Sifatec GmbH & Co. KG
Das Flachdachgerüst

FLAT ROOF
SIDE PROTECTION

Instructions for assembly and use

Status: May 2023



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A 1 Product features

The Sifatec side protection was developed by an experienced master roofer and tested and optimized in practice. Special attention was paid to rational working in combination with the highest possible safety. The flexibility and economy are obvious. Due to the special anchoring technique, no ballasting on the flat roof surface is necessary.

For the Sifatec side protection system, a proof of stability has been provided and tested, and the instructions for assembly and use presented here have been prepared. Thus, the usability according to the DGUV Information 201-023 is provided and certified. (General approval by the building authorities is not required for this product range).

A 2 Product description

The Sifatec side protection consists of:
- The flat roof anchor plate, which is available in different versions or lengths
- The patented flat roof suspension
- The side protection post with support
- The side protection crosspieces
- The railing brace
- Various pipe connectors/couplings

A 3 General safety instructions

Observe the following points before use:

-The side protection may only be assembled and disassembled by persons who are familiar with these instructions for assembly and use!
- Persons involved in assembly and disassembly must observe DGUV Information 201-023!
- Components should be checked for mobility and visually for damage at the latest before assembly.
- Damaged parts must not be used! This includes e.g., rusted, bent, broken or cracked components. These parts must be replaced immediately and taken out of service. Please contact Sifatec GmbH & Co. KG.
- Only original Sifatec parts may be used.
- Only the fasteners specified in this manual may be used in the specified quantity.
- for storage it is recommended to store the individual parts in a dry place to avoid corrosion damage.

Before starting work or using the work equipment, it must be checked on the basis of a risk assessment whether the statutory regulations for occupational safety and the accident prevention regulations of the employers' liability insurance association are complied with at the place of use. As a result, appropriate protective measures must be specified.
Protective measures are necessary above all to prevent falls during assembly or disassembly of the work equipment.

Possible protective measures can be:
- Assembly from a safe stand (e.g., mobile scaffold, elevating work platform).
- Use of personal protective equipment against falls with specification of the anchor point by the superior.
The employees must be instructed on the protective measures resulting from the risk assessment. Object-related assembly instructions are to be drawn up.

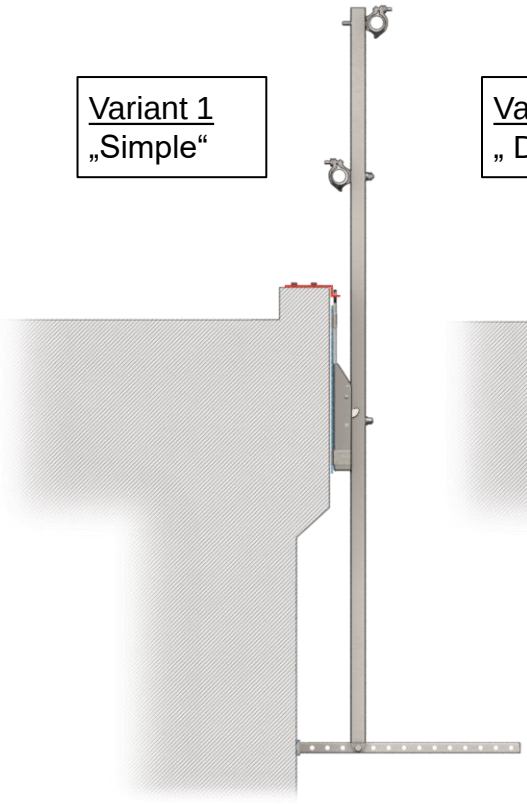
A 4 Use

The Sifatec side protection may be used as class A side protection according to DIN EN 13374 temporary side protection systems.

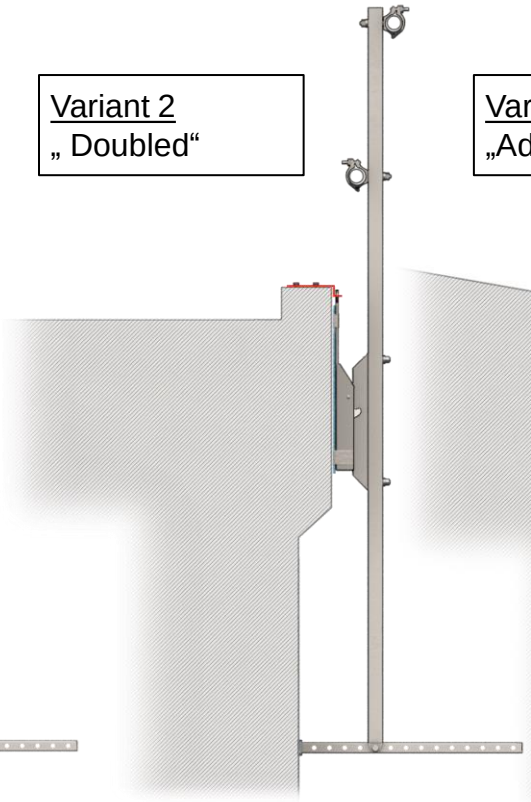
In case of application-related changes to the suspension of the system, a supplementary structural analysis may be necessary. In this case, please consult with Sifatec GmbH & Co. KG.
After a person or an object has fallen against/into the side protection system, the individual parts must be checked by a competent person. Damaged system components must be replaced and must not be used any further.
Openings between the side protection system and adjoining components must be kept as small as possible and must not exceed 120mm for rail beams or 20mm for boards.

A 5.0 Assembly variants

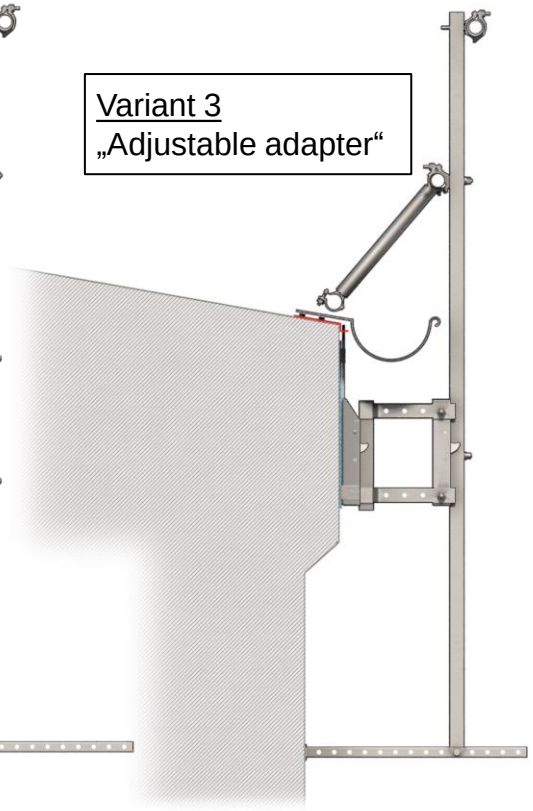
Variant 1
„Simple“



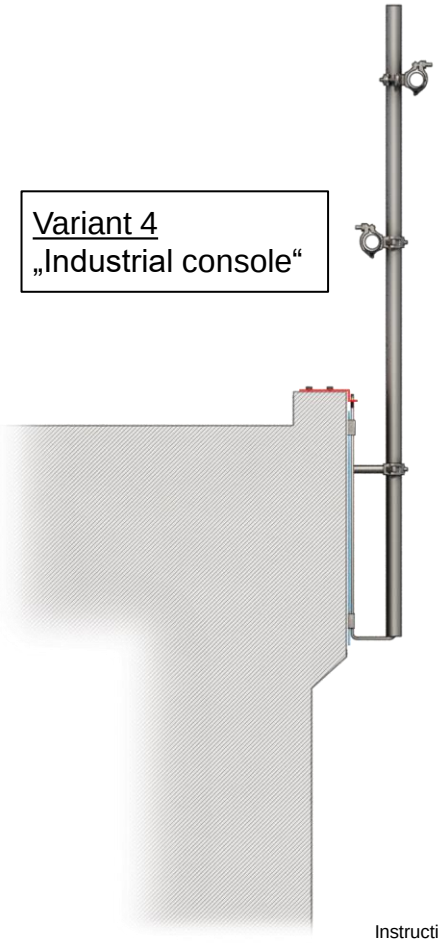
Variant 2
„ Doubled“



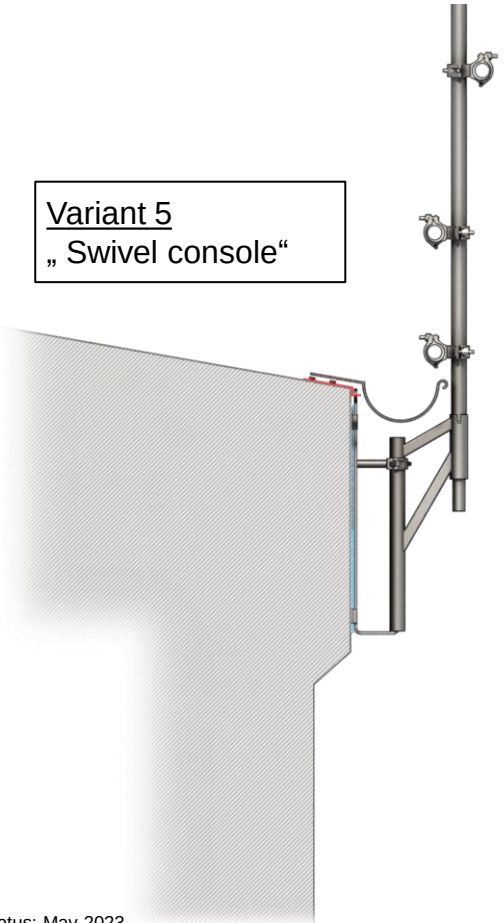
Variant 3
„Adjustable adapter“



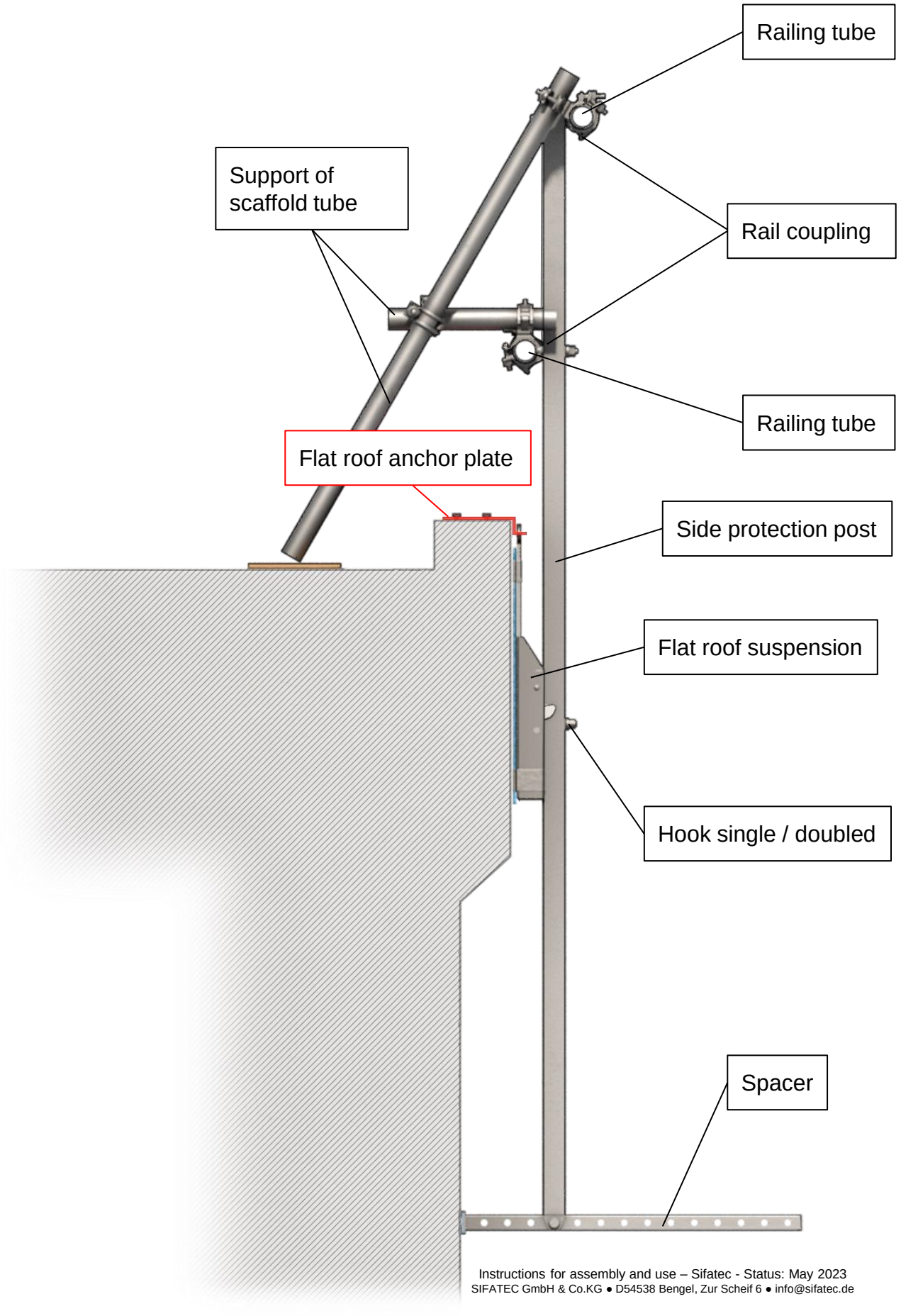
Variant 4
„Industrial console“



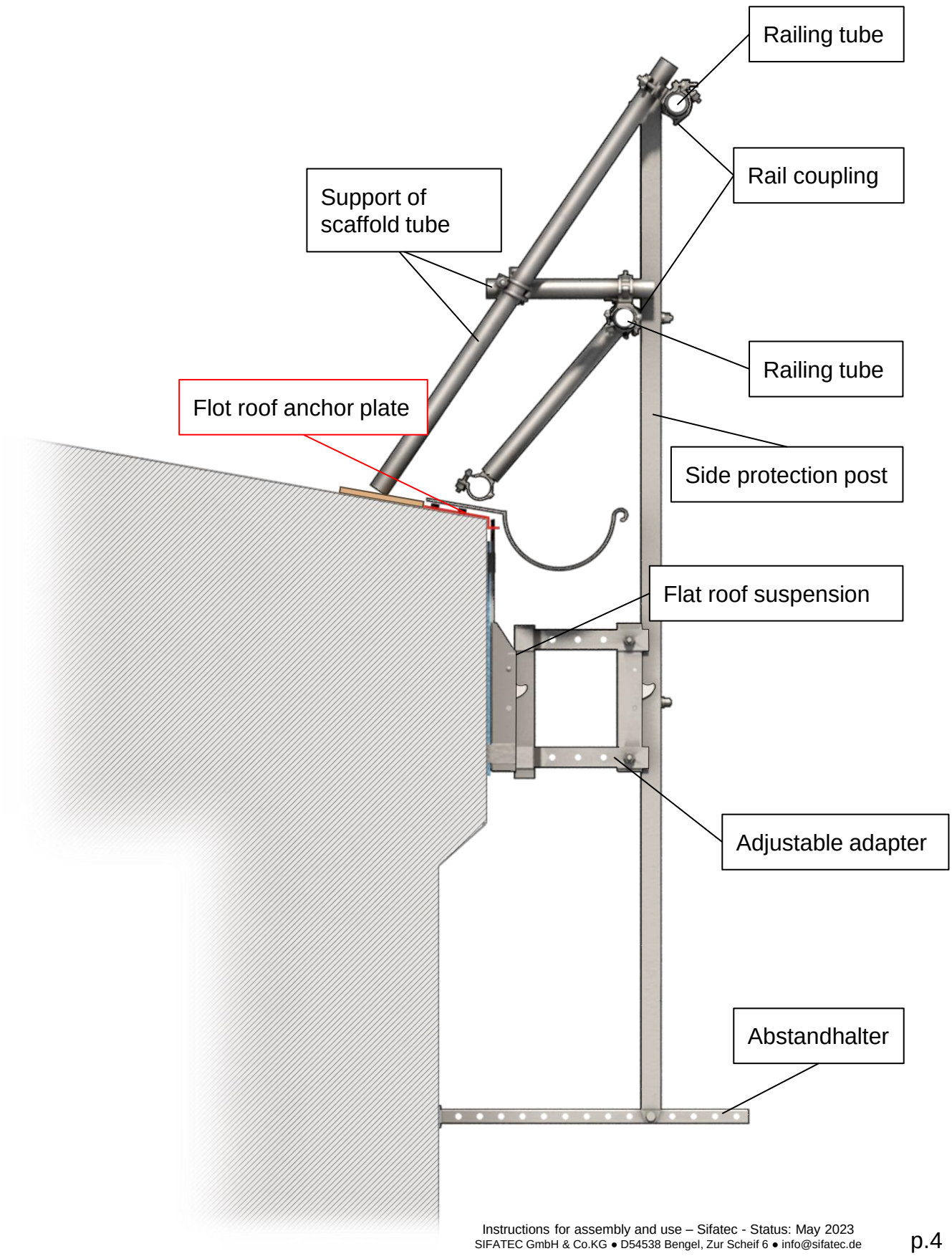
Variant 5
„ Swivel console“



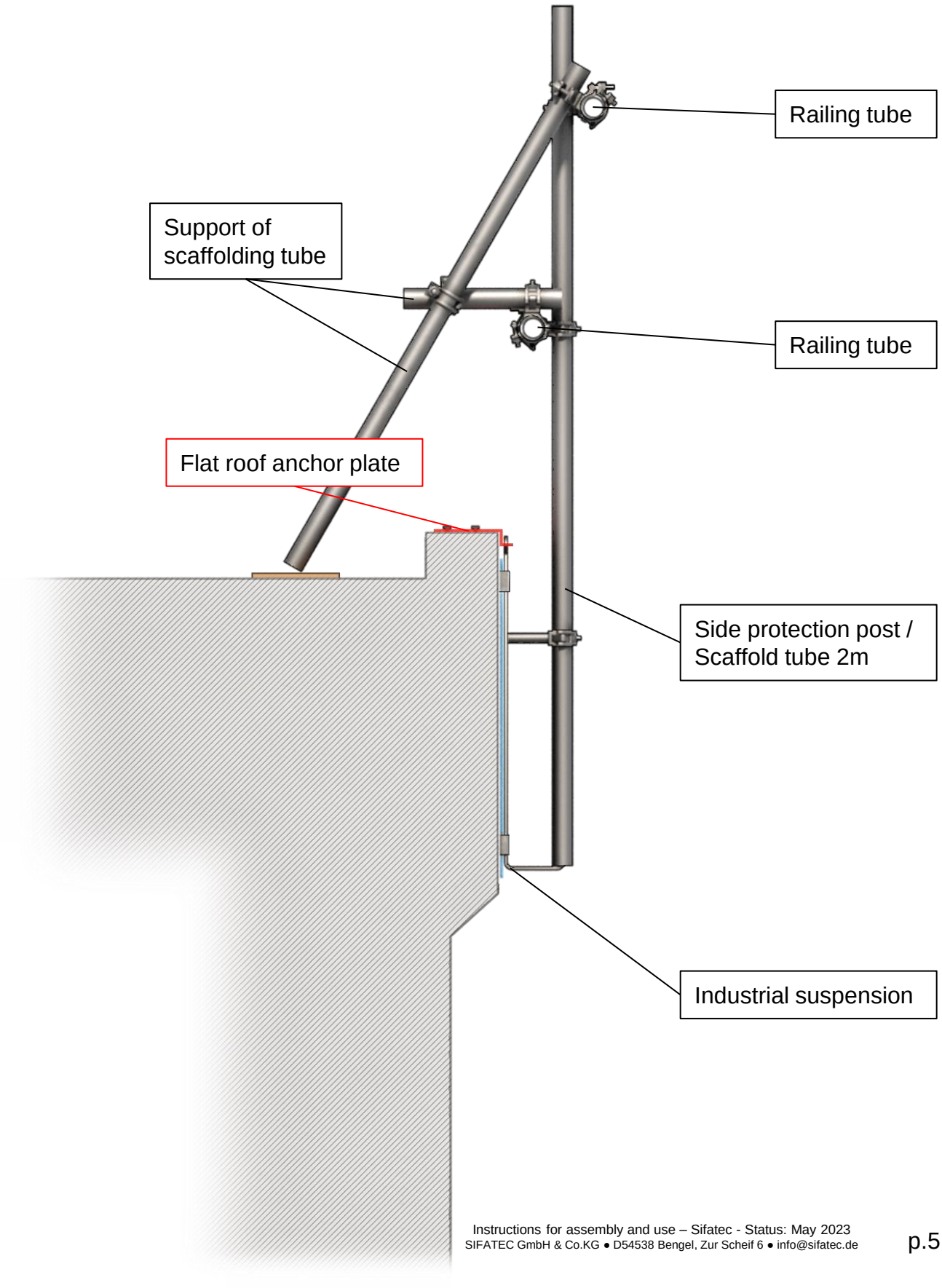
A 5.1 Component overview VariantS 1 + 2 (V1+V2)



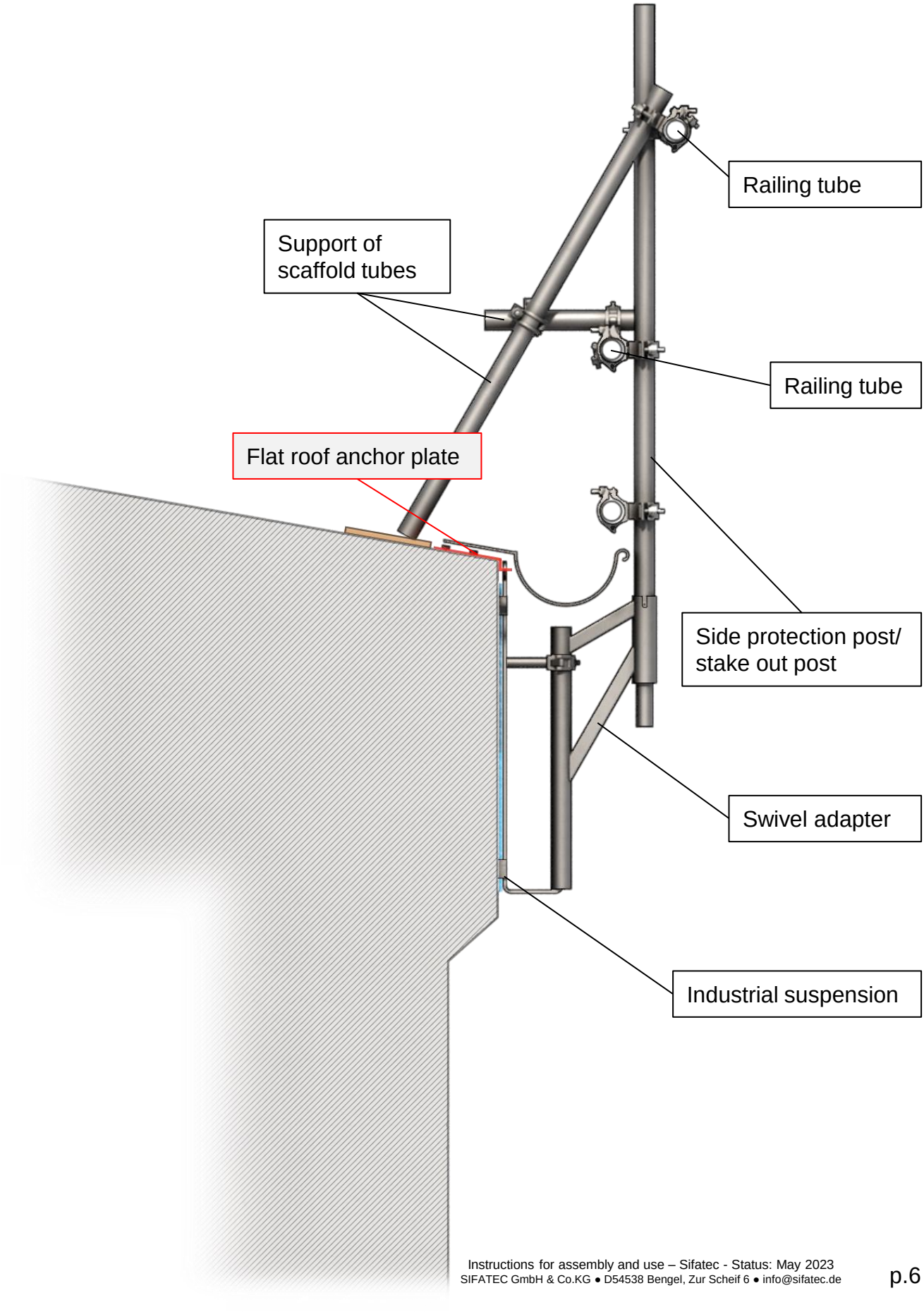
A 5.1 Component overview Variant 3 (V3)



A 5.1 Component overview Variante 4 (V4)



A 5.1 Component overview Variant 5 (V5)



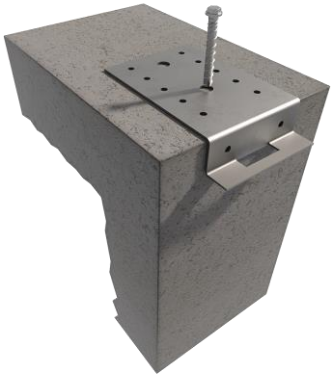
A 6 Assembly

A 6.1 Fastening the flat roof anchor plates

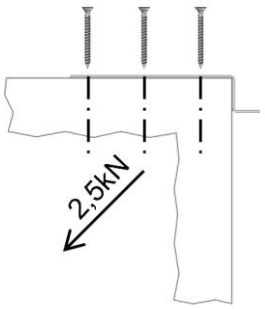
The flat roof anchor plates can be attached to solid concrete parts ,a wooden edge plank or sandwich panels. Flat roof anchor plates already present on the structure must be checked for sufficient load-bearing capacity before they are used.

Safety note:

- - All screws must always be screwed in
- - Anchoring may only be done in sound wood able to take a load
- - Screwing must be carried out carefully
- - Care must be taken to ensure that the loads are safely transferred to the structure, i.e., it must be ensured that the edge board can take the loads



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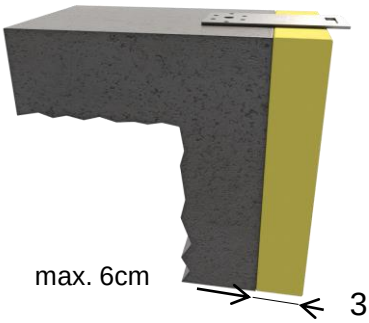
2

A 6.1.1 Anchoring to concrete parts

(Fig. 1 u. 2)

For anchoring the flat roof anchor plate to concrete parts, anchors with approval of EOTA or a member showing an official ETA (e.g. the German Institute for Construction Technology), which are designed for anchor loads of 2.5kN diagonal pull (service load), must be used. (e.g., anchors from Upat, Hilti, Fischer, Liebig etc.).

When setting the anchors, proceed according to the anchor manufacturer's instructions.



3

When installing the flat roof anchor plate, make sure that the suspension opening is located directly at the concrete edge.

Special anchor plates must be used to bridge insulation layers.

The maximum distance to the concrete edge of 6cm must not be exceeded. The long versions of flat roof anchor plates are edged to specified dimensions or with suitable tools on site.

A 6.1.2 Fastening to edge planks or wooden beams

(Fig. 4)

For fastening the flat roof anchor plate to wooden parts, approved wood screws with the dimension 5x50 or 5x55 with full thread must be used. All 6 screws must always be screwed in. The edge plank must be fastened to the building in such a way that the locally applied diagonal tensile load 2.5kn (service load) can be transferred.

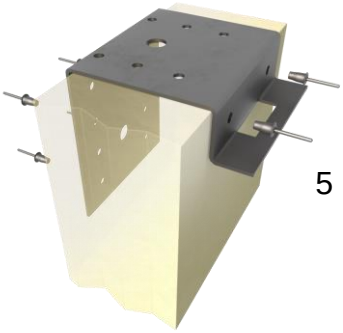


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A 6.1.3 Fastening to sandwic panels

(Fig. 5)

Aluminium rivets of (4.8*10 or larger) are used to fasten the flat roof anchor plate to sandwich panels. Always fasten all 6 rivets.



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A 6.2 Mounting the side protection post

After fastening the flat roof anchor plates correctly, the main construction parts have to be installed.

A 6.2.1 Mounting the flat roof suspension

(Industrial suspension analogous to this; Figs. 6, 7, 8, 9).
The flat roof suspension has a special suspension mechanism that prevents unintentional unhooking.
To hook it in, the flat roof suspension is swung 45° to the side and then hooked into the opening of the anchor plate. Applying a slight force to the top right, the flat roof suspension (industrial suspension) is swung back.

Attention
No noticeable resistance must be felt when swinging back!

A 6.2.2 Mounting the swivel adapter (V5)

(Fig. 11)
The industrial suspension is screwed to the swivel adapter (swivel angle: +/- 60°) by closing the pipe coupling. In doing so, the necessary wall distance of the side protection post tube to be attached later must be set.

A 6.2.3 Hanging the side protection post

(Fig. 10)
The suspension hook is attached to the side protection post with the screw bolt and the plug bolt in such a way that the upper end of the side protection post protrudes approx. 1 m above the roof level after it has been suspended.
The spacer must be attached to the lower end of the side protection post.

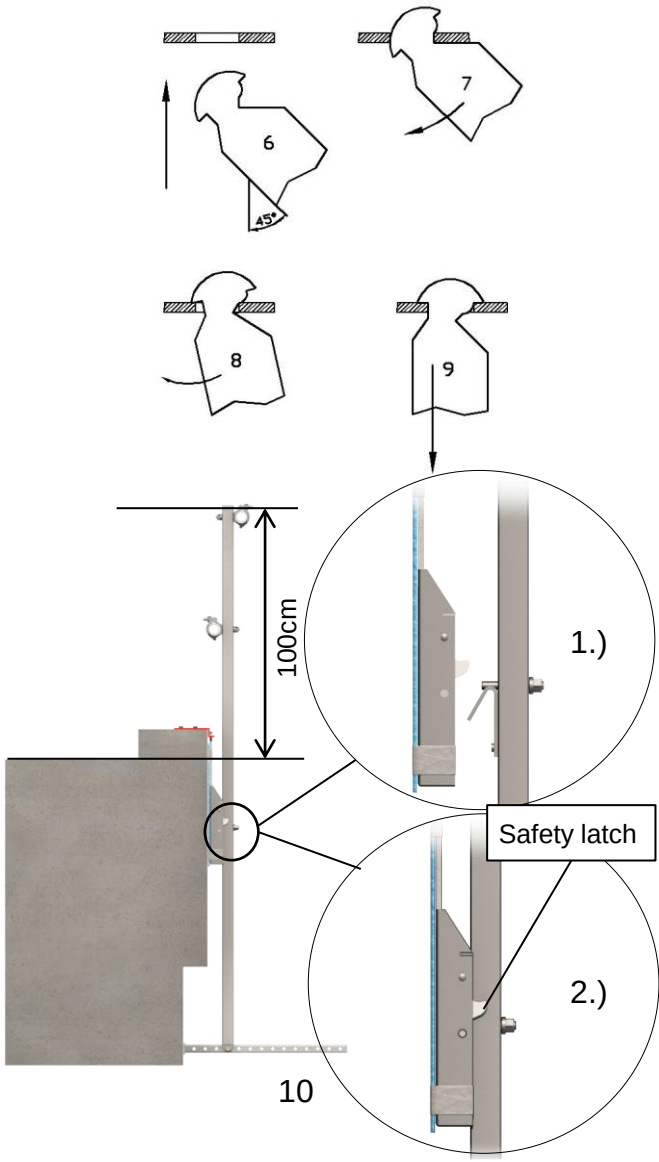
The side protection post is then hooked into the flat roof suspension, the safety latch swings back automatically.

Note
If the lower end of the flat roof suspension is in contact with the building and the insertion heights according to Part B (page 11) are complied with, the spacer at the lower end of the side protection post can be dispensed with.

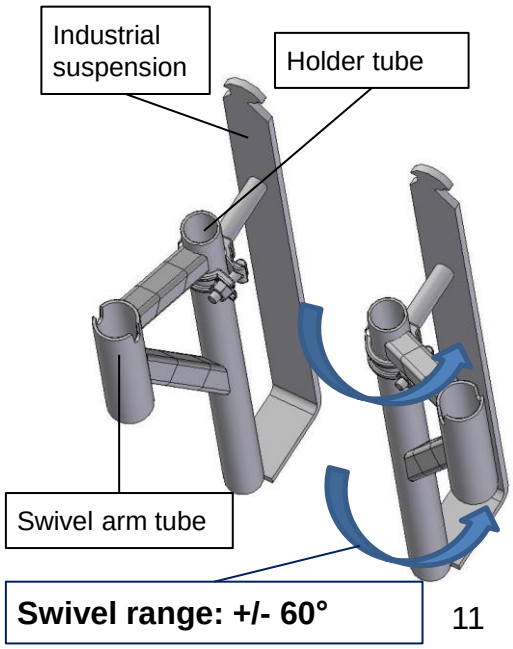
A 6.2.4 Inserting the stake out post (V5)

The side protection post is inserted into the tube of the swivel arm or alternatively into the holder tube. Make sure that the two bolts of the side protection post engage in the recess of the holding tube. (-> Anti-twist device!) When inserted into the holding tube, only the lower tube section is immersed. Anti-twist protection is not necessary here.

The upper end of the side protection post must protrude at least 1 m above the roof level after insertion.



10



11

A 6.3 Attaching the side protection

(Fig. 12)

The rail couplings (V1, V2, V3) or standard couplings (V4, V5) are attached to the side protection post at heights of 0.5m and 1.0m above the roof surface.

The side protection spars, consisting of steel scaffold tube Ø48.3x3.2mm or aluminium scaffold tube Ø48.3x4.0mm, are then attached to the rail couplings or standard couplings. Tube butt joints are connected by means of a push-type coupling and centring bolts.

Tip from a professional: The tube butt joint should be as close to the post as possible. This makes it easier to assemble and disassemble the side protection. In addition, the side protection is more stable and easier to install in alignment.

The maximum distances between the side protection posts are 6.0 m for steel tubes and 4.0 m for aluminium tubes. Between each side protection post, the knee rail and rail beam (both railing tubes) must be coupled centrally with a railing brace (Fig. 13+14).

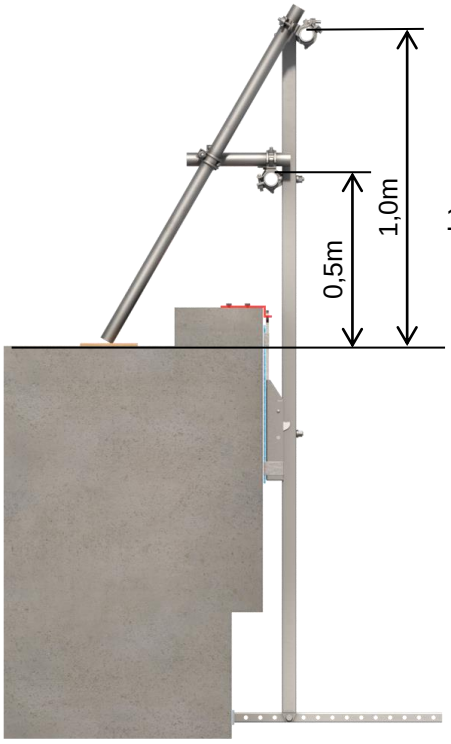
If the roof edge does not have an upstand, parapet, or similar, a scaffold tube must be installed directly above the roof surface. In addition, if there is a risk of objects falling from the roof surface, a corresponding safety area must be set up on the ground below the corresponding roof edge.

For assembly variant 3 "Adjustable adapter", a scaffold tube is attached to the knee rail directly above the roof surface with additional railing braces (Fig. 14).
With all other assembly variants, the tube can be attached directly to the side protection post with couplings.

Note

If there is an opening greater than 470mm between the edge of the building and the knee rail, another rail must be installed so that the opening is a maximum of 470mm.

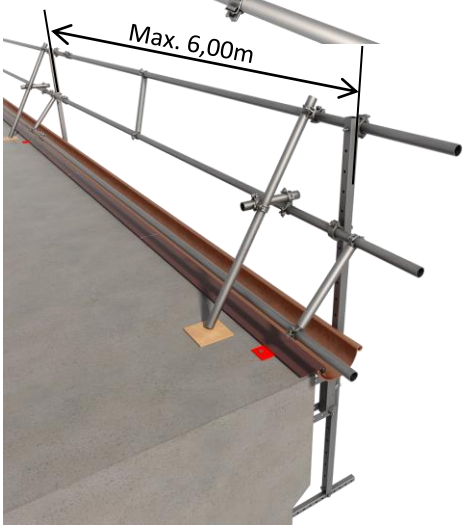
It is recommended that the lower support is always installed, but it can be dispensed with depending on the height of the building if the conditions require it. If the lower support must be dispensed with in variant 3, the bay width must be reduced to 5.50m. Please note the increased stress on the facade due to the modified support.



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A 6.4 Support to the inside

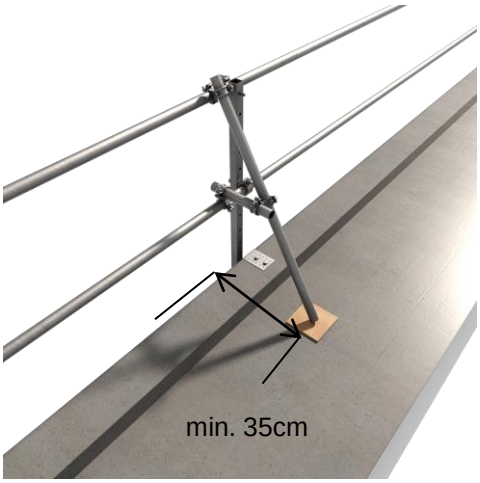
(Fig. 15)

A scaffold tube is attached to the rail beam with a standard coupler, which is supported on the roof surface at a minimum distance of 35 cm behind the flat roof edge.

This scaffold tube is attached to the roof surface with a minimum distance of 35 cm behind the flat roof edge.

This scaffold tube is coupled to the rail beam and knee rail by means of swivel couplers and a shorter horizontal scaffold tube.
This inward support must be attached to each side protection post.

Corner formations in accordance with A6.6 are considered as supports to the inside. During work in this area, a support can be temporarily removed or swung upwards.

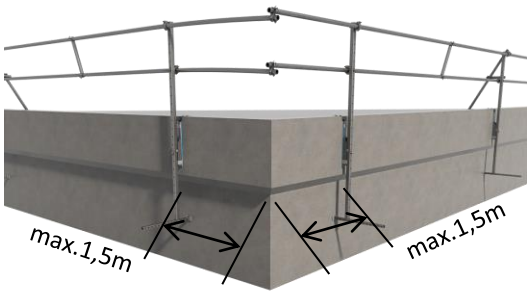


15

A 6.5 Forming corners

(Fig. 15+16)

The distance between the side protection posts and the corner must be less than or equal to 1.5m (Fig. 16).
If the distance of one side protection post to the corner is less than 0.5m, the other side protection post may be installed at a distance according to A6.4 (Fig. 17). At the corners of the building, the beams are coupled by means of a standard or swivel coupling.

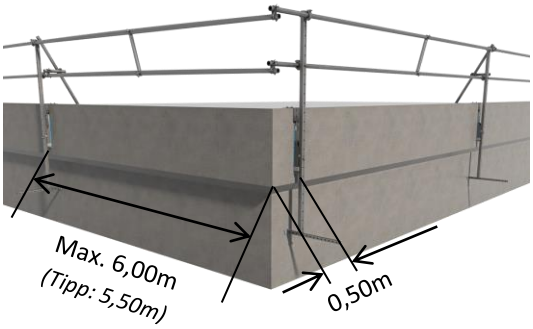


16

A 7 Disassembly

Disassembly of the Sifatec side protection is carried out in reverse order. The flat anchor plates remain on the structure if the fasteners are no longer accessible.

Tip from a professional:
The safety latch can be easily pushed away with the folding rule open.
A sticker located next to each flat roof anchor plate can help finding the position for reassembly.
Please ask for stickers before ordering the next flat roof anchor plates.



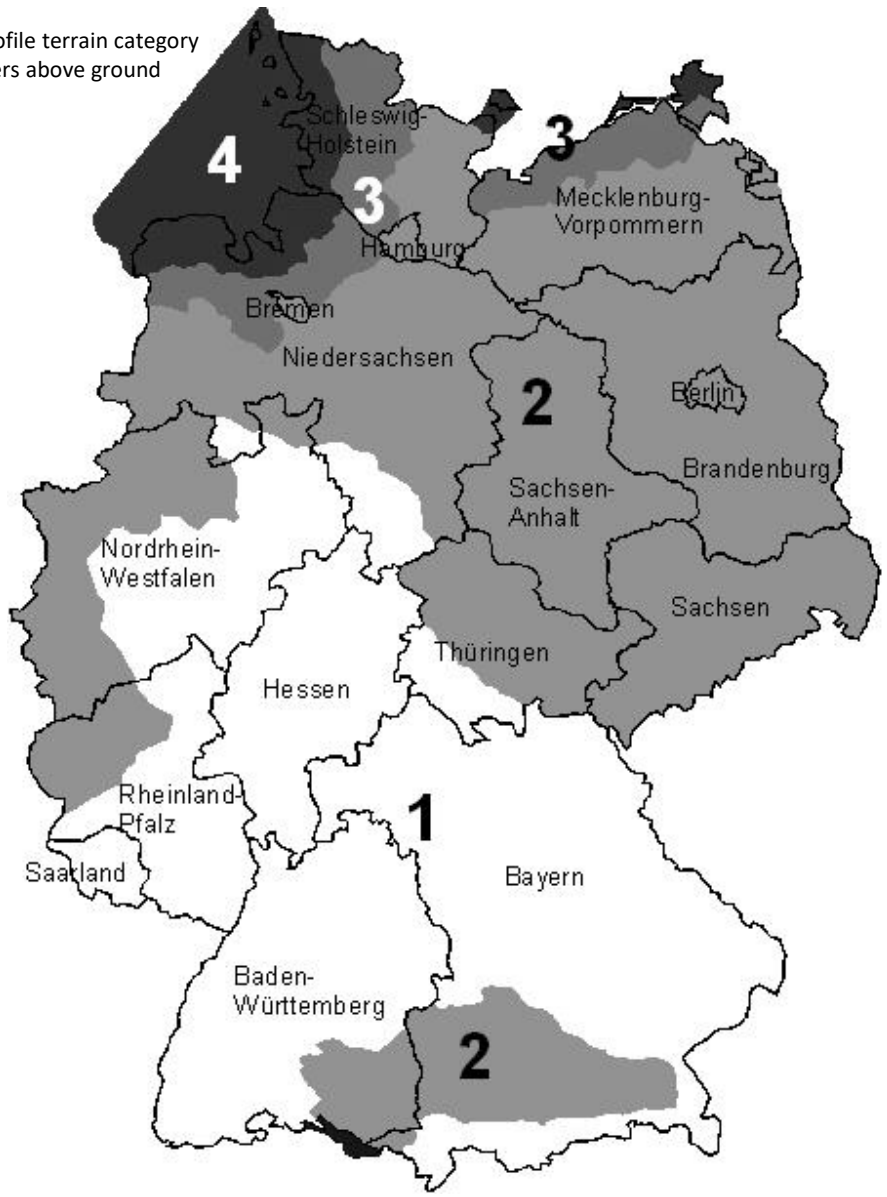
17

Part B Application heights Germany

Aufbauvariante	**Wind load zone WZ1*** $V_{b,0}$ = <22,5m/s $q_{b,0}$ = 0,32kN/m²	**Wind load zone WZ2*** $V_{b,0}$ = <25,0m/s $q_{b,0}$ = 0,39kN/m²	**Wind load zone WZ3*** $V_{b,0}$ = <27,5m/s $q_{b,0}$ = 0,47kN/m²	**Wind load zone WZ4*** $V_{b,0}$ = <30,0m/s $q_{b,0}$ = 0,56kN/m²
Variant 1 „Simple"	200m (120m without lower support)	100m (60m without lower support)	45m (25m without lower support)	30m (15m without lower support)
Variant 2 „Doubled"	300m (175m without lower support)	220m (75m without lower support)	100m (40m without lower support)	50m (25m without lower support)
Variant 3 „Adjustable adapter"	175m (80m without lower support)	75m (40m without lower support)	40m (25m without lower support)	25m (15m without lower support)
Variant 4 "Industrial console"	300m	150m	70m	40m
Variante 5 „Swivel console"	40m	40m	40m	40m

For use in other countries, please observe the regional wind load zones including wind speed and pressure. If there is a difference, play it safe and use the information of the next higher wind load zone or hand over a map of the wind load zone to Sifatec GmbH & Co. KG for calculation.

*Inland (mixed profile terrain category II/III), data in meters above ground level)



Appendix A Test certificate DEKRA 2021



ZERTIFIKAT
CERTIFICATE

Zertifikatsinhaber Applicant	Sifatec GmbH & Co. KG
Produkt: Product:	Seitenschutzsystem Edge protection system
Handelsname(n): Trade name(s):	FLACHDACH SEITENSCHUTZ
Typ(en)/Modell(e)/Artikel-Nr(n).: Type(s)/model(s)/article no(s):	FLACHDACH SEITENSCHUTZ
Produktkenndaten: Product specifications:	Temporäre Konstruktionen für Bauwerke – Temporäres Seitenschutzsystem Temporary constructions for buildings – temporary edge protection system

DEKRA Testing and Certification GmbH erklärt hiermit, dass das oben genannte Produkt den Anforderungen des Produktsicherheitsgesetzes hinsichtlich der Gewährleistung von Sicherheit und Gesundheit entspricht und auf folgender Grundlage zertifiziert worden ist (Abschnitt 5 ProdSG):
DEKRA Testing and Certification GmbH hereby declares that the above-mentioned product is in conformity with the requirements of the Product Safety Act with respect to ensuring safety and health and has been certified on the basis of (Chapter 5 ProdSG):

- Hersteller-Zertifizierungsvertrag: Manufacturer's certification contract:	FRM-90.46
Prüfgrundlagen: Test requirements:	DIN EN 13374:2019
- Fertigungsstätte(n): Factory location(s):	Sifatec GmbH & Co. KG

Einzelheiten, wie Prüfergebnisse und zugelassene Komponenten, sind in folgenden Dokumenten niedergelegt:
Details like test results and approved components are laid down in following documents:

Zertifizierungsakten-Nr(n).: Certification file no(s).:	20200186
- Prüfbericht(e)/Projektnummer(n) Test report(s)/project number(s):	PB 20-266 / 142059600

Das abgebildete GS-Zeichen darf vom Zertifikatsinhaber für die Dauer der Gültigkeit dieses Zertifikates und unter den Bedingungen des Zertifizierungsvertrages auf den in diesem Zertifikat beschriebenen Produkten angebracht werden.
Die Gültigkeit dieses Zertifikats kann jederzeit vorzeitig aufgehoben werden.
The shown GS mark may be applied by the licensee to products as specified in this certificate for the duration of this certificate and under the conditions of the certification contract. The validity of this certificate can be terminated prematurely at any time.

«remarks»

Das Zertifikat wurde ausgegeben am: This certificate was issued on:	11.12.2020
Es wird ungültig am: It expires at the latest on:	10.12.2025

Zertifikats-Nr.: ZP/B216/20-GS
Certificate no.: ZP/B216/20-GS

DEKRA Testing and Certification GmbH

Jörg-Timm Kilisch
Geschäftsführer
Managing Director

«Delegate publication of the certificate is shown»

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