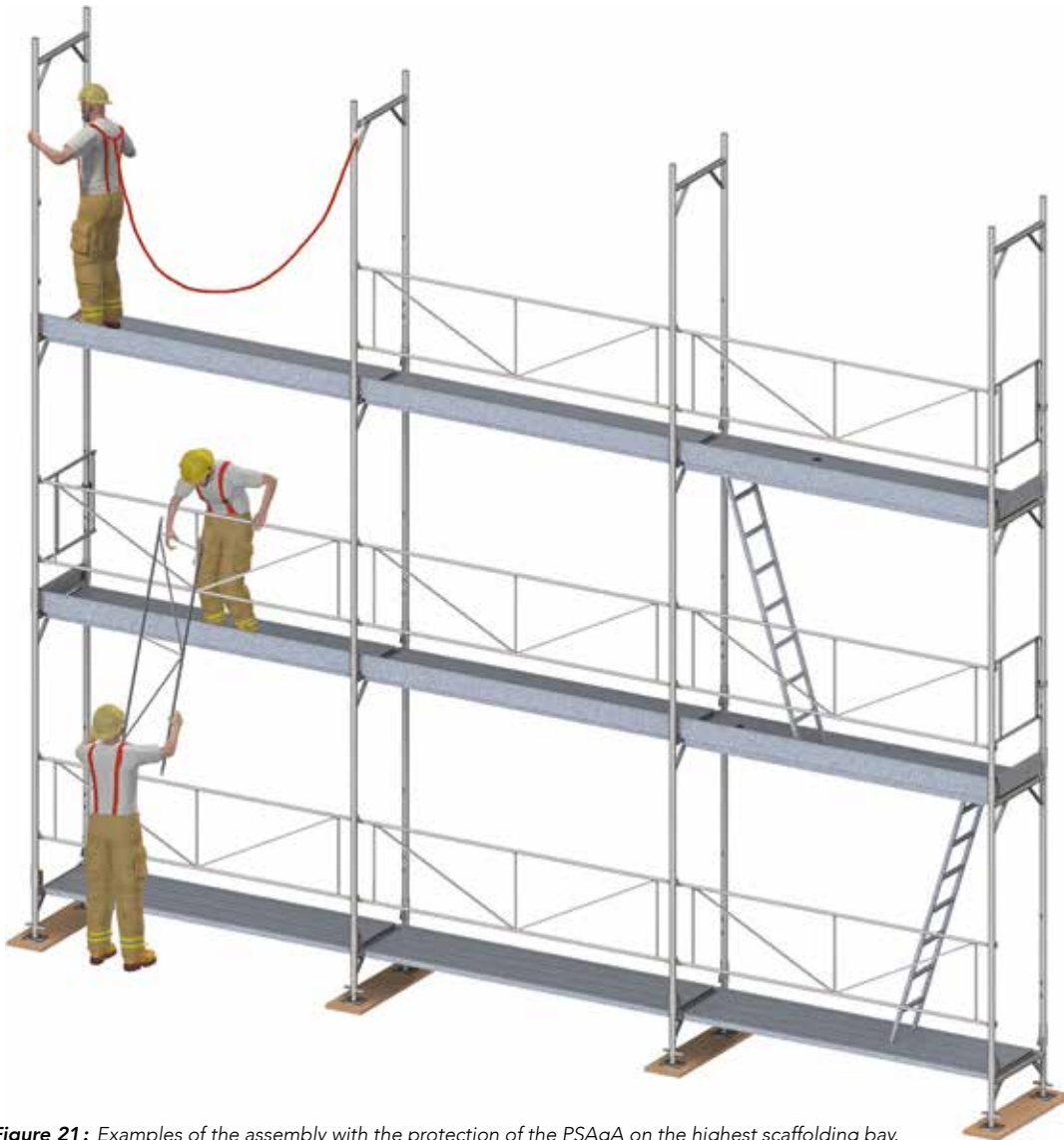
Figure 18: Personal protective equipment against falling (PSAgA).



Figure 20: Maximum height of the attachment points of the PSAgA.



## 2 Assembly of the Scaffolding



**Figure 21:** Examples of the assembly with the protection of the PSAgA on the highest scaffolding bay.

- Originating from the access bay:
  - Before exiting the area which is secured by the MSG, the PSAgA must be fastened with the carabiner at a designated attachment point (see figure 19).
  - The next respective scaffolding bay must be plugged in (see figure 16).
  - The next respective railing must be installed (see paragraph 2.2.6).
  - The scaffolding bay must be secured with safety pins (see figure 17).
- If a scaffolding end has been reached: the end part must be assembled.
- Planks must be put on top of the scaffolding bay and, if necessary, be secured against lifting (see paragraph 2.2.7).
- If brackets are provided in this scaffolding bay:
  - Brackets must be installed (see paragraph 2.9.6).
  - Planks must be put on top of the brackets and secured against lifting (see paragraph 2.2.7).
- If anchors are provided for this scaffolding bay, anchors must be installed.

## 2 Assembly of the Scaffolding

### 2.4.4.2 Results of the Risk Assessment: PSAgA

#### A) Assembly of the scaffolding bay with the protection of the PSAgA (see also figure 21).



Figure 22: Safeguarding with the PSAgA prior to the entering of the highest scaffolding level.

- Prior to the accessing of the highest scaffolding bay with the PSAgA through fastening of the carabiner.
- the highest level must be entered through the aluminium planks with hatch and ladder, and the hatch must be closed immediately afterwards
- Two scaffolding frames in the access bay must be plugged into the lower scaffolding frame (see figure 16).
- The railing must be mounted in the access bay (see paragraph 2.2.6).
- The scaffolding bay must be secured with safety pins (see figure 17).
- The Scaffolding must be installed from the access bay as described in paragraph 2.4.4.1.

## 2 Assembly of the Scaffolding

### 2.4.5 Braces

In some models additional braces of tubes and swivel couplings are necessary (see paragraph 6.2). These must be installed immediately during the assembly of a scaffolding level.

### 2.5 Top End of the Scaffolding

Above the highest scaffolding bay, guard rail posts of 1,00 m must be mounted. Railings will then need to be attached to the guard rail posts.

The scaffolding frames and guard rail posts must be positioned so that the tilt pins point towards the scaffolding planks.

The assembly must be performed simultaneously as paragraph 2.4.4, the securing against falling according to paragraphs 2.4.4.1 or 2.4.4.2.

### 2.6 Completion of the Sideguard

Missing toe boards must be mounted into all scaffolding bays which are not used for the assembly and dismantling of the scaffolding.

### 2.7 Anchorings

#### 2.7.1 Anchoring Grid and Anchorage Forces

The respective anchoring grid and the respective accompanying anchorage forces for the system configuration of the standard design can be found in paragraphs 6.2 and 6.3. The general building supervision approval Z-8.1-937 must be observed.

The anchorage forces which are specified there refer to the actual maximum occurring forces (service loads). Safety factors are not included.

Anchors must be mounted continuously during the scaffolding assembly. As fasteners screws of a minimum diameter of 12 mm or of an equivalent construction/type/design must be used.

During the preliminary fixing of the anchoring levels, particular attention should be paid to the scaffolding frames which have a height of 0,70 m and 1,70 m, and must be considered as a complete scaffolding level.

As a rule, the wall ties must be mounted directly under the scaffolding plank with normal couplings on the scaffolding frame (permissible deviation see paragraph 2.7.5).

#### 2.7.2 Wall Ties

Wall ties must be mounted with a normal coupling on the inner post (see figure 23 and figure 24).



Figure 23: Wall tie, default configuration.



Figure 24: Wall tie, configuration with inner brackets.

#### 2.7.3 V-Anchoring

Two wall ties are used as V-anchoring, they must be arranged in a V-shape and attached to an inner post with normal couplings. The arrangement of the anchoring must be under an angle of circa 90° and circa 45° to the surface of the anchorage ground (see figure 25 and figure 26).



Figure 25: V-anchoring, default configuration.



Figure 26: V-anchoring, configuration with inner brackets.

## 2 Assembly of the Scaffolding

### 2.7.4 Anchorings in a Corner Formation

In the area of a scaffolded corner of buildings, additional anchors are necessary.

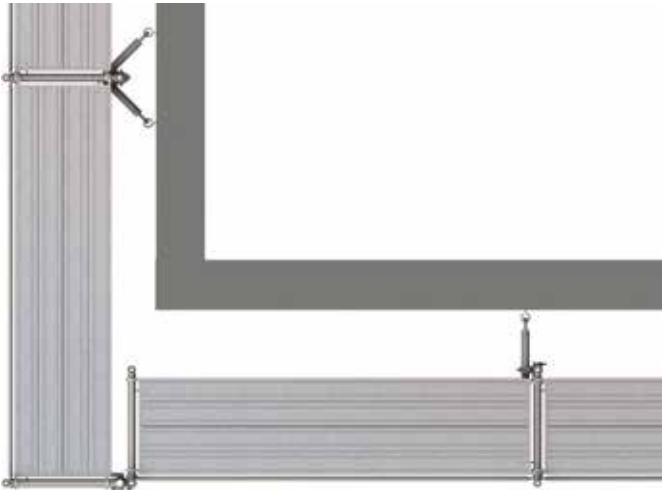


Figure 27: Anchorings in a corner formation.

### 2.7.5 Deviation from the intended Position of the Wall Tie

If no stable anchoring surface is present at an intended anchoring height, the anchorage ground in this anchoring level must be arranged in a vertical distance of maximum 30 cm to the intersection.

If the wall ties are deviating in more than one anchoring level of the intended position on the intersection, the stability proof of the implementation of scaffolding must be verified.

### 2.7.6 The Initiation of the Anchorage Forces on the Anchorage Ground

- The anchorage forces according to paragraph 6.3 must be initiated over the wall tie and the fasteners on a sufficiently strong anchorage ground (for example the scaffolded building structure).
- Appropriate fasteners are, for example, the anchoring devices on facades according to DIN 4426 „ safety equipment to use for maintenance of buildings, fall protection“
- Unsuitable fasteners are, for example, tie wire and ropes. The use of such fasteners is not permitted.
- Sufficiently strong anchorage grounds are, for example, concrete ceilings, concrete walls, and concrete columns, load-bearing walls according to DIN 1053 „masonry“.
- Surface insufficient for anchorage grounds are, for example, snow guards, lightning conductors,

downpipes, and window frames. The connection of the fasteners on such elements is **not** permitted.

- The load capacity of the fasteners between wall ties and anchorage ground must be verified for the anchorage forces.
  - The verification of the load capacity of the fasteners can be produced by, for example, by
    - the qualification approval issued by the institute of construction engineering, Berlin,
    - static calculations or
    - proof loads according to paragraph 2.7.7
- If fasteners are used for the anchoring with a qualification approval, the conditions mentioned therein must be observed. This includes, for example
  - Verification of the anchorage ground,
  - required element dimensions and edge distances
  - special installation instructions.

### 2.7.7 Load Tests

If load tests are necessary according to paragraph 2.7.6, they must be carried out at the place of use.

In order to carry out load tests, suitable testing equipment must be used.

Anchorage points, on which load tests will be carried out, must be determined by a qualified person according to number/quantity and location.

The load tests must be carried out according to the following criteria:

- The test load must amount to 1,2 times of the required anchorage forces  $F$  according to paragraph 2.7.1.
- If the anchorage ground during the scope of testing is made out of
  - a maximum of 10% concrete
  - a maximum of 30% other building materials

of all used fasteners, however, a maximum of 5 load tests must be carried out.

If individual or several fasteners are not supporting the test load, the qualified person must:

- establish the cause of this,
- arrange an alternative fastener, and
- heighten the scope of testing if necessary.

The results of the examination must be documented in written form and must be stored for a minimum of 3 months after the dismantling of the scaffolding.

## 2 Assembly of the Scaffolding

### 2.8 Entries to the workplaces on the scaffolding

Prior to the construction work on the first scaffolding level, an entry must be installed. In order to prevent dangers of falling at the entries which are connecting high-situated workspaces on the scaffolding, stairways or internal gangway systems.

#### 2.8.1 Stairways



**Figure 28:** Stairway.

Stairways are mounted with the safety of the PSAgA.

The Stairway has to be connected to the main frame every 2,00 m with swivel couplings (directly under/beneath the planks). At these parts the scaffolding must be anchored, even if there are no anchorings provided for the main frame at these parts.

## 2 Assembly of the Scaffolding

- The first scaffolding frame must be assembled, and, if necessary, connected to the scaffolding with scaffolding tubes and normal couplings.
- The second scaffolding frame must be assembled, and, if necessary, connected to the scaffolding with scaffolding tubes and normal couplings.
- Stairways must be hung onto the cross tubes of the scaffolding frame.
- End railings and end toe boards or end railings must be mounted with the existing toe board.
- Staircase beams must be mounted on the outside in between the scaffolding frames (see paragraph 2.2.6).
- If necessary, the anchoring of the scaffolding can be added.
- The Railing between scaffolding and stairway must be removed.

### 2.8.2 Gangways

For the inner gangway, aluminium planks with hatch and ladder must be used (see figure 29).

The hatches of these planks must be arranged away from the scaffolding. They must only be opened to climb through, and must be closed immediately afterwards. Otherwise, the hatches must remain closed.

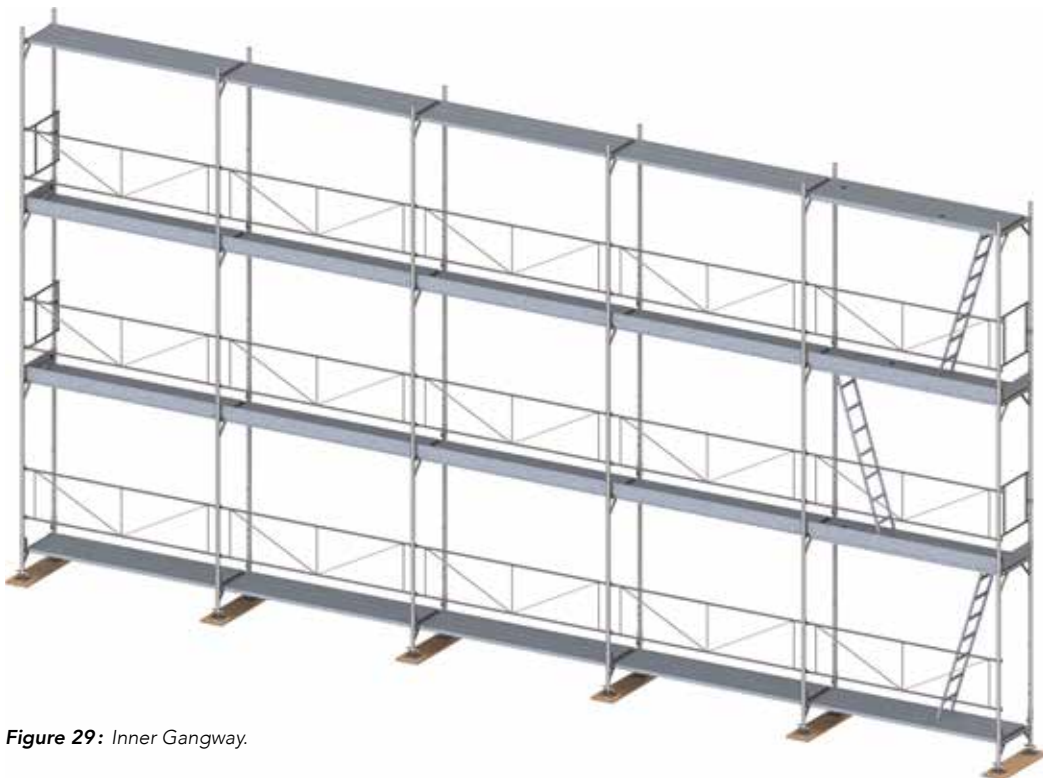


Figure 29: Inner Gangway.

## 2 Assembly of the Scaffolding

### 2.9 Different Types and mounting of Supplementary Components

#### 2.9.1 Preface

During the assembly of the supplementary components, an increased risk of falling can occur. The assembly must be performed in a way that the risk of falling is eliminated or rather to be kept as low as possible. The safety instructions mentioned in paragraph 1 must be strictly observed during the assembly, alteration, and dismantling of the scaffolding.

#### 2.9.2 Gantry Frames

In order to secure transport routes, gantry frames must be used (see figure 30). The gantry frames must be aligned vertically.

The ascent into the second scaffolding level occurs with an aluminium plank with hatch and over a ladder which can be leaned against the scaffolding. The gantry frames must be assembled simultaneously to the scaffolding frames (see paragraph 2), whereas the base frame should not be assembled at this point.

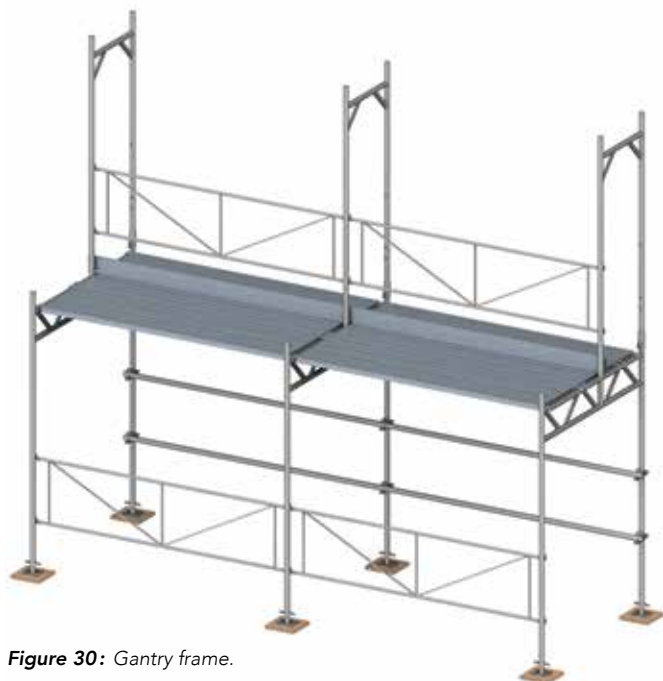


Figure 30: Gantry frame.

The models of the scaffoldings with gantry frames are depicted on pages 40 to 42. The additional measures specified must be observed.

## 2 Assembly of the Scaffolding

### 2.9.3 Bridge Beam

The bridges will be necessary if, for example, passages need be kept free.

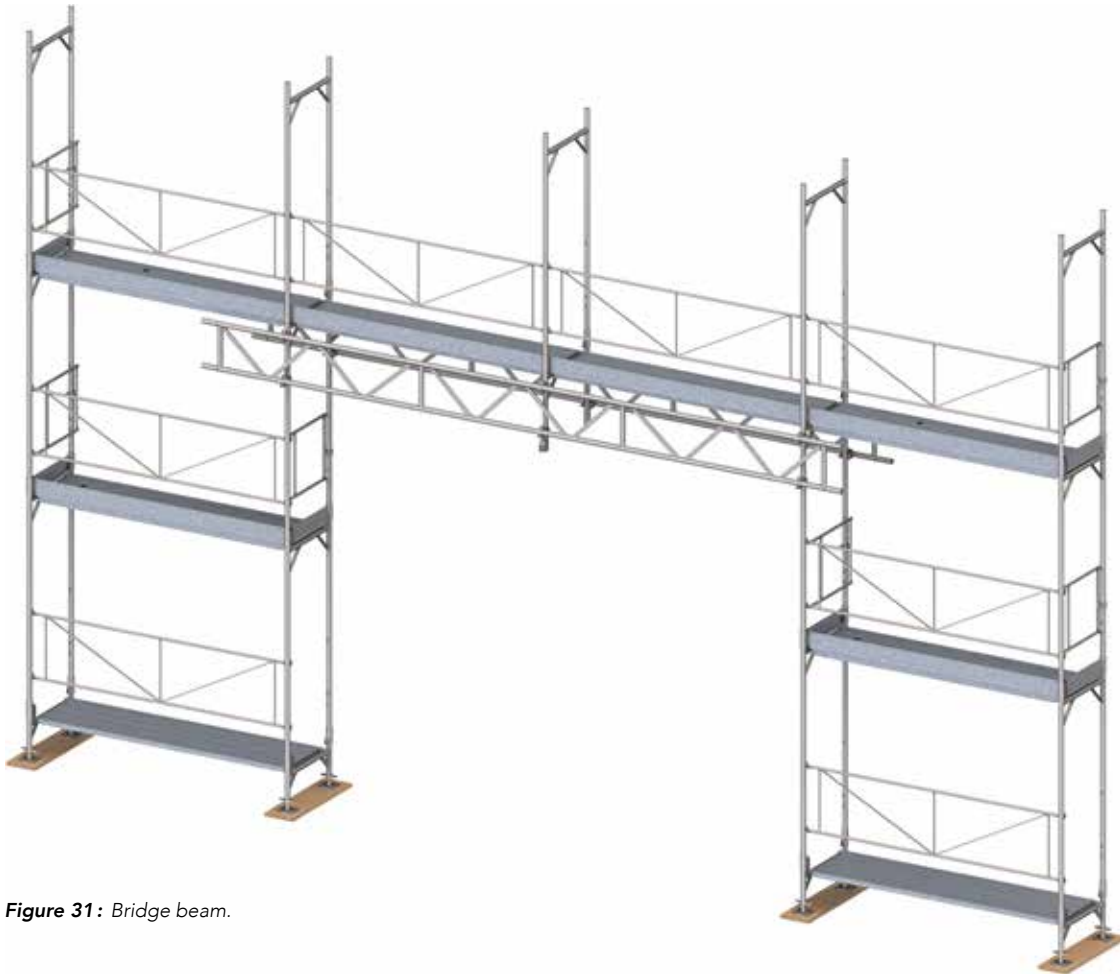


Figure 31: Bridge beam.

The lattice girders used for this purpose must be mounted directly under the first or second scaffolding level with respectively two normal couplings on the scaffolding frame and braced with a horizontal bracing (see also pages 52 to 55).

In the middle of the lattice girders a scaffolding frame (0,70 m × 0,70 m) must be mounted (respectively with normal couplings on both of the chords of the lattice girders). On top of these scaffolding frames:

- the planks will be placed and secured against dislocation (see paragraph 2.2.7) and
- during the assembly of the next scaffolding level the scaffolding frame should be mounted (see figure 16) and secured with safety pins (see figure 17).

On pages 43 to 46, various models of the scaffolding with bridges are depicted. The additional measures specified must be observed.



## 2 Assembly of the Scaffolding

### 2.9.4 Protective Canopy

The protective canopy must only be assembled on the outer part of the scaffolding in the second level (H = 4 m) (see figure 32).



**Figure 32:** Protective Canopy.

Before the assembly of the protective canopy, the actual scaffolding is to be erected up to the first anchor level above the protective canopy and anchored. The scaffolding is to be anchored at each scaffolding frame at the height of the protective canopy and at the most 4,00 m above it.

Guard rails are to be installed between the protective canopy and the work surface.

The protective canopy surface is to be manufactured without gaps.

The work surface is to be manufactured without gaps and must extend to the building.

The manufacture of the scaffolding with protective canopy is illustrated on page 48. The additional measures specified there must be observed.

## 2 Assembly of the Scaffolding

### 2.9.5 Protective Wall

Protective walls are used for the correct securing against falling during construction work on declining roof surfaces.

In order to incorporate the protective wall, railing posts of 2,00 m height

- must be plugged onto the scaffolding frames and strengthened with a scaffolding tube (see figure 36), or
- plugged onto 70 cm consoles (see figure 37) and secured with safety pins.

Safety nets are nets with a peripheral rope included according to EN1263-1. These will be fastened to the chord binders on the highest guard rail, on the 2,00 m railing post (see figure 33 and figure 34) and on the lower edge with the belonging net holders (see figure 35).

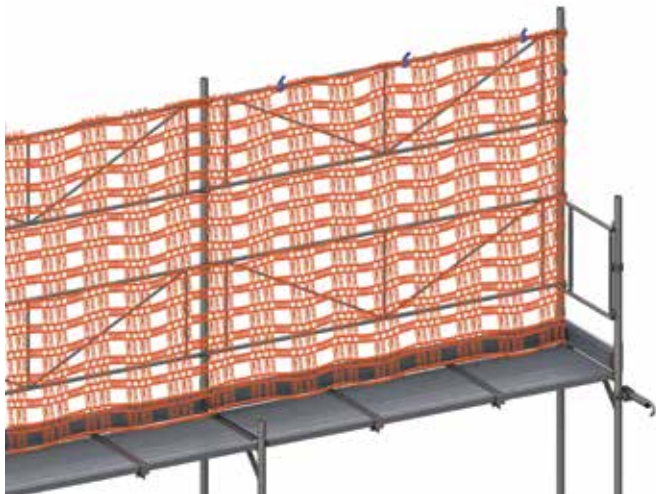


Figure 33: Version of the safety nets. (also see the separate/additional assembly instruction for safety nets).

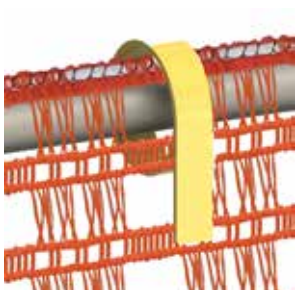


Figure 34: Upper fastener with binders.



Figure 35: Lower fastener with net holders.

On the version of the scaffolding with a protective wall in the highest anchoring level (compare to pages 43 to 48):

- Each knot must be anchored and
- all five scaffolding bays must be positioned with an additional V-anchoring.

### A) Protective wall on the scaffolding frame

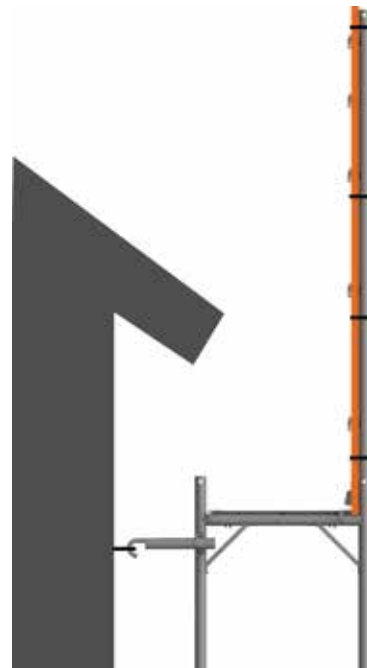


Figure 36: Protective wall on top of scaffolding frame (with reinforcing tube).

### B) Protective wall on top of 0,70 m consoles

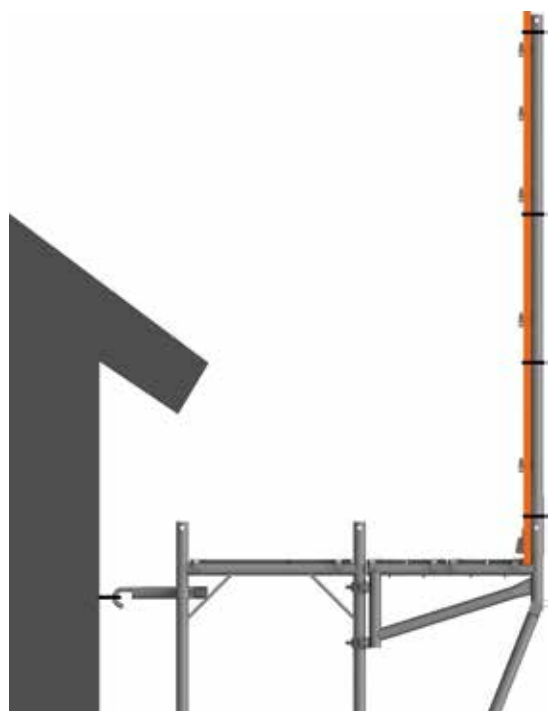


Figure 37: Protective wall on top of 0,70 m consoles.

## 2 Assembly of the Scaffolding

### 2.9.6 Enlargement Brackets

#### 2.9.6.1 Bracket 0,30 m

The brackets 0,30 m will be used to enlarge the platform area of the inner side of the scaffold (see figure 38). These must be positioned on all scaffolding levels.



Figure 38: Scaffolding with bracket 0,30 m.

The brackets will be attached with a coupling to the scaffolding frame.

On top of the consoles, 0,32 m wide planks must be placed and secured against dislocation (see paragraph 2.2.7). The distance between the planks at inner brackets must be a maximum of 5 cm. As such, a gap covering is necessary in this area.

#### 2.9.6.2 Bracket 0,70 m

The 0,70 m consoles must be used to enlarge the platform area of the outer side of the scaffolding (see figure 39). They must exclusively arranged on the highest scaffolding level.



Figure 39: Scaffolding with bracket 0,70 m.

The brackets 0,70 m must be attached with the coupling on the scaffolding frame.

In support of the brackets 0,70 m, a bracket brace will be attached to the bracket and on the scaffolding frame.

On top of the bracket one or two plank systems will be paced:

- one aluminium plank, 0,64 m wide,
- two aluminium planks, 0,32 m wide or
- two steel – sheet metal planks, 0,32 m wide.

On top of the brackets, the use of aluminium planks with a hatch and ladder are forbidden.

The distance between the planks on the scaffolding frame and those of the 0,70 m brackets must be closed with the gap covering intended for this purpose as the maximum distance must be no greater than 2,5 cm.



Figure 40: Gap covering.

## 2 Assembly of the Scaffolding

### 2.9.7 Coverings

The scaffolding must be covered with nets or tarpaulins.

In order to cover a scaffolding with nets, MATO S nets must be used, which fulfil the requirements of air permeability and the distance of the eyelets. The nets must be attached with a binder on the outer standard tube of the scaffolding frame with a maximum distance of 50 cm.

For covered scaffolding, additional anchorings are necessary (see pages 46 to 48).

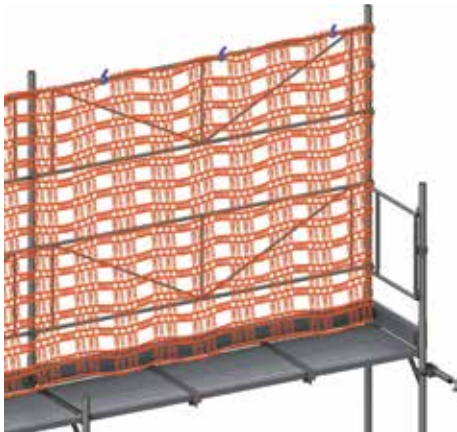


Figure 41: Cladding with nets.



Figure 42: Cladding with tarpaulins.

Nets and tarpaulins must be attached with binders on the outer standards of the scaffolding frames. The maximum distance of the fasteners is 50 cm.

### 2.9.8 The free-standing Scaffolding bay above the last anchoring

In the intermediate state during the erection of buildings, the highest scaffolding bay must tower approximately 2 m above the first anchoring level.

At this version (compare to page 58),

- each knot must be anchored in the highest anchoring level and
- an additional V-anchoring must be arranged at all five scaffolding bays.



Figure 45: Free-standing scaffolding level as an intermediate state during the erection of buildings.

## 3 Dismantling of the Scaffolding

### 3.1 Dismantling of the Scaffolding

In order to dismantle the scaffolding, the order of the described procedures must be reversed.

The anchorings must only be removed if the scaffolding bays placed above have been dismantled completely. Building components which anchorings have been loosened must be removed immediately.

In order to prevent tripping hazards, dismantled scaffolding components must not be stored on the transport routes.

Dismantled scaffolding components must not be dropped or thrown off the scaffolding.

The scaffolding components must be stored correctly.

## 4 Usage

### 4.1 Usage of the Scaffolding

The scaffolding must be used according to the specified load classes.

Load Class	Permissible payload
1	75 kg/m <sup>2</sup>
2	150 kg/m <sup>2</sup>
3	200 kg/m <sup>2</sup>

The specified payloads are allowed on a maximum of one scaffolding bay.

Each user of the scaffolding is responsible for the approved utilisation and for the operational safety of the scaffolding.

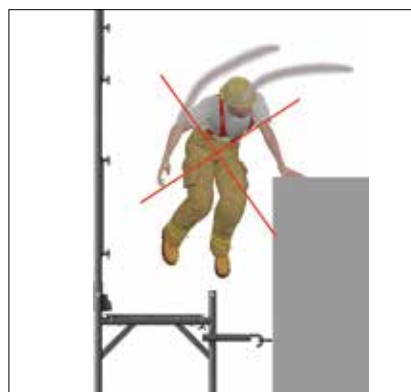
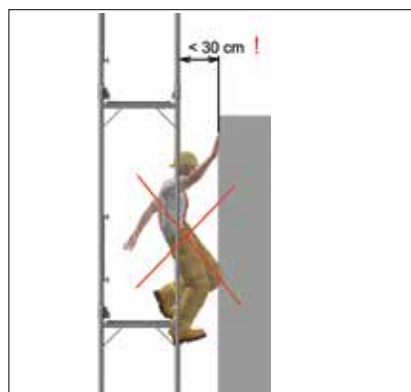
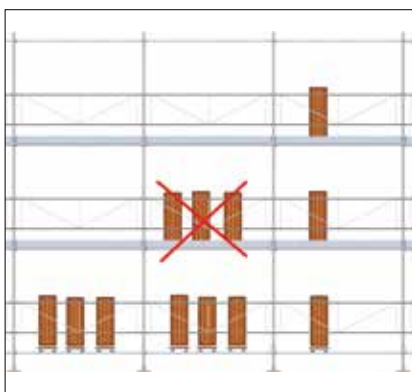
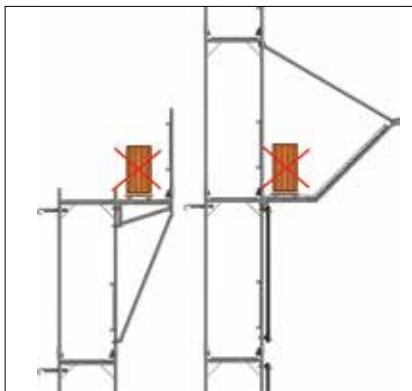
It is forbidden to jump off scaffolding bays or throw anything on them.

The hatches of the aluminium planks with hatch or rather aluminium with hatch and ladder must only be opened immediately before the ascent or descent and must to be closed immediately afterwards.

On top of scaffolding bays, which are used as a catch scaffold or protective canopy, it is forbidden to store materials and equipment.

The valid legal regulations of the industrial safety regulation (BetrSichV) and the accident prevention regulation „construction works“ (BGV C22) must be observed during the usage of the scaffolding. Further information on the usage can be obtained from the BGI 662 – instruction manual for the handling of work- and safety scaffolding (June 2011 edition).

# 5 Safety Information



# 6 Standard Design

## 6.1 Component List of the Standard Design

Designation - MATO 1 Scaffolding Components	Licence Z-8.1-937, System A, page
Base jack 0,30 m, 0,40 m, 0,50 m, 0,60 m, 0,80 m, 0,95 m, 1,20 m, 1,50 m	1 / 84 / 85 / 86
Scaffolding frame steel 2,00 m × 0,70 m	3
Gantry frame steel 2,40 m × 1,70 m	4
Scaffolding frame steel 0,70 m × 0,70 m	5
Scaffolding frame steel 1,70 m × 0,70 m	6
Base frame steel 0,70 m × 0,40 m / 1,00 × 0,40 m / 1,40 × 0,40 m	7 / 87
Aluminium plank 0,65 m – 2,50 m × 0,32 m	11
Aluminium plank 0,65 m – 3,00 m × 0,64 m	12
Aluminium plank 0,65 m – 2,50 m × 0,32 m ERGO	16
Aluminium plank 0,65 m – 3,00 m × 0,64 m ERGO	17
Aluminium plank 3,00 m × 0,32 m	23
Aluminium plank with hatch and ladder 2,00 m – 3,00 m × 0,64 m	28 / 88
Gap covering 1,00 m – 3,00 m	38
Aluminium staircase 2,50 m × 0,60 m	39
Aluminium staircase 3,00 m × 0,60 m	40
Bridge beam steel 3,20 m – 7,70 m × 0,45 m	44
Bridge beam aluminium 2,20 m – 8,20 m × 0,45 m	45 / 46
Guard rail post steel 1,00 m	47
Guard rail post steel 2,00 m	48
Guard rail post aluminium 1,00 m	49
Railing steel 0,70 m – 1,50 m	52
Railing steel 2,00 m – 3,00 m	53
End railing, steel 0,30 m; 0,70 m	54
Staircase handrailing 2,50 m	55
Staircase handrailing 3,00 m	56
Toe board aluminium 0,70 m – 3,00 m	57
Toe board aluminium 0,6 m; 0,9 m	58
Toe board staircase aluminium	59
Toe board wood 0,70 m – 3,00 m	60
Toe board staircase wood	61
Bracket with tube connector and screw coupling 0,30 m	62
Bracket with screw coupling 0,70 m	63
Bracket brace with screw coupling	64
Bracket with screw coupling 0,30 m	65
Bracket with screw coupling 0,60 m	66
Anchoring with hooks 0,20 m – 1,00 m	68
Anchoring with sleeve, nut and bolt 0,20 m – 1,00 m	69



## 6 Standard Design

### 6.1 Component List of the Standard Design

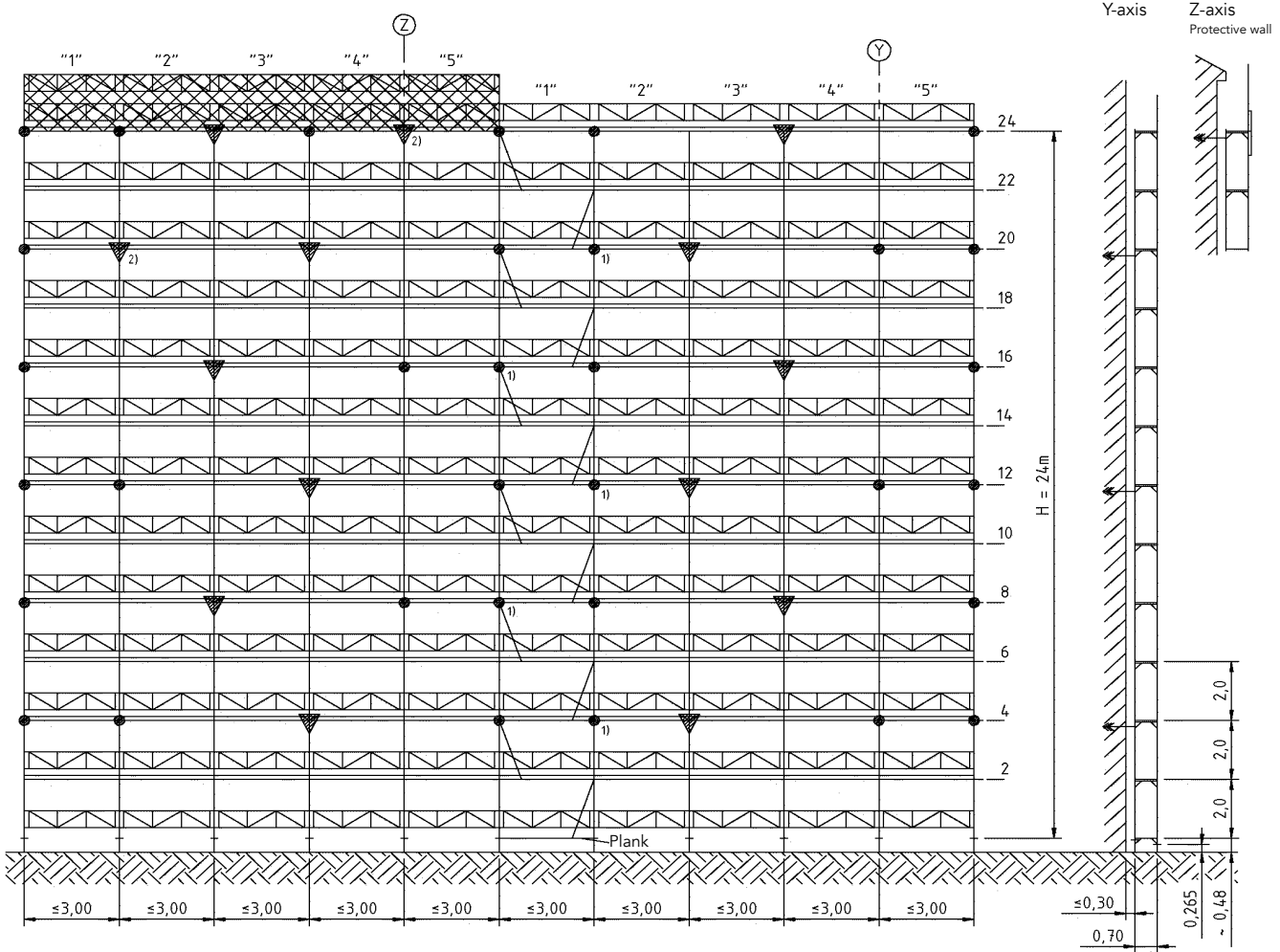
Designation - MATO 1 Scaffolding Components	Licence Z-8.1-937, System A, page
Safety pin Ø 12 mm	70
Safety pin Ø 9 mm	71
Protective canopy bracket	72
Traverse 0,70 m	77
Steel sheet plank 0,70 m – 3,00 m	78
Steel sheet plank 3,50 m – 4,00 m	79
Scaffolding frame steel 2,00 m × 0,70 m, light	96
Scaffolding frame steel 0,70 m × 0,70 m, light	97
Scaffolding frame steel 1,70 m × 0,70 m, light	98
Base frame steel 0,70 m × 0,40 m, light	99

# 6 Standard Design

## 6.2 Configuration of the Standard Design

Uncovered scaffolding  
Default configuration  
with/without protective wall

Partially open façade  
Closed façade



**Max. spindle length:**

265 mm

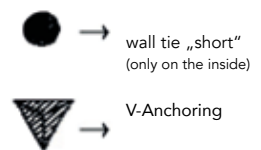
**Anchoring:**

Short wall ties, tie pattern 8 m offset.  
One V-anchoring in each anchoring level.  
1) In the area of the ladder ascent,  
it must be anchored every 4m.

**Additional measures for the protective wall:**

**Anchoring:**

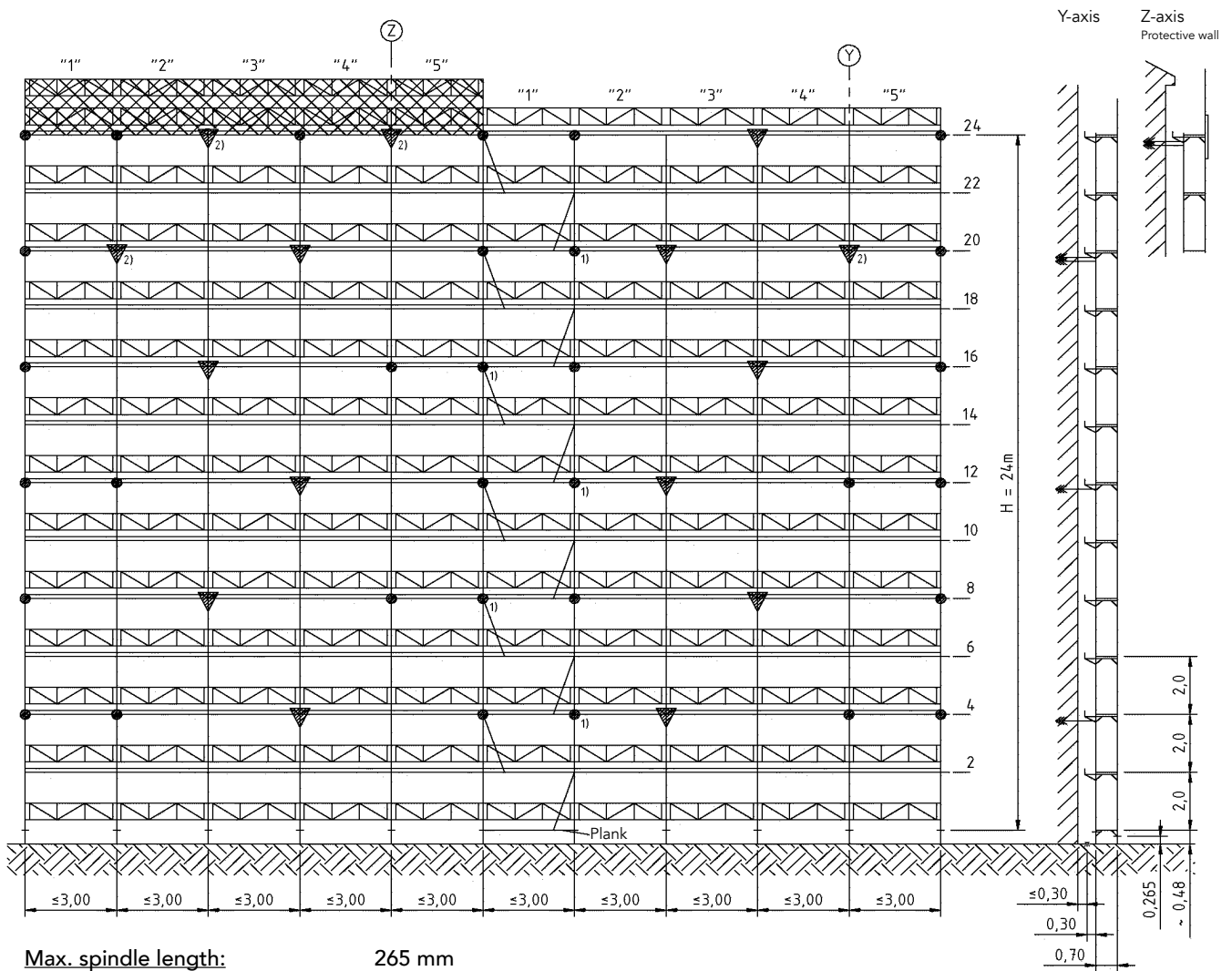
In the version with the protective wall,  
each knot has to be anchored at the highest  
anchoring level (H = 24 m).  
The protective wall must be strengthened with  
an additional pipe.  
2) Additionally one V-anchoring every  
5 scaffolding bays.



# 6 Standard Design

Uncovered scaffolding  
Bracket configuration 1  
(with inner brackets)  
with/without protective wall

Partially open façade  
Closed façade



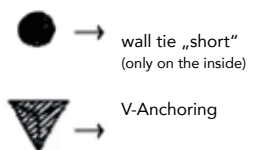
**Max. spindle length:**

265 mm

**Anchoring:**

Short wall ties, tie pattern 8m offset.  
One V-anchoring in each anchoring level.

- 1) In the area of the ladder ascent, it must be anchored every 4 m.
- 2) Additionally one V-anchoring every 5 scaffolding bays.



**Additional measures for the protective wall:**

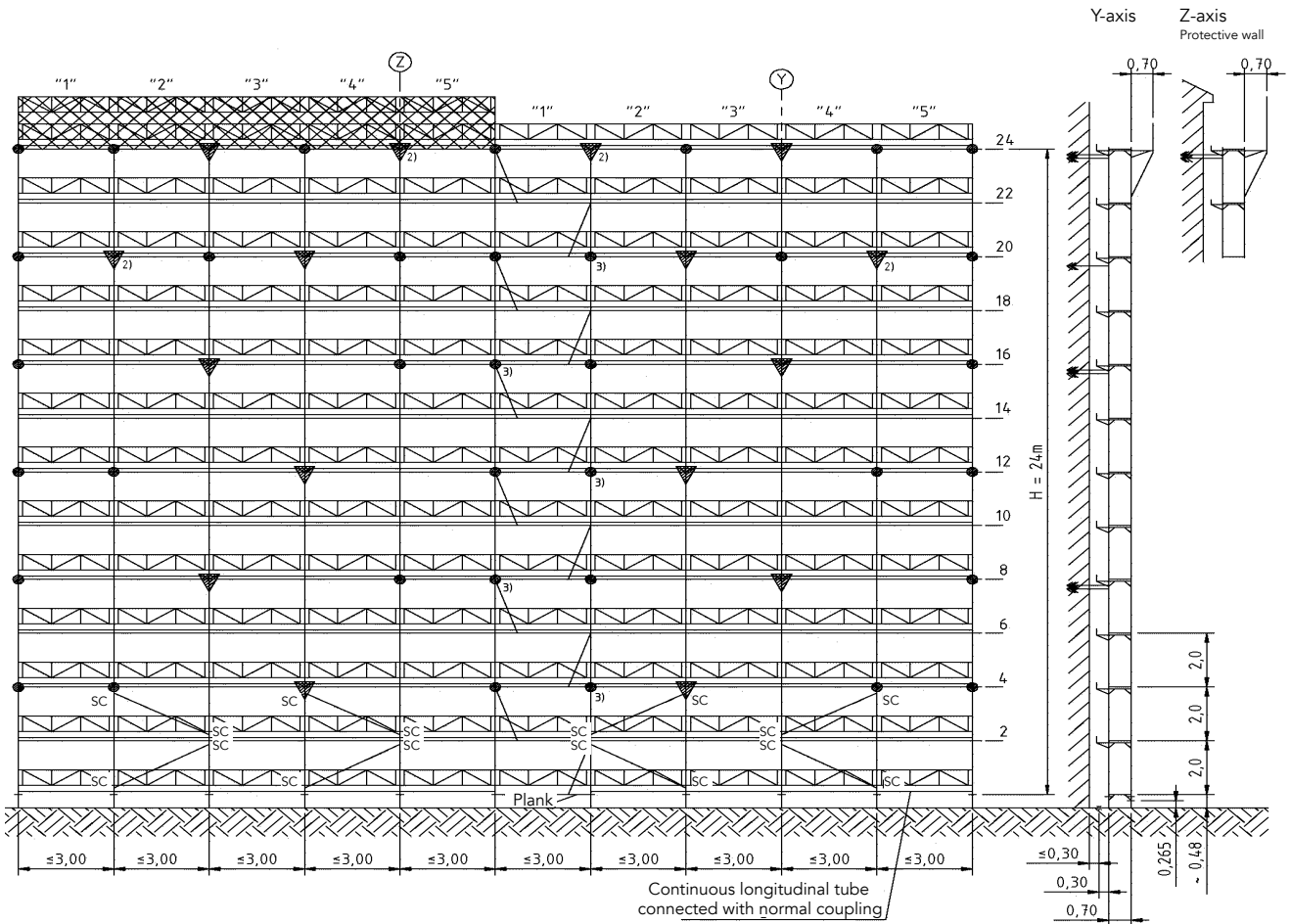
**Anchoring:**

In the version with the protective wall, each knot has to be anchored at the highest anchoring level (H = 24 m). The protective wall must be strengthened with an additional pipe.

# 6 Standard Design

Uncovered scaffolding  
Bracket configuration 2  
(with inner and outer brackets)  
with/without protective wall

Partially open façade  
Closed façade



**Max. spindle length:**  
**Anchoring:**

265 mm  
Short wall ties, tie pattern 8 m offset.  
One V-anchoring in each anchoring level.  
For H=20 m and H=24 m, each knot must be anchored.  
2) Additionally one V-anchoring every 5 scaffolding bays.  
3) In the area of the ladder ascent, it has to be anchored every 4 m.

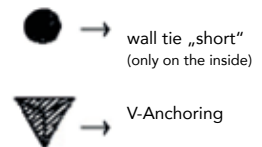
**Additional measure:**

Every 5 bays, a continuous longitudinal pipe and 2 x 2 diagonally arranged pipe should be added (see figure).

**Additional measures for the protective wall**

**Anchoring:**

In the version with the protective wall, each knot has to be anchored at H=20 m and H=24 m, each second one must be a V-anchoring.

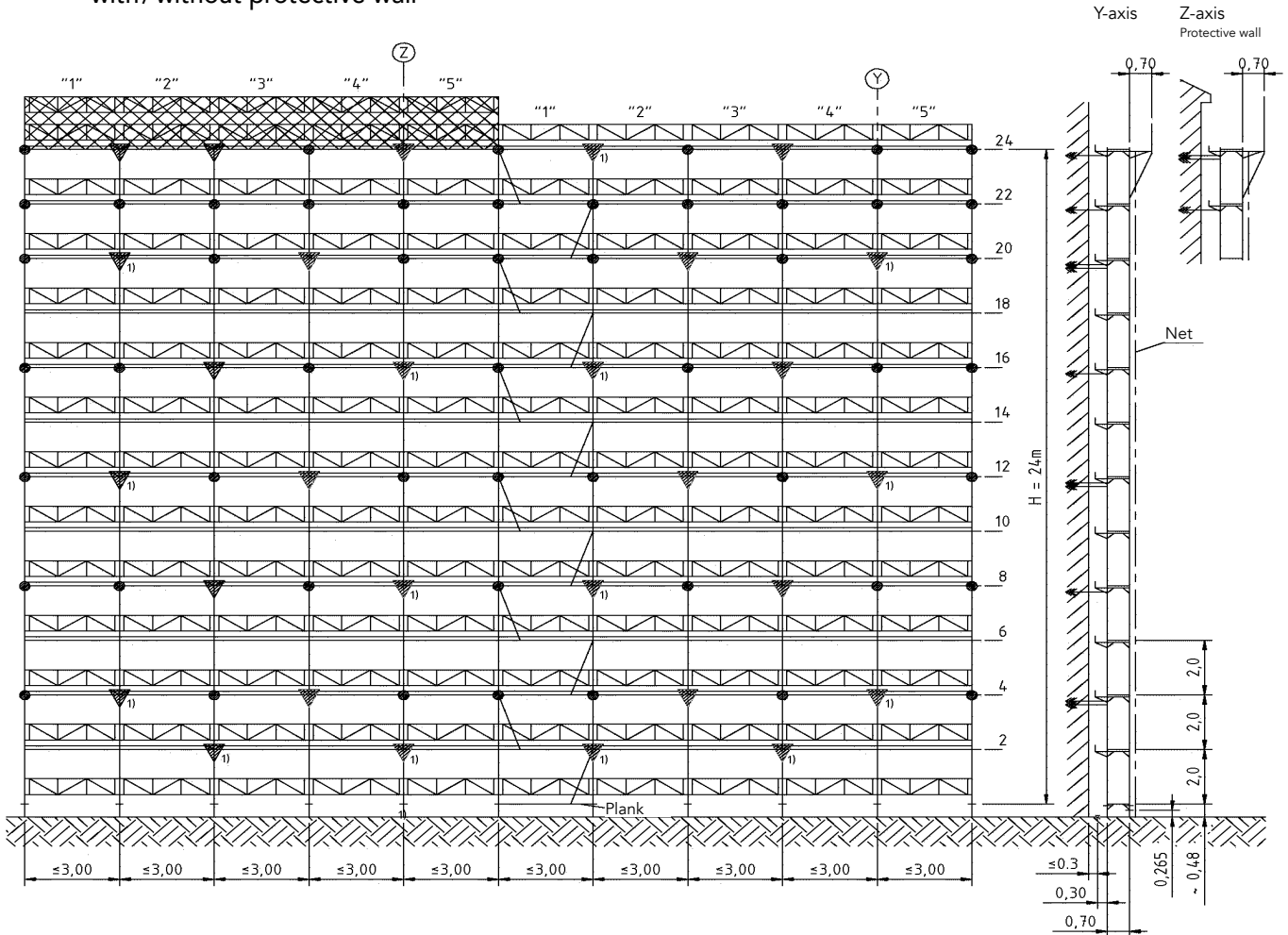


NC = Normal coupling  
SC = Swivel coupling

# 6 Standard Design

Net-covered scaffolding  
Bracket configuration 2  
(with inner and outer brackets)  
with/without protective wall

Open façade



Max. spindle length:

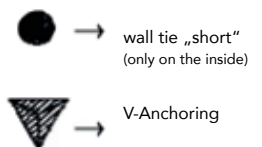
265 mm

Anchoring:

Short wall ties, tie pattern 4 m.  
and additional anchors at H = 22 m.  
In each anchoring level one V-anchoring.  
1) Additionally one V-anchoring every  
5 scaffolding bays.

Additional measures for the protective wall

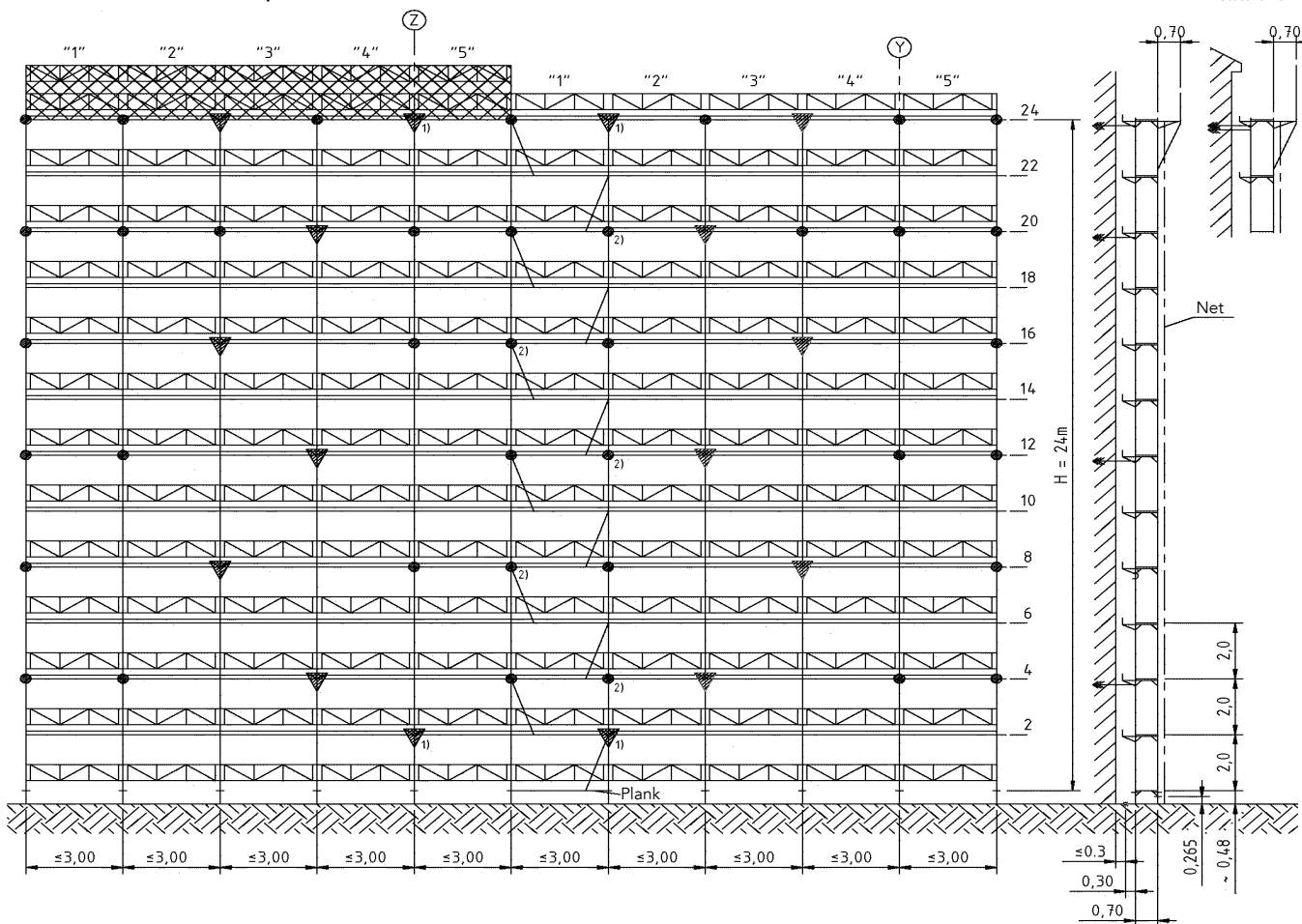
At the height of H = 24 m every second anchoring  
is a V-anchoring.



# 6 Standard Design

Net-covered scaffolding  
Bracket configuration 2  
(with inner and outer brackets)  
with/without protective wall

Closed façade



**Max. spindle length:**

265 mm

**Anchoring:**

Short wall ties, tie pattern 8 m offset.

and additional anchors at H=20 m and H=24 m.

For H=20 m and H=24 m, each knot must be anchored.

1) Additionally one V-anchoring every 5 scaffolding bays.

2) In the area of the ladder ascent, it has to be anchored every 4 m.

● → wall tie „short”  
(only on the inside)

▼ → V-Anchoring

**Additional measures for the protective wall**

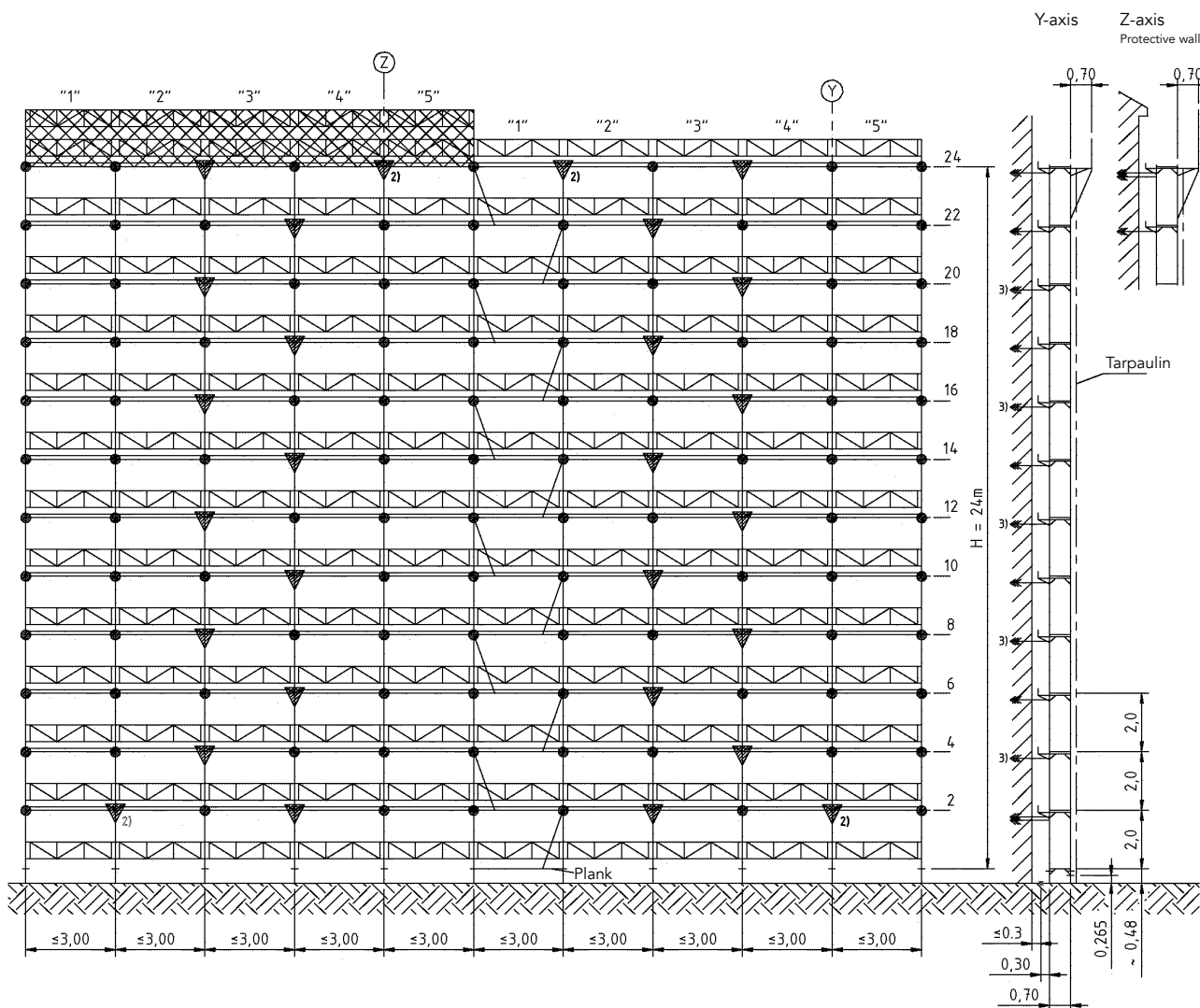
**Anchoring:**

In the version with the protective wall, each knot has to be anchored at H=20 m and H=24 m.

# 6 Standard Design

Tarpaulin covered scaffolding  
Bracket configuration 2  
(with inner and outer brackets)  
with/without protective wall

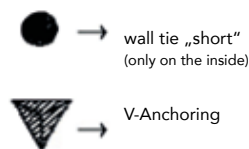
Partially open façade  
Closed façade



Max. spindle length:  
Anchoring:

265 mm  
Short wall ties, tie pattern 2 m.  
Tie pattern V-anchoring every 2 m.  
1) Additionally one V-anchoring  
2) In front of a closed façade: Instead of a short wall tie → pressure support.

Additional measures for the protective wall: None.



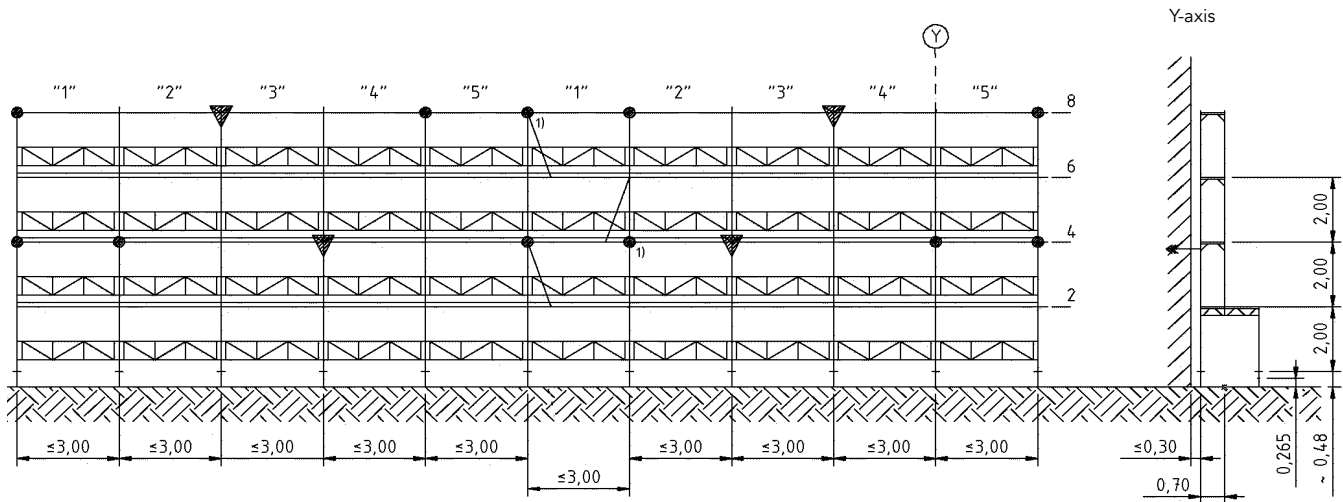
# 6 Standard Design

## Version with Gantry Frames, Default Configuration

Uncovered Scaffolding  
 Default configuration  
 with/without protective wall

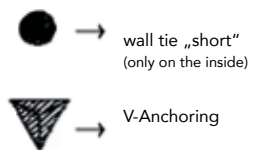
Partially open façade  
 Closed façade

Only additional measures are depicted. Further structural support according to the assembly variant.



Additional measures for gantry frames: None.

1) In the area of the ladder ascent it must be anchored every 4 m.





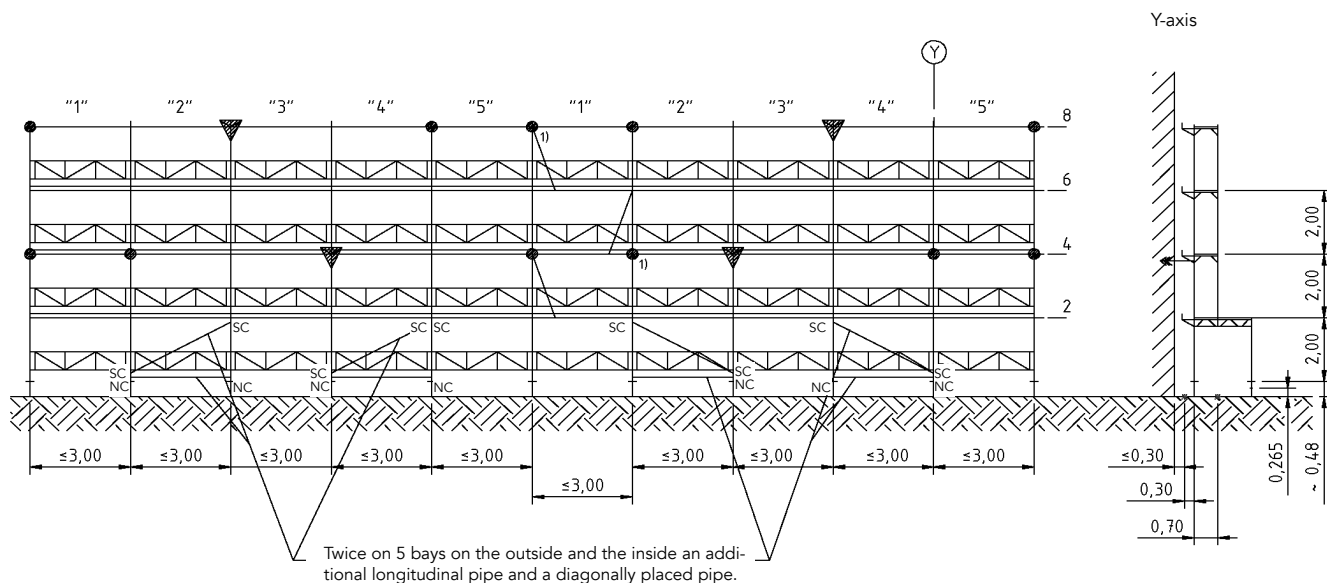
# 6 Standard Design

## Version with Gantry Frame, Bracket Configuration 1

Uncovered scaffolding façade  
Bracket configuration 1  
(with inner brackets)  
with/without protective wall

Partially open façade  
Closed façade

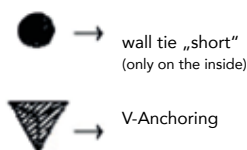
Only additional measures are depicted. Further structural support according to the assembly variant.



### Additional measures for gantry frames:

Additional measure: Twice on 5 bays on the outside and the inside an additional longitudinal pipe and a diagonally placed pipe (see figure).

1) In the area of the ladder ascent it must be anchored every 4 m.



NC = Normal coupling  
SC = Swivel coupling

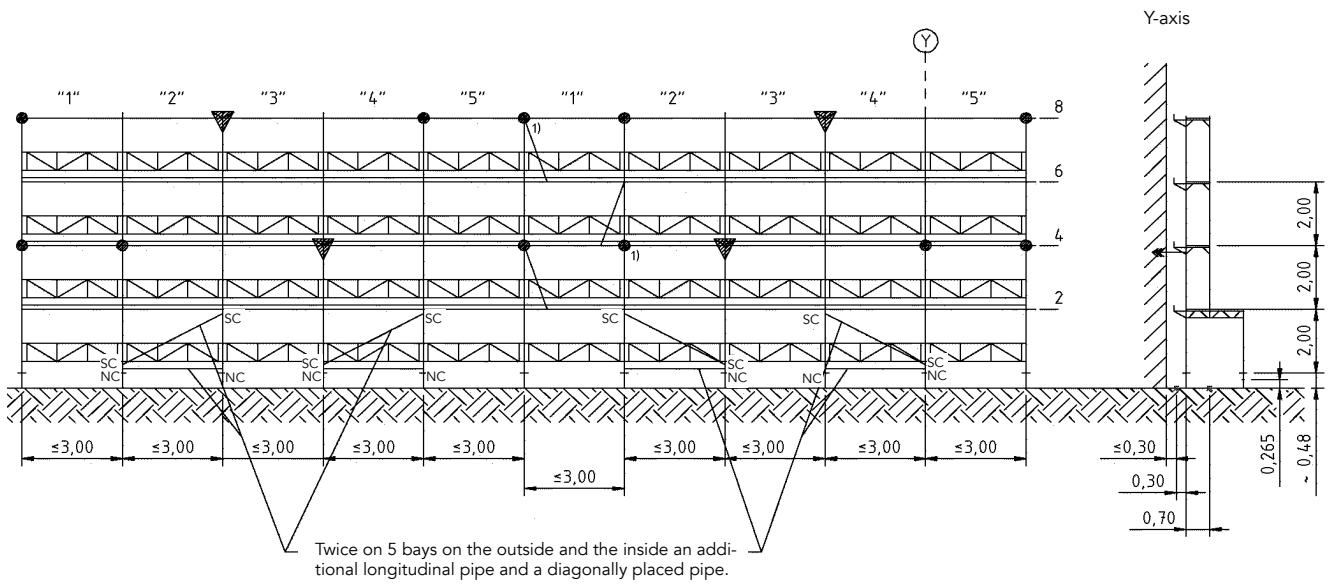
# 6 Standard Design

## Version with Gantry Frame, Bracket Configuration 2

Uncovered scaffolding façade  
Bracket configuration 1  
(with inner brackets and outer brackets)  
with/without protective wall

Partially open façade  
Closed façade

Only additional measures are depicted. Further structural support according to the assembly variant.

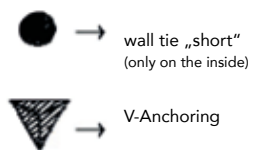


### Additional measures for gantry frames:

#### Additional measure:

Twice on 5 bays on the outside and the inside an additional longitudinal pipe and a diagonally placed pipe (see figure).

1) In the area of the ladder ascent it must be anchored every 4 m.



NC = Normal coupling  
SC = Swivel coupling

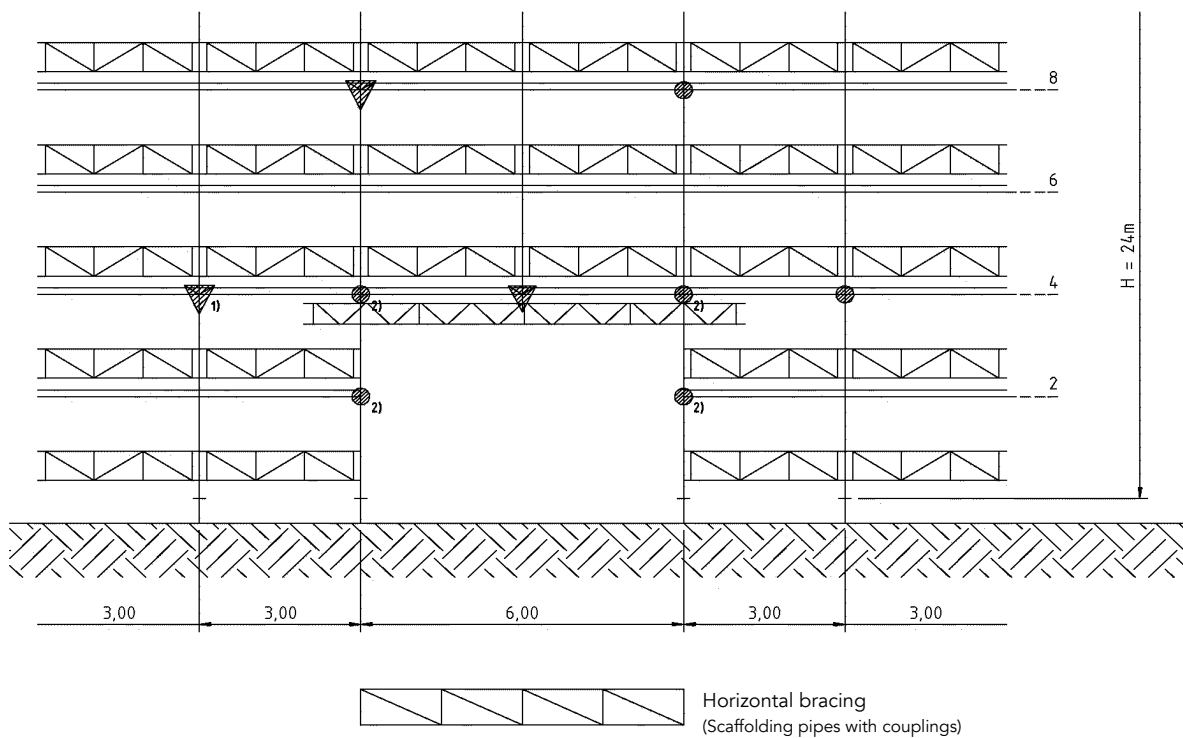
# 6 Standard Design

## Version with Bridge Beams, Default Configuration

Uncovered scaffolding  
 Default configuration  
 with/without protective wall

Partially open façade  
 Closed façade

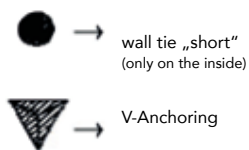
The depicted anchoring and bracing elements must additionally be mounted, if they are not included in the corresponding assembly variants.



### Additional measures for bridge beams:

#### Anchoring:

- 1) Additionally one V-anchoring.
- 2) In the area of the bridge beam each knot must be anchored at a height of 2 m and 4 m.



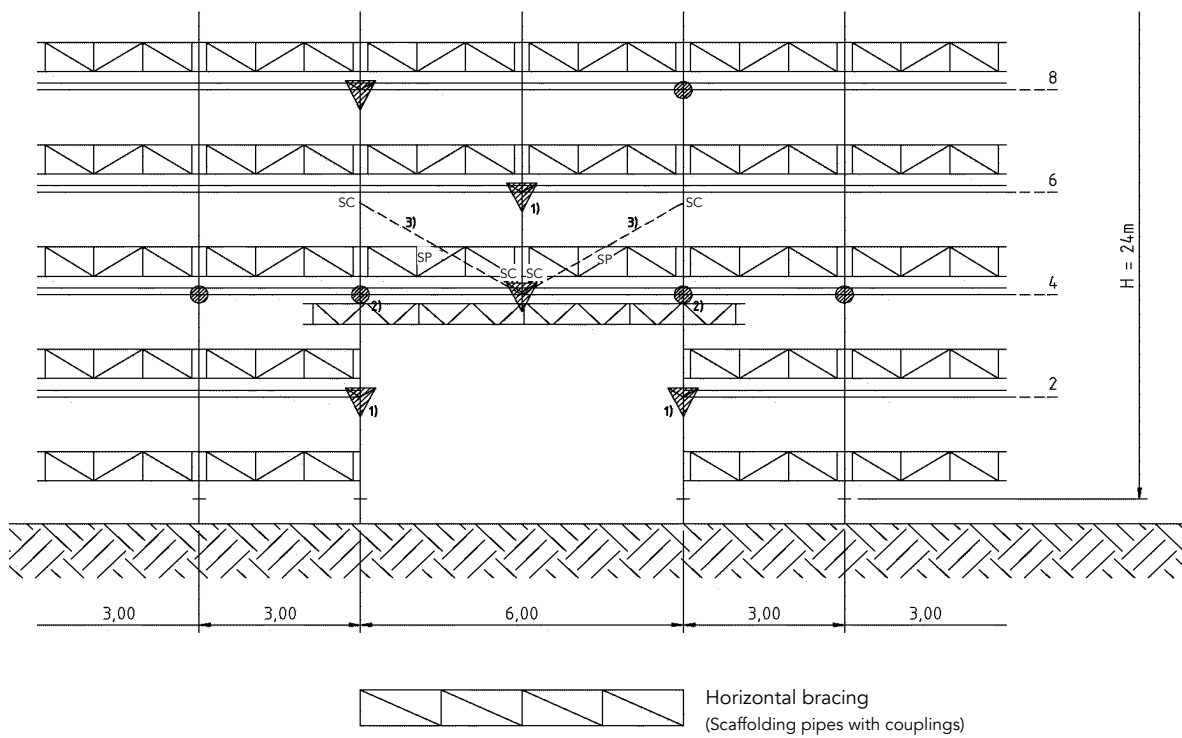
# 6 Standard Design

## Version with Bridge Beams, Bracket Configuration 1

Uncovered scaffolding  
 Default configuration 1  
 (with inner brackets)  
 with/without protective wall

Partially open façade  
 Closed façade

The depicted anchoring and bracing elements must additionally be mounted, if they are not included in the corresponding assembly variants.



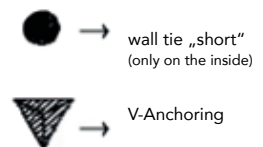
### Additional measures for bridge beams:

Anchoring:

- 1) Additionally one V-anchoring.
- 2) In the area of the bridge beam each knot must be anchored at a height of 4 m.

Anchoring:

- 3) On the inside and the outside respectively two diagonally placed pipes (see figure).



SP = Scaffolding pipe  
 SC = Swivel coupling

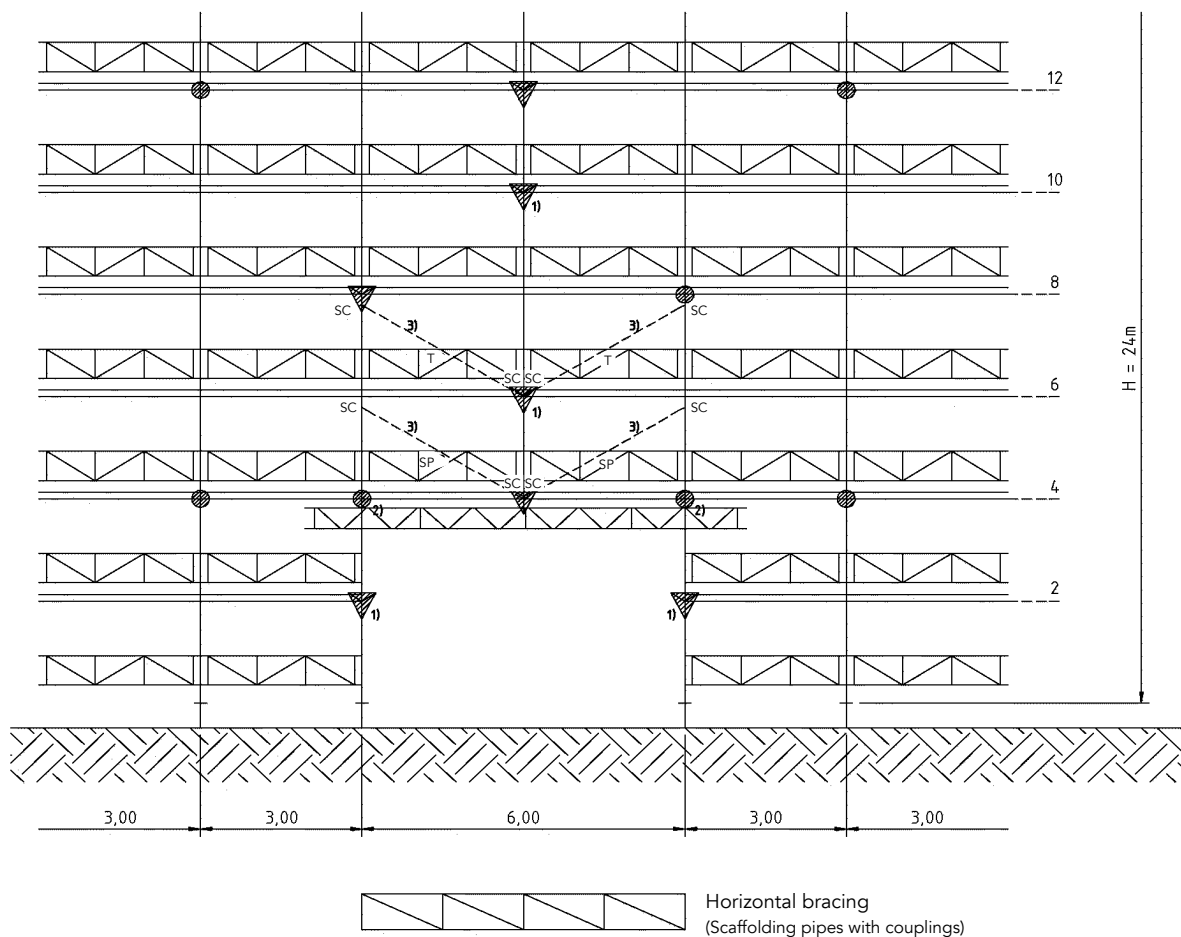
# 6 Standard Design

## Version with Bridge Beams, Bracket Configuration 2

Uncovered scaffolding  
Bracket configuration 2  
(with inner and outer brackets)  
with/without protective wall

Partially open façade  
Closed façade

The depicted anchoring and bracing elements must additionally be mounted, if they are not included in the corresponding assembly variants.



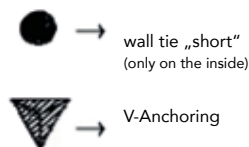
### Additional measures for bridge beams:

Anchoring:

- 1) Additionally one V-anchoring.
- 1) in the area of the bridge beam each knot must be anchored at a height of 4 m.

Anchoring:

- 3) On the inside and the outside respectively two diagonally placed pipes (see figure).



SP = Scaffolding pipe  
SC = Swivel coupling

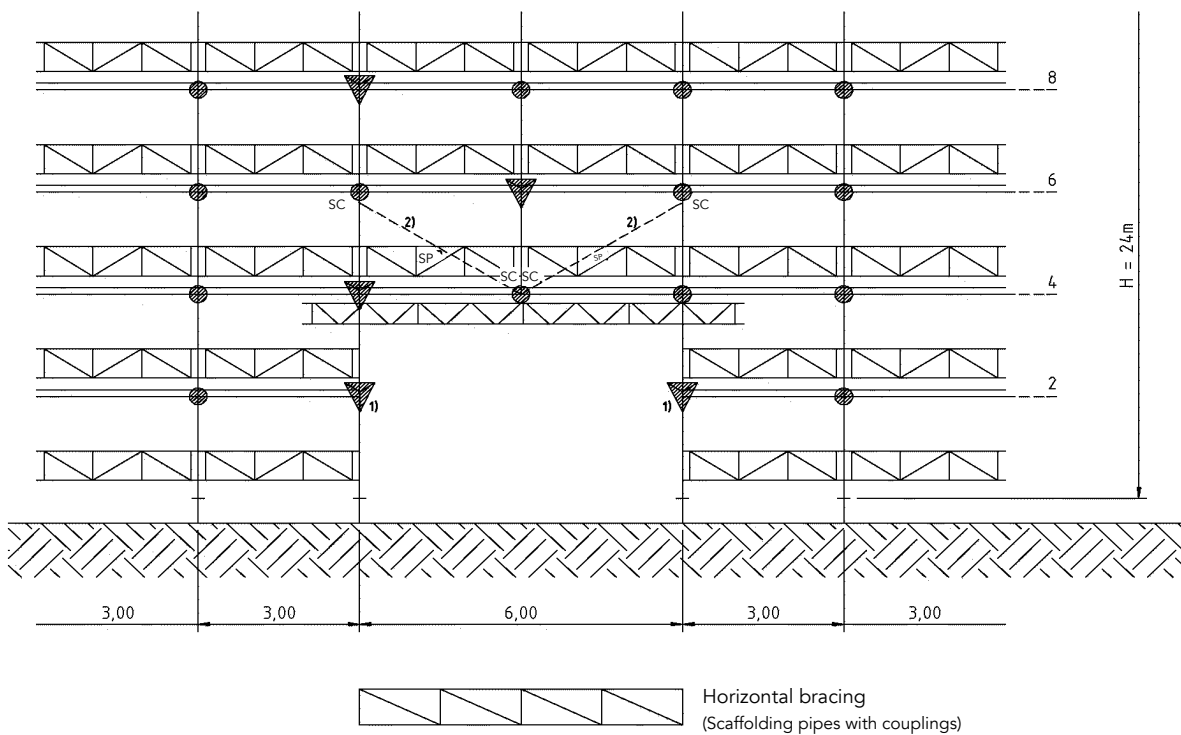
# 6 Standard Design

## Version with Bridge Beams, Bracket Configuration 2, Tarpaulin Covered

Tarpaulin covered scaffolding  
Bracket configuration  
(with inner and outer brackets)  
with/without protective wall

Partially open façade  
Closed façade

The depicted anchoring and bracing elements must additionally be mounted, if they are not included in the corresponding assembly variants.



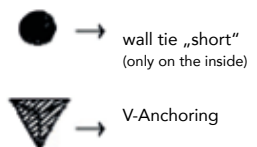
### Additional measures for bridge beams:

Anchoring:

1) Additionally one V-anchoring.

Additional measure:

2) On the inside and the outside respectively two diagonally placed pipes (see figure).



In the anchoring height of 8 m, 12 m and 20 m at a closed façade:

Instead of a short wall tie → pressure support.

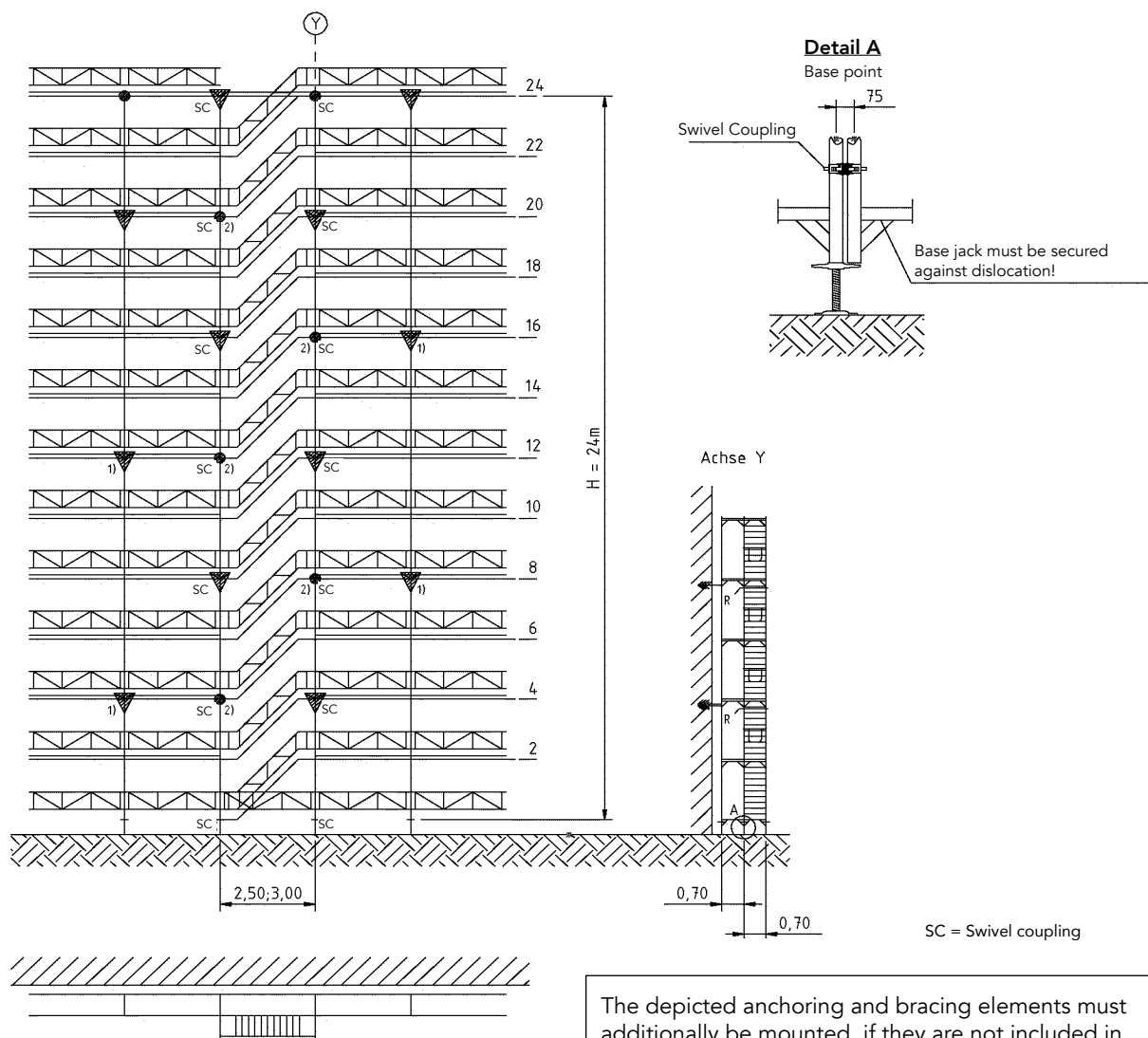
SP = Scaffolding pipe  
SC = Swivel coupling

# 6 Standard Design

## Version with Staircase

Uncovered scaffolding  
Bracket configuration 2  
(with inner and outer brackets)  
with/without protective wall

Partially open façade  
Closed façade



The depicted anchoring and bracing elements must additionally be mounted, if they are not included in the corresponding assembly variants.

### Additional measures for staircases:

#### Anchoring:

- 1) In all anchoring levels two V-anchoring in five bays (additionally one V-anchoring).
- 2) In the area of the staircase it has to be anchored in each anchoring level.

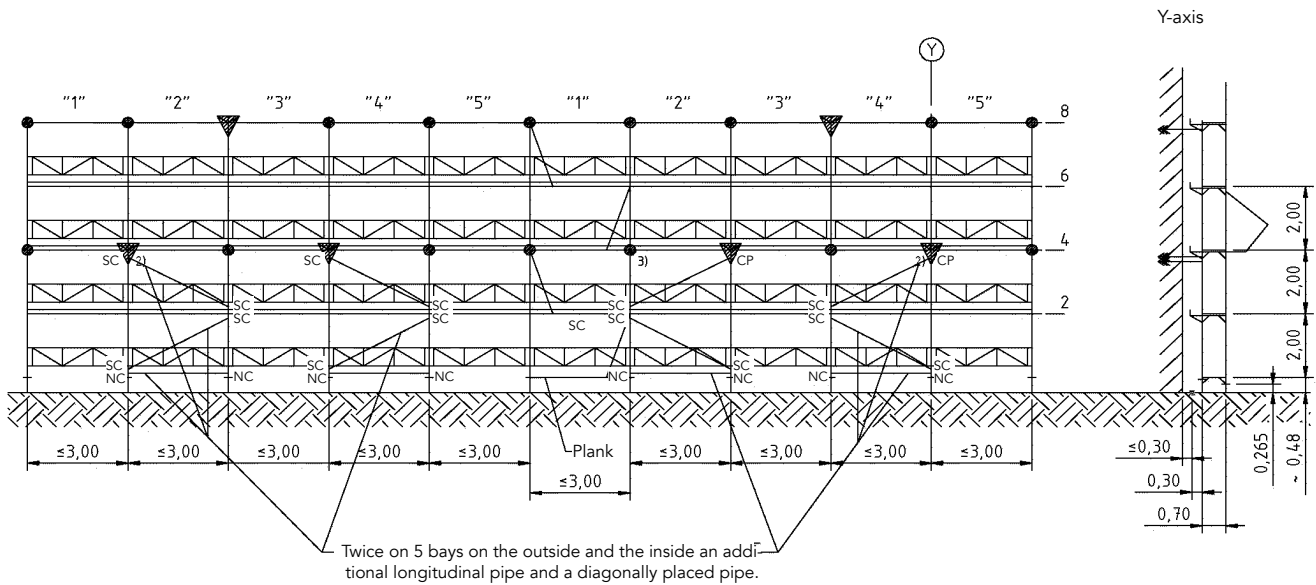
# 6 Standard Design

## Version with Protective Canopy

Uncovered scaffolding  
 Bracket configuration 2 (with inner and outer brackets)  
 With / without protective wall  
 with protective canopy

Partially open façade  
 Closed façade

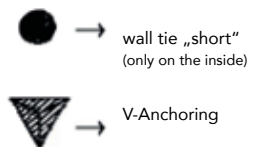
Only additional measures are depicted. Further structural support according to the assembly variant.



### Additional measures for the protective canopy:

- Anchoring:** At H=4 m and H=8 m each knot must be anchored.
- 1) Additionally one V-anchor every 5 scaffolding bays.
  - 2) In the area of the ladder ascent it must be anchored every 4 m.

**Additional measure:** Twice on 5 bays on the outside and the inside an additional longitudinal pipe and a diagonally placed pipe (see figure).



NC = Normal coupling  
 SC = Swivel coupling

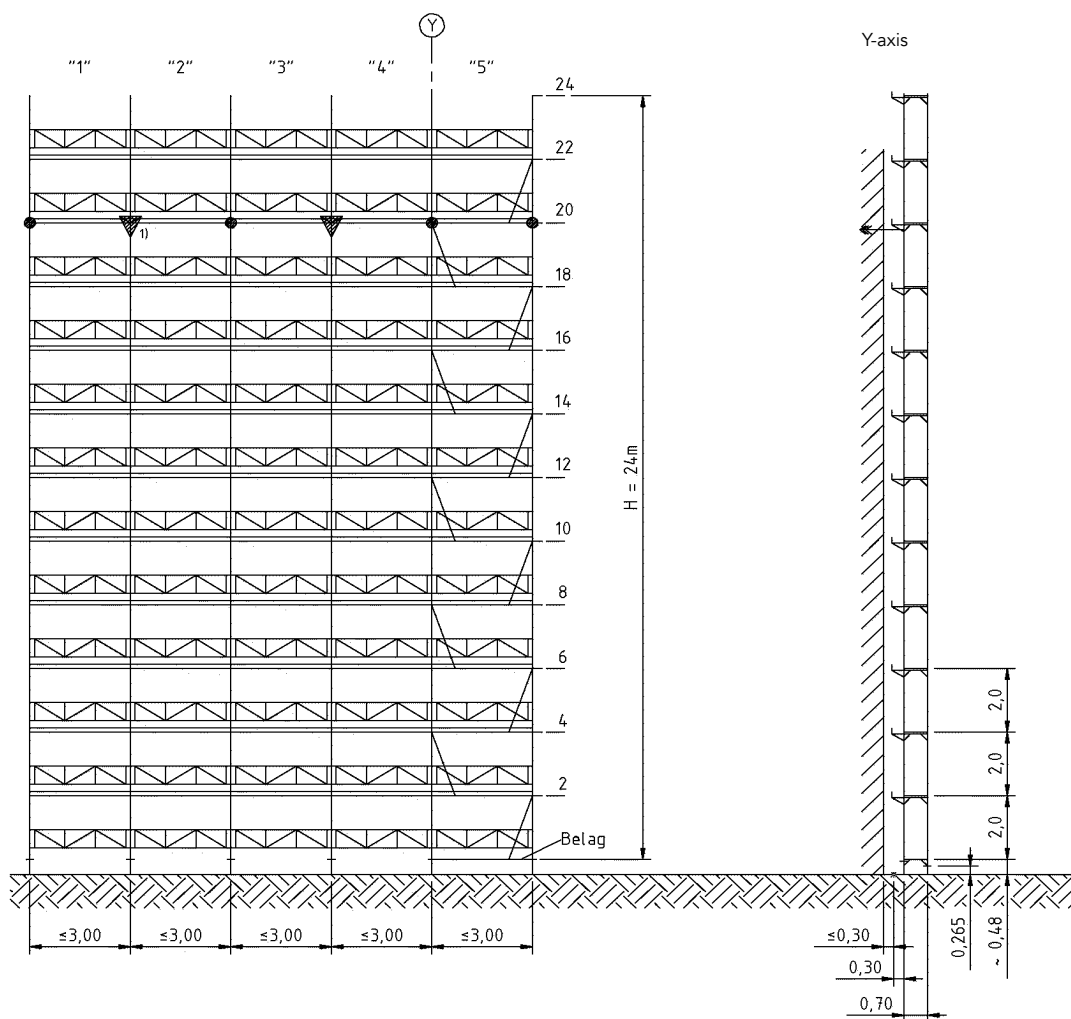


# 6 Standard Design

## The Free-standing Scaffolding Bay above the Last Anchoring

Uncovered scaffolding  
Bracket configuration 1 (with inner brackets)  
With / without protective wall

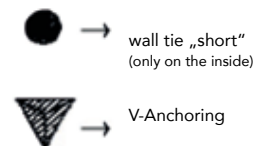
Partially open façade  
Closed façade



Only additional measures are depicted. Further structural support according to the assembly variant.

**Additional measures:**

- Anchoring: In the highest anchoring level each knot must be anchored.  
 1) Additionally one V-anchoring every 5 scaffolding bays on the highest anchoring level.



# 6 Standard Design

## 6.3 Anchorage forces and Fundament Loads

	Inner brackets	Outer brackets	Net cladding	Tarpaulin cladding	Anchoring forces [kN]								Foundation loads [kN]				
					orthogonal								parallel	max. inclined load	partly open / closed facade		
					partly open facade				closed facade								
					Compressive ≤ 20 m	Tensile ≤ 20 m	Compressive ≤ 24 m	Tensile ≤ 24 m	Compressive ≤ 20 m	Tensile ≤ 20 m	Compressive = 24 m	Tensile = 24 m	short holder	V-holder	V-holder	interior	exterior
Configuration without special equipment	X				3,7		3,0		1,5		0,9		0,1	6,3	4,5	9,7	10,8
	X	X			3,7		3,0		1,5		0,9					16,3	16,3
	X	X	X		4,1		3,4		2,9		2,2						
	X	X		X	6,5	5,3	4,2		5,1	4,4	2,9	1,6					
Configuration with protective wall					3,6		3,3		1,5		2,1		0,1	6,3	4,5	9,6	10,4
	X	X			3,6		3,6		1,5		2,1					16,4	16,3
	X	X	X		4,1		4,6		2,9		3,1						
	X	X		X	6,4	5,3	5,3		5,0	4,4	4,3	3,3					
SD	X	X			3,6		2,3		1,7		0,9		0,1	5,7	4,0	16,4	17,7
DGR					4,6		2,9		1,9		0,9		0,1	5,7	4,0	15,0	5,3
	X	X			4,6		2,9		1,9		0,9					22,8	7,4
Configuration with bridging					3,6		3,0		1,6		0,9		0,1	5,7	4,0	14,4	15,7
	X				3,6		3,0		1,6		0,9					22,1	17,8
	X	X			3,6		3,0		1,6		0,9		23,1	22,9			
	X	X		X	6,5	5,3	3,8		5,1	4,4	2,9	1,7	22,8	22,1			
TR	X	X			See corresponding configuration												
VA	X				See corresponding configuration												

- SD: Configuration with protective canopy
- DGR: Configuration with gantry frame
- TR: Configuration with staircase
- VA: Configuration with special anchoring position

The forces which are specified refer to the actual maximum occurring forces (service loads). Safety factors are not included.

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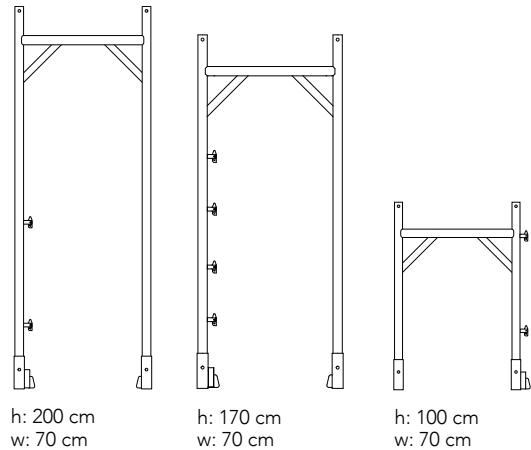
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## Scaffolding Frame

- With toe board bracket and integrated wind shield for the platform panels.
- Made out of galvanised steel tube
- Approval number DIBt Z-8.1-937
- Pipe-Ø 48,3 mm
- 25 items per bunch, 45 items per Barelle

Wall thickness mm	Height cm	Width cm	Weight kg	Order number
2,7	50	70	6,0	1-211050
2,7	70	70	8,0	1-211070
2,7	100	70	9,0	1-211100
2,7	170	70	14,3	1-211170
2,7	200	70	15,3	1-211200
3,25	70	70	9,9	1-212070
3,25	100	70	12,4	1-212100
3,25	200	70	19,6	1-212200

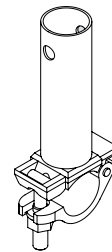
Info: The wall thicknesses (steel/aluminium) can be combined.  
Further information can be found in the assembly and mounting instructions.



## Attachment pin with coupling for the scaffolding frame

- made out of galvanised steel tube
- with screw mount
- Pipe-Ø 48,3 mm

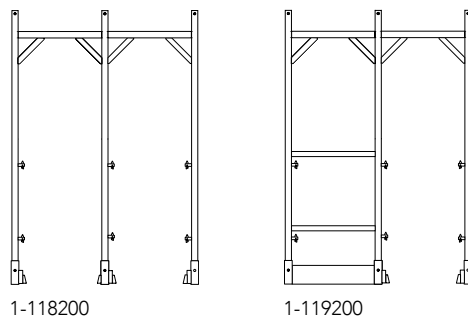
Wall thickness mm	Height cm	Weight kg	Order number
2,3	18,8	0,7	1-217105



## Staircase Double Frame

- Made out of aluminium
- Pipe-Ø 48,3 mm

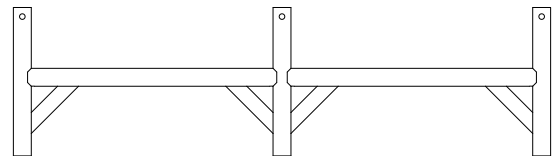
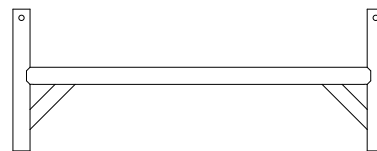
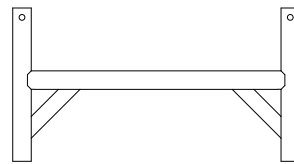
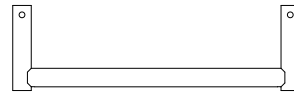
Wall thickness mm	Height cm	Width cm	Weight kg	Order number
4	200	140	14,0	1-118200
4	100	140	9,0	1-119100
4	200	140	16,3	1-119200



## Base Frame

- Used to support the first scaffolding frame
- Made out of galvanised steel tube
- Pipe-Ø 48,3 mm

Wall thickness mm	Height cm	Width cm	Weight kg	Order number
3,25	22	70	4,0	1-215070
3,25	40	70	5,9	1-216070
3,25	40	100	7,0	1-216100
3,25	40	140	10,7	1-216140





## Guard Rail Post

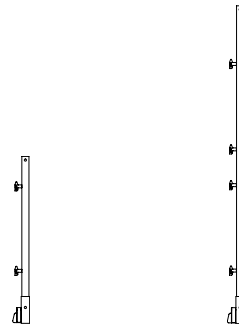
- With toe board bracket and integrated wind shield for the platform panels.
- made out of galvanised steel frame
- Pipe-Ø 48,3 mm

Wall thickness mm	Height cm	Weight kg	Order number
3,25	110	4,9	1-224100
3,25	200	8,9	1-224200

- Made out of aluminium

Wall thickness mm	Height cm	Weight kg	Order number
4	110	2,3	1-122100
4	200	4,0	*1-122200

\* usage only allowed for a roof inclination up to 25°

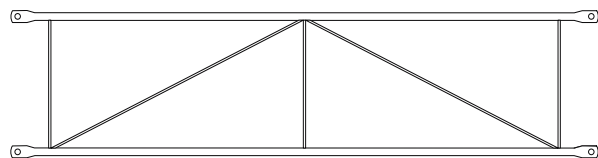


50 units per bunch

## Rail

- with a diagonal strut
- made out of galvanised steel tube

Length cm	Width cm	Weight kg	Order number
70	60	3,4	1-230070
100	60	4,6	1-230100
150	60	6,5	1-230150
200	60	8,2	1-230200
250	60	10,4	1-230250
300	60	12,7	1-230300



25 items per bunch

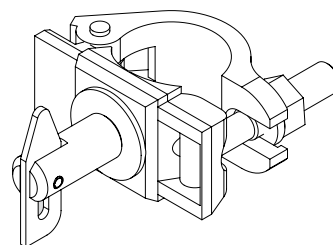
## Guard Rail Mount

- made out of galvanised steel tube
- with a screw mount
- 100 units per palette

Weight kg	Order number
1,2	1-550048

- With tapered key mount

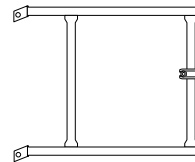
Weight kg	Order number
1,2	1-551048



## End Railing

- with screw coupling
- made out of galvanised steel tube
- 100 items per palette

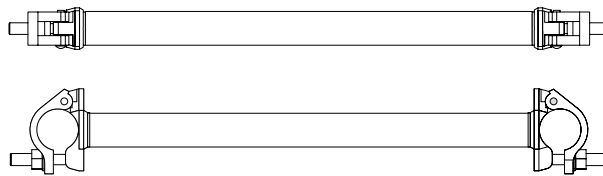
Width cm	Weight kg	Order number
30	3,1	1-240030
70	3,6	1-240070



## Crossbeam

- For handing over platforms on intermediate levels
- Mounted on both sides with a screw coupling
- With pipe-Ø of 48,3 mm

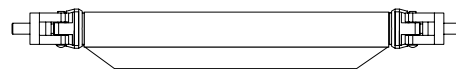
Width cm	Weight kg	Order number
13	1,9	1-246013
20	2,1	1-246020
70	2,5	1-246070
100	4,2	1-246100



- Reinforced with a screw coupling

Width cm	Weight kg	Order number
100	6,0	*1-248100

\* not a stock item

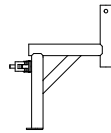




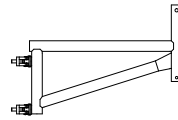
## Outer Brackets

- For widening scaffolding and catwalks
- Adjustable height with a screw coupling

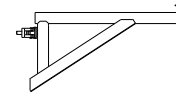
Width cm	Weight kg	Order number
30	3,2	1-250030
70	5,9	1-250070
60	5,3	1-258060



1-250030



1-250070



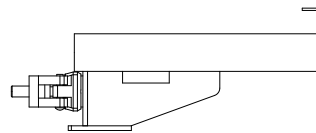
1-258060

## Inner Bracket

- adjustable
- Pipe-Ø 48,3 mm
- with screw coupling

Width cm	Weight kg	Order number
30	2,1	1-258030

\* Only compatible if the frame is used with the 48,30 × 2,7/3,25 mm steel tube



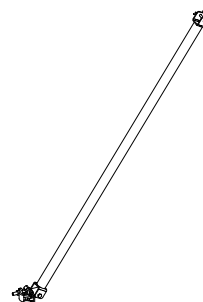
1-258030



## Bracket Brace

- To support the brackets in case of a maximal load
- Mounted with a half coupling and two pins
- Adjustable for the outer brackets 70 cm, 75 cm, 105 cm

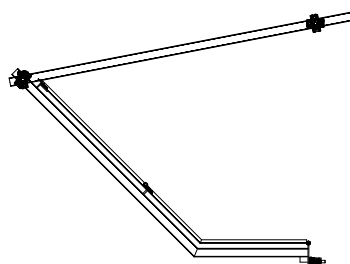
Wall thickness mm	Length cm	Weight kg	Order number
3,25	200	6,3	1-264200



## Protective Canopy Bracket

- to protect pedestrians
- With platform groove
- Made out of galvanised steel tube -  $\varnothing 48,3 \times 3,25$  mm

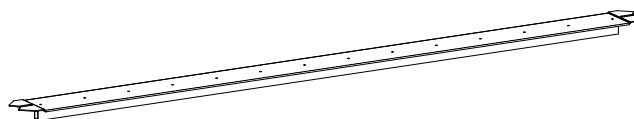
Length cm	Width cm	Weight kg	Order number
200	120	14,0	1-265120
200	180	16,0	1-265180



## Platform Gap Cover

- Eliminates gaps between brackets and scaffolding frames

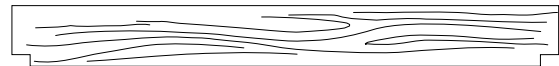
Length cm	Width cm	Weight kg	Order number
70	12,5	2,5	1-265070
100	12,5	3,7	1-265100
150	12,5	5,8	1-265150
200	12,5	7,9	1-265200
250	12,5	10,0	1-265250
300	12,5	12,1	1-265300



## Toe Board Wood

- Unplaned wood of a 22 mm thickness

Units per bunch	Length cm	Height cm	Weight kg	Order number
96	70	15	1,5	1-510070
96	100	15	2,0	1-510100
96	150	15	3,0	1-510150
96	200	15	4,0	1-510200
96	250	15	5,0	1-510250
96	300	15	6,0	1-510300



- End Toe Board

Units per bunch	Length cm	Height cm	Weight kg	Order number
96	60	15	1,4	1-511060
96	90	15	1,8	1-511090

## Toe Board Coated Wood

- Planed toe board in client RAL colour
- lengths of 200 cm or more are labelled
- The delivery period is 4–7 weeks

Units per bunch	Length cm	Height cm	Weight kg	Order number
96	70	15	1,5	1-514070
96	100	15	2,0	1-514100
96	150	15	3,0	1-514150
96	200	15	4,0	1-514200
96	250	15	5,0	1-514250
96	300	15	6,0	1-514300

**Tobler AG MATO 1 \***

\* Text from delivered data

- The delivery period for coated toe boards is 4-7 weeks

Units per bunch	Length cm	Height cm	Weight kg	Order number
96	60	15	1,4	1-515060
96	90	15	1,8	1-515090

## Aluminium Toe Board

Units per bunch	Length cm	Height cm	Weight kg	Order number
96	70	15	0,7	1-512070
96	100	15	1,2	1-512100
96	150	15	1,8	1-512150
96	200	15	2,4	1-512200
96	250	15	2,9	1-512250
96	300	15	3,5	1-512300



- End Toe Board

Units per bunch	Length cm	Height cm	Weight kg	Order number
96	60	15	0,8	1-513060

## Powder-Coated Aluminium Toe Board

- Toe Board powder-coated in client RAL colour
- lengths of 200 cm or more are labelled
- delivery period of 6-7 weeks

Units per bunch	Length cm	Height cm	Weight kg	Order number
96	70	15	0,9	1-516070
96	100	15	1,4	1-516100
96	150	15	2,1	1-516150
96	200	15	2,8	1-516200
96	250	15	3,5	1-516250
96	300	15	4,0	1-516300

**Tobler AG MATO 1 \***

\* Text from delivered data

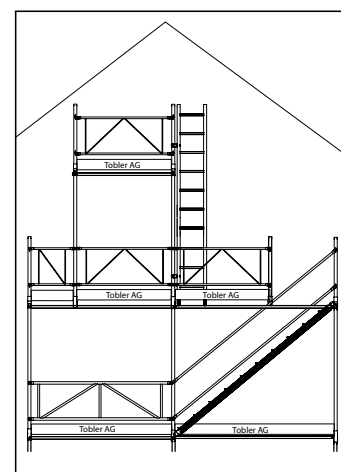
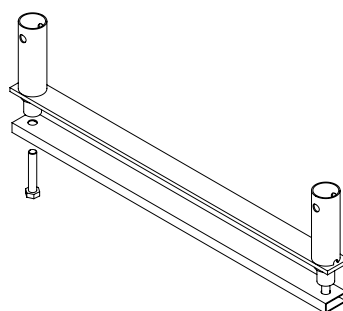
- The delivery period for powder-coated end toe boards is 4-7 weeks

Units per bunch	Length cm	Height cm	Weight kg	Order number
96	60	15	0,8	1-517060

## Special Crossbeam

- Longitudinally for narrowing scaffolding and staircase entries
- The frame and the guard rail posts must be mounted
- made of galvanised steel tube
- max. 1 frame must be attached
- only usable with aluminium or steel platforms

Width cm	Weight kg	Order number
70	5,7	1-272070



## Staircase Banister

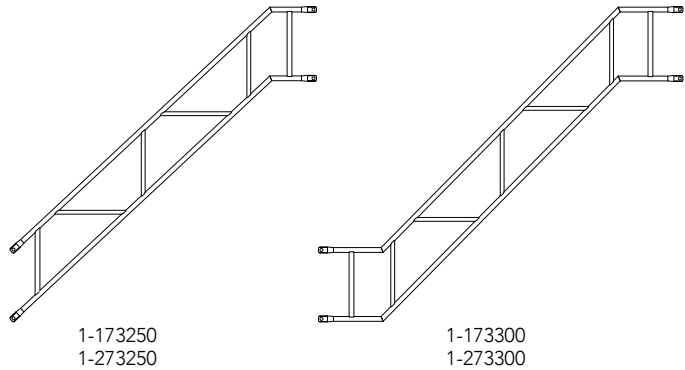
- made out galvanised steel tube

Length cm	Height cm	Weight kg	Order number
250	200	15,3	*1-273250
300	200	17,7	*1-273300

\* not a stock item

- Made out of aluminium

Length cm	Height cm	Weight kg	Order number
250	200	8,8	1-173250
300	200	9,8	1-173300



## Wind Shield for Platforms

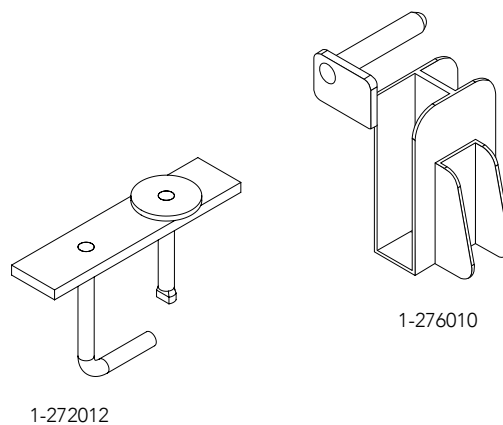
- Toe board brackets with wind shield
- for inboard toe board assembly on the highest scaffolding level as well against the removal of scaffolding platforms

Weight kg	Order number
0,6	1-276010

- Windshield for all platforms
- In galvanized steel

Weight kg	Order number
0,3	*1-276012

\* suitable for all scaffolding systems including the handing over round tube platform



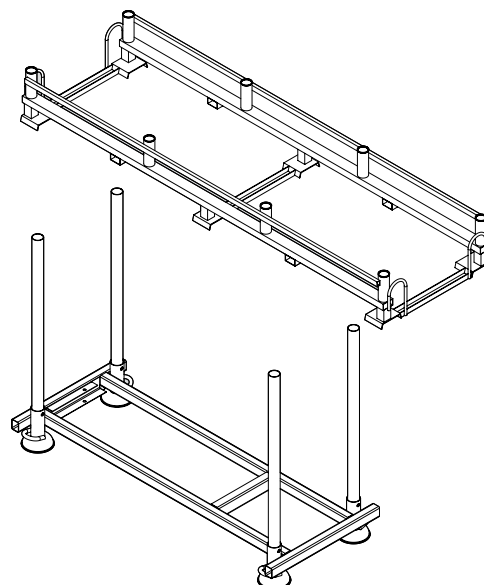
## Barelle

- for 45 scaffolding frames

Length cm	Width cm	Weight kg	Order number
245	70	44,0	1-280070
245	100	54,0	1-280100
245	140	66,0	1-280140

- for 40 banisters, demountable, stackable

Length cm	Width cm	Weight kg	Order number
150	60	26,8	1-282150



## Aluminium Platform

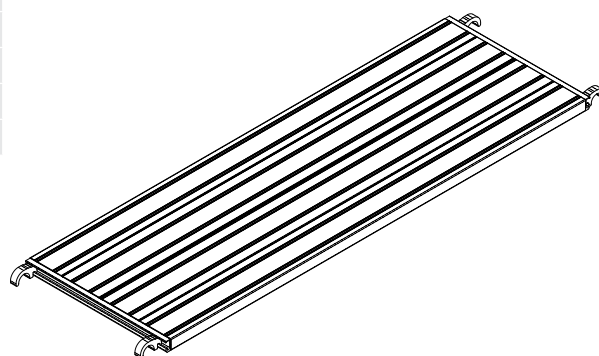
- Approval number DIBt Z-8.937
- Aluminium platform in a closed version
- Low weight and easy to assemble
- low stacking height of 45 mm
- With wind shield
- 50 units per bundle



Load-bearing capacity kg/m <sup>2</sup>	Length cm	Width cm	Weight kg	Order number	
✓ 600	600	70	64	6,1	Z-120070
✓ 600	600	100	64	8,1	Z-120100
✓ 600	600	125	64	9,7	*Z-120125
✓ 600	600	150	64	11,3	Z-120150
✓ 600	600	200	64	14,5	Z-120200
✓ 450	250	64	17,8		Z-120250
✓ 200	300	64	21,0		Z-120300

\* not a stock item

✓ catwalk and roof safety scaffolding are tested

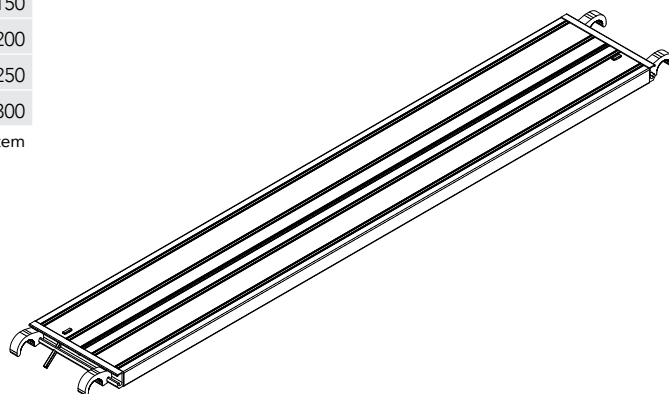


- Model with a 25 mm hook width

Load-bearing capacity kg/m <sup>2</sup>	Length cm	Width cm	Weight kg	Order number	
✓ 600	600	70	32	3,8	Z-126070
✓ 600	600	100	32	5,0	Z-126100
✓ 600	600	125	32	5,9	*Z-126125
✓ 600	600	150	32	6,9	Z-126150
✓ 600	600	200	32	8,8	Z-126200
✓ 450	250	32	10,8		Z-126250
✓ 200	300	32	12,7		Z-126300

\* not a stock item

✓ catwalk and roof safety scaffolding are tested



## Aluminium Platform with Hatch and Ladder

- with wind shield
- 38 items per bundle
- Installation height 65 mm
- the contact surface is made out of a box section
- The lengths 200 cm and 150 cm are only available at Tobler, the ladder is extendable

Load-bearing capacity kg/m <sup>2</sup>	Length cm	Width cm	Weight kg	Order number
✓ 300	150	64	21,7	Z-124150
✓ 300	200	64	24,0	Z-124200
✓ 200	250	64	28,0	Z-124250
✓ 200	300	64	31,4	Z-124300



✓ catwalk and roof safety scaffolding are tested

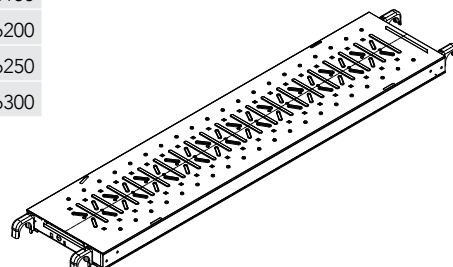
## Steel Sheet Platform

- Platform made of galvanised steel sheet, perforated, with hooks for round tube
- textured contact surface
- with wind shield
- 51 items per bundle with a height of 60 mm

Load-bearing capacity kg/m <sup>2</sup>	Length cm	Width cm	Height mm	Weight kg	Order number
✓ 600	70	32	60	5,5	Z-226070
✓ 600	100	32	60	6,9	Z-226100
✓ 600	150	32	60	9,4	Z-226150
✓ 600	200	32	60	11,8	Z-226200
✓ 450	250	32	60	14,2	Z-226250
✓ 300	300	32	60	16,6	Z-226300

✓ catwalk and roof safety scaffolding are tested

Our platforms made of steel sheet are also available for other scaffolding types. Contact us and we will deliver a suitable platform for your scaffolding system!

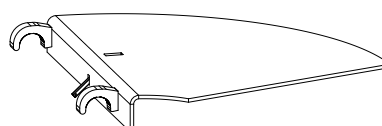


Platform with a hooks width of 25mm

## Balancing Platform

- Used to form corners
- Compatible with MATO1, MATO 2 and MATO 8

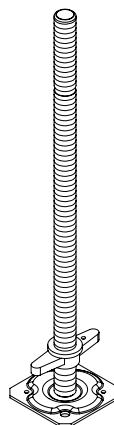
Length cm	Weight kg	Order number
55	6,0	Z-165055



## Screw Jack Baseplates

- With rolled thread
- Thread-Ø 38 mm
- 5 tons load-bearing capacity
- 250/400 items per pallet

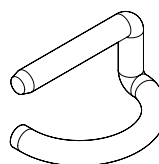
Length cm	Weight kg	Order number
30	2,7	Z-520030
50	3,4	Z-520050
60	4,0	Z-520060
80	4,4	Z-520080
95	4,7	Z-520095
120	7,8	Z-520120
150	8,4	Z-520150



## Safety Pin

- Galvanised
- 200 items per pack/10.000 items per pallet

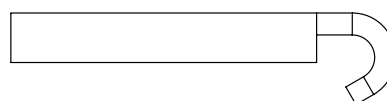
Ø Diameter mm	Weight kg	Order number
9	0,1	Z-528009
13	0,2	Z-528013



## Anchoring

- With hooks
- 100 items per pack

Length cm	Weight kg	Order number
20	1,2	Z-530020
30	1,5	Z-530030
50	2,3	Z-530050
80	3,4	Z-530080
100	4,1	Z-530100



- Sleeve without eye bolt
- 100 items per pack

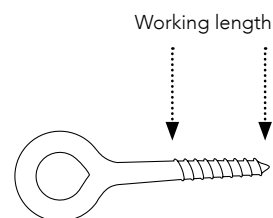
Length cm	Weight kg	Order number
20	0,8	Z-531020
30	1,0	Z-531030
50	1,5	Z-531050
80	2,3	Z-531080



## Eye Bolt

- Galvanised
- 50 items per pack

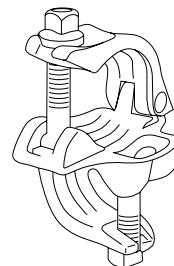
Ø Diameter mm	Length mm	Working length	Weight kg	Order number
12	90	15	0,1	Z-533090
12	120	45	0,1	Z-533120
12	160	85	0,2	Z-533160
12	190	115	0,3	Z-533190
12	230	155	0,3	Z-533230
12	300	225	0,4	Z-533300
12	350	275	0,5	Z-533350
12	450	375	0,6	Z-533450



## Cross Coupling

- With screws
- Galvanised
- 750 / 1 000 items per pack

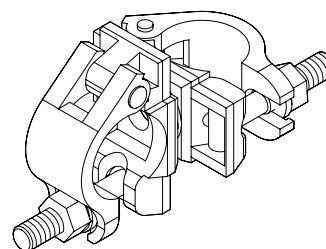
Dimensions mm	Width across flats	Weight kg	Order number
48/48	19	1,2	Z-540148
48/48	22	1,2	Z-540248



## Swivel Coupling

- With screws
- Galvanised
- 750 / 1 000 items per pack

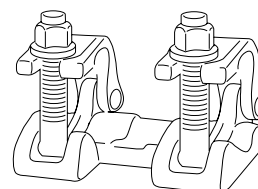
Dimensions mm	Width across flats	Weight kg	Order number
48/48	19	1,3	Z-542148
48/48	22	1,3	Z-542248



## Tensile Coupling

- With screws
- Galvanised
- 600 items per pack

Width across flats	Weight kg	Order number
22	1,6	Z-544022

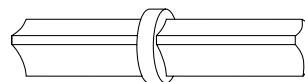




## Tube Connector

- Galvanised
- 500 items per pack

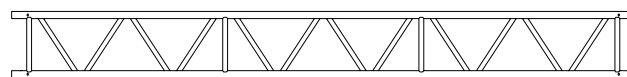
Ø Diameter mm	Weight kg	Order number
48.3	1,2	Z-544015



## Bridge Beam

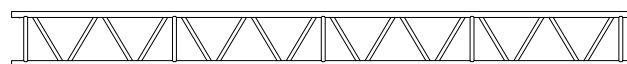
- Galvanised steel Ø 48,3 mm for bridges inside and outside of the modular dimension
- 8 units per bundle

Wall thickness mm	Length cm	Height cm	Weight kg	Order number
4	220	40	10,0	Z-560220
4	320	40	14,2	Z-560320
4	420	40	18,1	Z-560420
4	520	40	22,7	Z-560520
4	620	40	26,5	Z-560620
4	775	40	33,6	Z-560775
4	820	40	34,8	Z-560820



- Galvanised steel Ø 48,3 mm for bridges inside and outside of the modular dimension
- 8 items per bundle

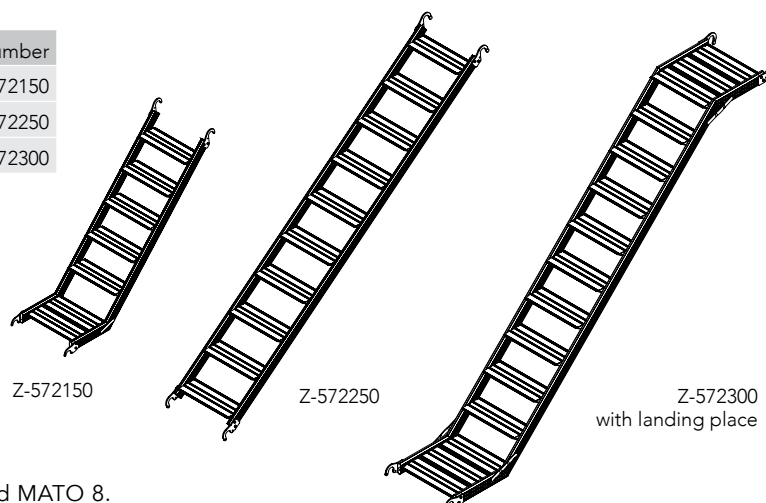
Wall thickness mm	Length cm	Height cm	Weight kg	Order number
3,25	220	40	22,5	Z-562220
3,25	320	40	34,0	Z-562320
3,25	420	40	43,0	Z-562420
3,25	520	40	53,8	Z-562520
3,25	620	40	62,5	Z-562620
3,25	700	40	78,0	Z-562770



## Staircases

- anti-slip
- 18 cm step depth
- made of aluminium
- 25 items per bundle

Length cm	Height cm	Width cm	Weight kg	Order number
150	125	60	12,8	Z-572150
250	200	60	19,8	Z-572250
300	200	60	26,0	Z-572300



Z-572150

Z-572250

Z-572300  
with landing place

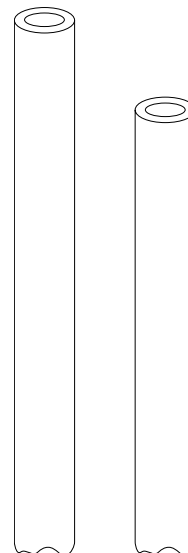
All staircases are compatible with MATO1, MATO 2 and MATO 8.

## Steel Scaffolding Tube

- Any lengths up to 6 m, Ø 48,3 mm
- 50 items per bundle

Wall thickness mm	Length cm	Weight kg	Order number
3,25	100	3,7	Z-292100
3,25	150	5,5	*Z-292150
3,25	200	7,3	Z-292200
3,25	250	9,1	*Z-292250
3,25	300	10,9	Z-292300
3,25	350	12,7	*Z-292350
3,25	400	14,5	Z-292400
3,25	450	16,3	*Z-292450
3,25	500	18,1	Z-292500
3,25	550	19,9	*Z-292550
3,25	600	21,0	Z-292600

\* not a stock item



## Aluminium Scaffolding Tube

- Any lengths up to 8 m, Ø 48,3 mm

Wall thickness mm	Length cm	Weight kg	Order number
4	100	1,6	Z-190100
4	150	2,4	*Z-190150
4	200	3,2	Z-190200
4	250	3,9	*Z-190250
4	300	4,7	Z-190300
4	350	5,4	*Z-190350
4	400	6,1	Z-190400
4	450	6,9	*Z-190450
4	500	7,7	Z-190500
4	550	8,4	*Z-190550
4	600	9,2	Z-190600
4	700	10,7	Z-190700
4	800	12,2	Z-190800

\* not a stock item

# General Terms and Conditions of Business (T&Cs) as at 1 January 2013

**These T&Cs govern legal relationships between Tobler AG (hereinafter referred to as TOBLER) and its contracting partners (hereinafter referred to as Client) arising from the sale, rental and assembly of scaffolding, formwork and the corresponding accessories. They constitute a framework contract applicable to the conclusion of all contracts and are binding until revoked.**

## 1. Tender and conclusion of the contract

- 1.1. Tenders, goods and services will be provided by TOBLER solely on the basis of these T&Cs, which will be deemed to have been accepted when the goods or services are ordered. The T&Cs will also expressly apply to all future orders by the Client.
- 1.2. A contract will be concluded when TOBLER accepts a written, telephone or personal order unconditionally.
- 1.3. Verbal assurances by TOBLER will only be valid if confirmed in writing and signed.
- 1.4. TOBLER will only be bound by the Client's general terms and conditions of business if they correspond to its own or if it has agreed to them in writing. Divergent conditions of the Client which TOBLER has not expressly recognised in writing will not be binding upon it.

## 2. Technical documents

- 2.1. Prospectuses, catalogues, etc. will not be binding in the absence of any agreement to the contrary. Details in technical documents will only be binding if they are expressly guaranteed in writing.
- 2.2. The right to make technical modifications is reserved. Differences from the prospectus or from details in other sales documents or from earlier deliveries in terms of configuration, weights and measurements of the goods will only be relevant if the intended purpose of the goods is restricted to a significant extent.
- 2.3. The final potential configuration is expressly reserved, particularly in the case of new designs or special configurations.
- 2.4. TOBLER will be entitled to supply equivalent unbranded parts from subcontractors.

## 3. Terms of payment

- 3.1. In the absence of any agreement to the contrary, payment must be made to TOBLER within thirty days, strictly net. The Client will be entitled to deduct a prompt payment discount of 2% for payment within ten days of the date of the invoice. Further deductions will only be admissible if expressly agreed in writing. Unjustified deductions will be charged retrospectively.
- 3.2. In the case of arrears, the Client will be liable for 7% p.a. interest on arrears with effect from the due date of payment, without a reminder from TOBLER.
- 3.3. The absence of minor parts from the order or the assertion of claims under guarantee against TOBLER will not entitle the Client to delay payments due.
- 3.4. Payment of the entire purchase price or the balance thereof will be due immediately if acceptance is delayed by the Client. The Client must bear the cost of any demurrage by the transport contractor.
- 3.5. Should the deposit not be paid or the requisite security not be provided in accordance with the contract, TOBLER will be entitled to uphold or cancel the contract and demand compensation in either case.

## 4. Delivery terms

- 4.1. In the absence of any agreement to the contrary, the place of fulfilment will be TOBLER's registered office in Rheineck.
- 4.2. Despatch and carriage are for the account and at the risk of the Client. The Client will be responsible for insurance against loss of any type whatsoever. The Client must bear any customs duty payable.
- 4.3. Pallets and crates are only made available on loan. The Client must return them at its own expense, otherwise TOBLER will invoice their cost.
- 4.4. Delivery will be made at the time desired by the Client, as far as possible. Notified or agreed delivery periods and times will be observed as far as possible, but are not binding. Should delivery be delayed for reasons for which TOBLER is not responsible (force majeure, import or transport problems, delay by third-party suppliers, changes subsequently demanded by the Client, etc.), the delivery date will be postponed accordingly.
- 4.5. A failure to observe the delivery deadline will not entitle the Client to cancel the contract, delay acceptance or demand compensation for delay.
- 4.6. Should it be impossible to provide goods and services in the foreseeable future due to events over which TOBLER has no control, TOBLER will be entitled to cancel the contract by notifying the Client, without incurring liability for compensation.
- 4.7. If the Client has been informed that the goods ordered are ready for despatch or collection, it will be obliged to collect or arrange delivery of the goods within five working days of notification. The Client will be in arrears of acceptance after this deadline has expired. In the event of arrears of acceptance, the Client will be obliged to compensate TOBLER for losses thus incurred. In this case, TOBLER will be entitled to retain the delivery at the expense and risk of the Client, store it on its premises, charging an appropriate fee, or cancel the contract, with payment of compensation for the loss incurred by TOBLER. Delayed acceptance will be deemed to apply if the Client unjustifiably refuses to accept the consignment due to delays in delivery. Even if TOBLER retains the goods or stores it on its premises, it will be entitled to cancel the contract at any time, without notice and without setting a period of grace, and to demand repayment of the loss which it has incurred.

## 5. Transfer of risk

- 5.1. The risk applicable to the deliverable will be transferred to the Client when the consignment leaves TOBLER.
6. Complaints
- 6.1. The Client must inspect the goods and assembly work immediately after receipt and execution.
- 6.2. It must notify TOBLER of any shortcomings in writing within three days, otherwise the goods and services will be deemed to have been approved.

## 7. Guarantee under the purchase agreement

- 7.1. In the case of new products (with the exception of timber, spare parts, tarpaulins, nets, any plastic components, small parts such as screws, nuts, etc., and mountings such as cables and tarpaulin ties), TOBLER will issue a guarantee to the Client for six months with effect from despatch of the consignment from TOBLER, provided that examination and notification take place punctually in accordance with paragraph 6. Liability for particular product characteristics will only be accepted if guaranteed in writing by TOBLER. Differences attributable to production or material will not give rise to entitlement to a guarantee. Moreover, the guarantee will lapse if the Client or an authorised agent of the Client makes modifications or repairs to the goods without the written agreement of TOBLER.
- 7.2. Any guarantee whatsoever for used items is precluded. No guarantee will apply to installed parts from third-party suppliers or if installed parts from third-party suppliers cause a fault or damage, or inhibit operation.
- 7.3. The guarantee may be restricted to repair or replacement of the defective parts, at TOBLER'S discretion. Further claims under guarantee by the Client, particularly for rehibition, reduction or damages, are precluded.
- 7.4. Replaced parts are the property of TOBLER and must be returned to it.
- 7.5. Repair work or the supply of replacements will not extend or renew the period under paragraph 7.1. The guarantee period applicable to the original delivery will apply to the repaired or replaced parts.
- 7.6. TOBLER will be entitled to refuse to rectify defects for as long as the Client fails to fulfil its obligations to TOBLER, without restriction.

- 7.7. TOBLER rejects any guarantee for damage attributable to normal wear and tear, inappropriate or violent handling, excess stress, inappropriate use and maintenance of the items, the use of unsuitable materials, accidents or force majeure.
- 7.8. Only TOBLER may carry out repairs to scaffolding components. Otherwise any claim under guarantee will lapse.

## 8. Reservation of title under the purchase agreement

- 8.1. TOBLER will remain the proprietor of the item purchased until the purchase price, including interest and any other costs, has been paid in full. The Client is obliged to inform any tenant of premises on which it accommodates the item purchased of the reservation of title in writing, before storing it.
- 8.2. The Client authorises TOBLER to register retention of title with the responsible authority.
- 8.3. The Client may not sell, pledge, loan or rent the purchased item until full payment of the purchase price, including all interest and costs, has been made. The Client also undertakes not to remove the purchase item from Swiss territory without the express written agreement of TOBLER. The Client must disclose the reservation of title immediately in the case of pledging, retention or seizure, and inform TOBLER in writing whenever possible, before the corresponding measure is taken.
- 8.4. The Client is obliged to cooperate with measures necessary to protect TOBLER'S property, at its own expense.
- 8.5. The Client is obliged to insure the purchased item against all likely risks at its own expense to the benefit of TOBLER, throughout the term of retention of title. The Client must submit a corresponding certificate of insurance on demand. Should the Client fail to comply with this requirement, TOBLER will be entitled to subscribe to insurance for its own benefit, at the expense of the Client.

## 9. Provisions specific to rental

- 9.1. Rent will always be net of carriage to and from the place of use. The costs of carriage will be charged separately, if it is arranged by TOBLER.
- 9.2. The Client is obliged to notify any tenant on whose premises it accommodates the rented goods of TOBLER'S rights of ownership in writing, before placing it there.
- 9.3. The benefit and risk associated with the rented goods will be transferred to the Client no later than at the time at which it can dispose of said goods, i.e. either when the rented goods are transferred to the Client or a third party appointed by the latter at TOBLER'S warehouse or when the rented goods are unloaded on site, if the Client has commissioned TOBLER with carriage. If delivery to an unoccupied building site is ordered, TOBLER will not assume any guarantee for the integrity and completeness of the delivery.
- 9.4. The Client must treat the rented goods with care and maintain them properly. The Client will be invoiced and must pay for damage and excessive wear attributable to inappropriate use of the rented goods. Formwork must be used as economically and carefully as possible and not cut. In particular, all formwork must be treated with release agent before concreting. Formwork beams must not be truncated under any circumstances. The greatest possible care must be taken when compressing concrete poured into the formwork, in order not to damage it.
- 9.5. All rented goods must be returned in a clean condition when the rental period ends. Otherwise the costs of subsequent cleaning will be invoiced to the Client. The Client is responsible for return carriage, which must take place at its own expense. The rented goods must be prepared for unloading so that they can be lifted easily by crane. A separate charge will be imposed for any work necessary for unloading, such as rearrangement, etc.
- 9.6. The rental charge for formwork does not include consumables (spacing tubes, plugs, tapers, release agent, etc.). When handling the elements, care must be taken that their wooden parts are not scratched (e.g. by sharp edges and corners of other elements). Particular care must be taken not to damage elements when cleaning them. Following use, the formwork must be placed on the pallets and in the crates provided. Small parts must be boxed. A separate charge will be made for any cleaning, sorting and repair work which may be necessary. Lost small parts must be replaced.
- 9.7. The rented goods will be made available for the agreed term. Should the Client be in arrears of payment of the rent or should it handle the rented goods carelessly or contrary to instructions, TOBLER will be entitled to cancel the rental agreement immediately and repossess the rented goods. In this case, the costs of return carriage will be invoiced to the Client separately. The Client will also be obliged to pay compensation for premature termination of the rental agreement. In particular, TOBLER must be placed in the position which it would have enjoyed had the rental agreement remained in force for the entire anticipated rental term. In this case, TOBLER will not be obliged to ensure the re-rental of the goods throughout the remainder of the anticipated rental term.
- 9.8. Should no firm rental agreement term be anticipated or should the Client continue to use the rented goods beyond the contractual term originally intended, both parties will be entitled to terminate the rental agreement at any time, subject to observance of a fourteen-day period of notice.

## 10. Static calculations

- 10.1. The prices do not include static calculations. They will be invoiced additionally at the request of and in accordance with the requirements of the Client.

## 11. Prohibition of assignment and offsetting

- 11.1. The Client is not entitled to offset claims by TOBLER against its own claims unless TOBLER has expressly agreed to offsetting in writing.
- 11.2. The Client is prohibited from assigning claims arising out of the contractual relationship with TOBLER to third parties.

## 12. Preclusion of further liability

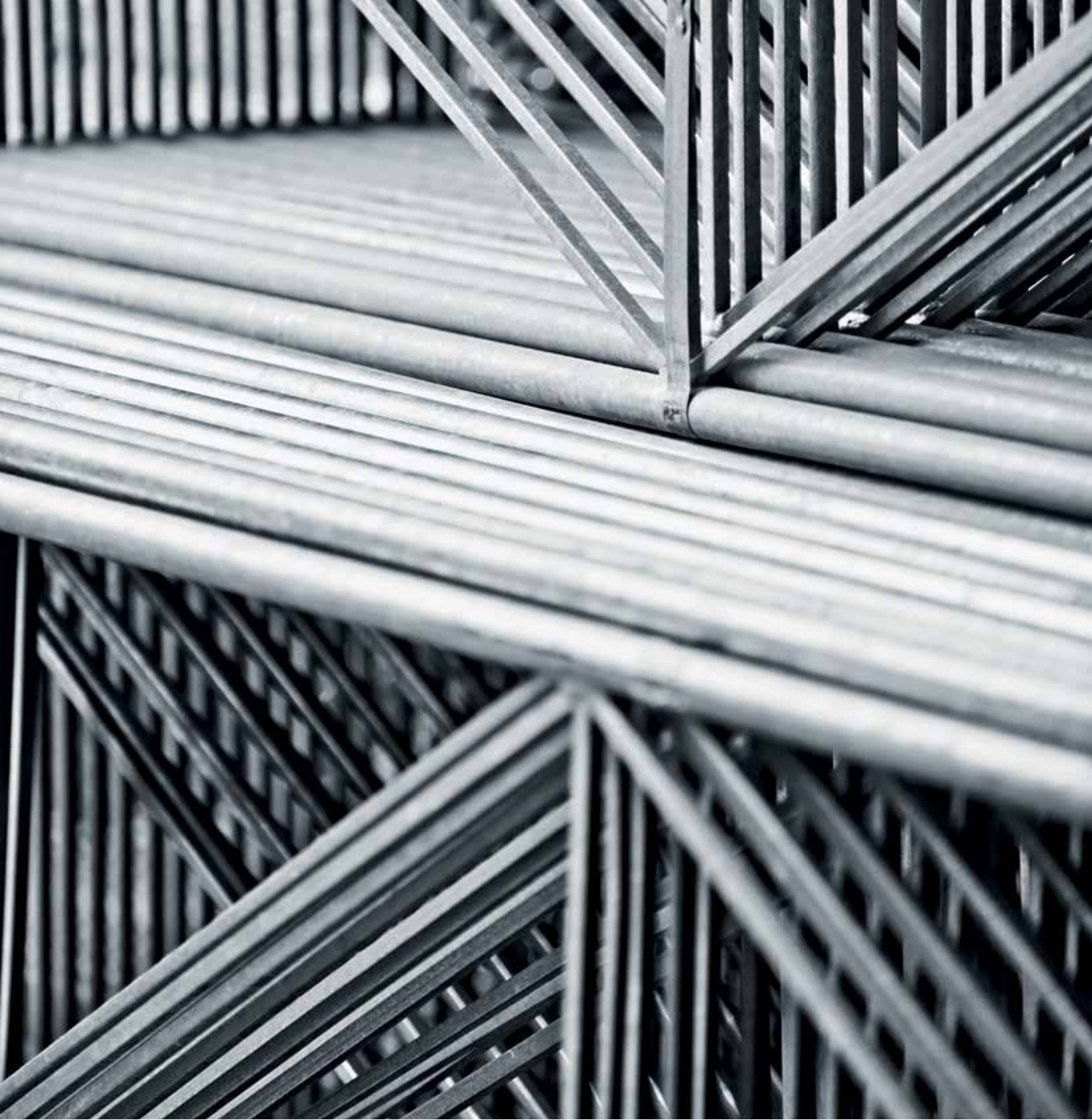
- 12.1. Any claims by the Client, with the exception of those expressly identified in these terms and conditions, on any legal basis whatsoever, particularly any claims for compensation, reduction or cancellation of the contract which are not expressly stipulated, are precluded. Under no circumstances will the Client be entitled to claim compensation for damage which does not affect the delivered item itself, such as loss of production, loss of use, orders, profit or other direct or indirect losses.

## 13. Amendments and liability

- 13.1. TOBLER reserves the right to amend these T&Cs at any time. The Client will be notified of amendments by circular letter or in another suitable way. They will be deemed to have been accepted unless a written objection is received within one month.

## 14. Copyright

- 14.1. TOBLER retains unrestricted title to drafts, drawings, etc. which it has prepared. They may not be copied or rendered accessible to third parties without TOBLER'S permission.
- 14.2. The imitation of goods, even if for exclusive personal use, will be subject to prosecution under criminal law.
15. Applicable law and court of jurisdiction
- 15.1. All legal relationships between the Client and TOBLER are governed by Swiss law, to the exclusion of the UN Convention on Contracts for the International Sale of Goods.
- 15.2. The sole place of jurisdiction for any proceedings and the place of recovery, but only for Clients with a foreign domicile (Article 50(2) of the Swiss Debt Recovery and Bankruptcy Act), is the domicile of TOBLER in Rheineck. However, TOBLER is entitled to pursue the Client before the responsible court at the latter's domicile or place of residence, or before any other responsible court.



**Tobler**<sup>®</sup>  
Scaffolding. Formwork.

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