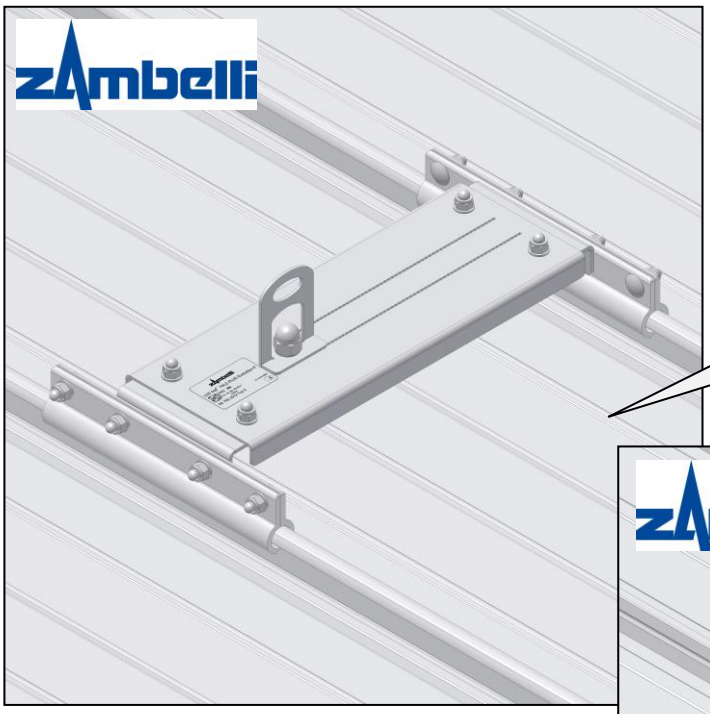
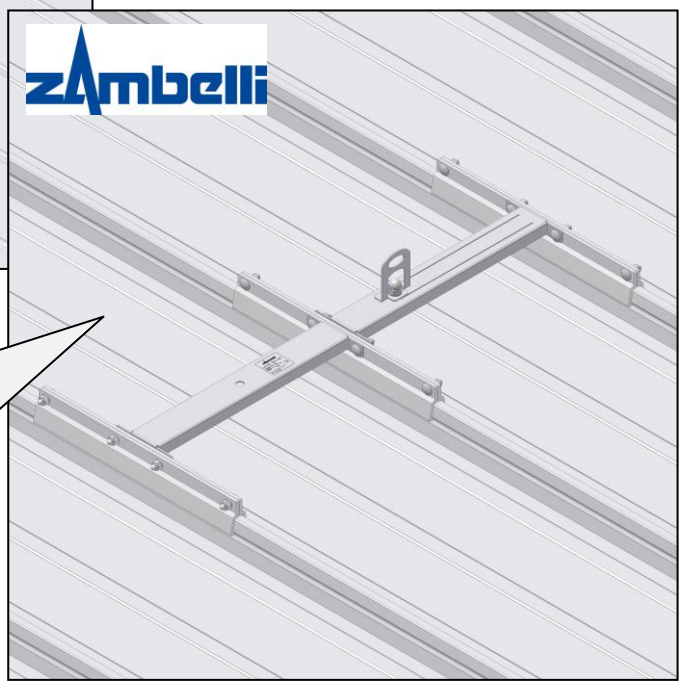
User instructions

Fall protection system for Sliding standing seam roofing Zambelli RIB-ROOF



LUX-top®
FALZ-PLUS
Evolution/-P
suitable for Zambelli RIB-ROOF Evolution metal roof systems



LUX-top®
GBD-Z 500
suitable for Zambelli RIB-ROOF SPEED 500 metal roof systems

LUX-top®
GBD-RR 465
suitable for Zambelli RIB-ROOF 465 metal roof systems

Tested by DIN EN 795:2012 Type A + DIN CEN/TS16415:2017 by DEKRA EXAM GmbH Certification body

with national technical approval Z-14.9-802, assigned by DIBt*

These user instructions are supplied with each LUX-top® GBD anchor device.
They must be read through carefully before use and must be kept accessible at all times, where possible near the equipment.

*excluding LUX-top® GBD-RR 465 (Certification in preparation)

Preface

The technical building regulations and the instructions given by the national technical approval Z-14.9-802 are to be observed.
This includes e.g. additional riveting of the fixed point clips which are in the range of the anchor points.
The substructure has to be checked for load-bearing capacity in front of the installation.
The installation of the fall protection systems is only allowed if the execution type of the Zambelli Sliding standing seam roofing which matches to the respective one which is mentioned by the general building approval.
The assembly guidelines of the roofing-manufacturer has to be observed.
E.g. it must not be possible that additional, unintended fixed points get created.
The installation has to be done my companies which have the necessary experience.

SAFETY INSTRUCTIONS:

- If using the anchor device as part of a fall arrest system, for safety reasons, before each use it is essential to ensure the necessary clear space below the user at the workplace, so that in case of a fall it is not possible for them to hit the ground or any other obstruction!

- In the event of a fall of one or more individuals secured on the **LUX-top® GBD** / **FALZ-PLUS Evolution/-P** anchor device the resulting deformation of the anchor device (up to 50 cm) must be taken into account in the arrest distance.

  The minimum clear space required below the system user is calculated from:

  Deformation of the anchor device (up to 50 cm)
  + fully open length of the energy absorber according to its instructions for use
  + elongation of the connection rope or cable due to extension
  + displacement of the full body harness on the body
  + height of the user
  + safety clearance of 1.0 m

- If there is insufficient clear space below the user, the anchor device may only be used with a restraint system and must be labelled accordingly. To this end, also note and follow the instructions for use for the other personal fall protection equipment (PFPE).

- In case of horizontal use, only use lanyards, which are suitable for this type of use and which are tested for the applicable loading and stressing due to the corresponding edge design.

- The anchor device may only be installed and used by trained persons, who are familiar with these user instructions and with handling PFPE against falls from a height and are physically and mentally suitable for the task. Health restrictions (e.g. cardiovascular problems, medication) can endanger the safety of the system user when working at heights.

- Use of the system for purposes other than those for which it is intended, e.g. by hanging undefined loads, is not allowed.

- The anchor device may only be used for attaching the PFPE (personal fall protection equipment) to EN 363, consisting, for example of a full body harness (EN 361), lanyard (EN 354) and energy absorber (EN 355).

- If the anchor device is used as part of a fall arrest system the user must be equipped with an energy absorber, which limits the maximum dynamic forces that act on the user during an arrest to 6 kN maximum.

- By combining individual elements of the named equipment, hazards can occur as the safety function of one of the elements can be impaired. Therefore, always ensure that the equipment parts put together to form a system are compatible with each other.

- The components of the personal protective equipment against falls from a height must be checked to ensure that they are in proper condition and that they comply with these user instructions.

- The attachment to the **LUX-top®** system is made by means of a connector (spring hook/carabiner) of the PFPE, according to its instructions for use.

- The user must visually inspect the anchor device before each use to ensure its proper functional and maintained condition.

- The relevant national regulations and the health & safety regulations (in Germany the accident prevention regulations of the trade associations responsible for industrial safety) and any other relevant regulations must be complied with when using the **LUX-top®** system. For Germany this includes, among other things:

TRBS 2121 "Technische Regeln für Betriebssicherheit - Gefährdung von Personen durch Absturz" / **Technical rules for health & safety at work - risk to people due to falling**

DIN 4426 "Sicherheitstechnische Anforderungen an Arbeitsplätze + Verkehrswege" / **Safety requirements for workplaces and transport routes**

DIN 363 "Persönliche Absturzschutzausrüstung – Persönliche Absturzschutzsysteme" / **Personal fall protection equipment - Personal fall protection systems**

BGV C22 "Bauarbeiten" / **Construction work**

BGR 198 "Einsatz von persönlicher Schutzausrüstung gegen Absturz" / **Use of personal protective equipment against falls from a height**

BGR 203 "Dacharbeiten" **/ Roof work**

BGI 5164 "Planungsgrundlagen von Anschlageinrichtungen auf Dächern"/ **Planning principles for anchor devices on roofs**

ASR A2.1 "Technische Regel für Arbeitsstätten - Schutz vor Absturz und herabfallenden Gegenständen, Betreten von Gefahrenbereichen"/ **Technical Rules for workplaces…**

- Ensure safe, stable position during use of the anchor devices!

- A plan must exist, which takes into account the rescue measures for all possible emergency incidents that can occur.

- Should any doubt occur regarding safety condition (e.g. severe corrosion, lightning strikes) or following a fall of one or more individuals secured on the **LUX-top®** anchor point the system must be withdrawn from further use and inspected by a competent person.

- After a fall of a person secured to the **LUX-top®** anchor point the stability of the surface/substrate must be checked on site before re-installing a new anchor device.

- The lanyard must always be set as short as possible, even when fall arrest systems are used, in order to reduce any free-fall height in case of a fall to a minimum. It is essential for safety that the position of the anchor device and the plan of work are chosen so that the free fall and the fall height are limited to a minimum.

  Ideally, a fall over the edge should be completely prevented by appropriate use of the PFPE.

- Position the anchor device on the building so that in case of a fall over the roof edge, the maximum possible fall factor is 1.

- Please note that failing to follow these user instructions, and if the documentation is incomplete, all claims for compensation are excluded.

- The manufacturer must be contacted in case of any uncertainty during installation or use of the system!

- A standard operating procedure with information on the location and use of the anchor devices should be attached at the access to the safety system (e.g. roof hatch).

General system description:

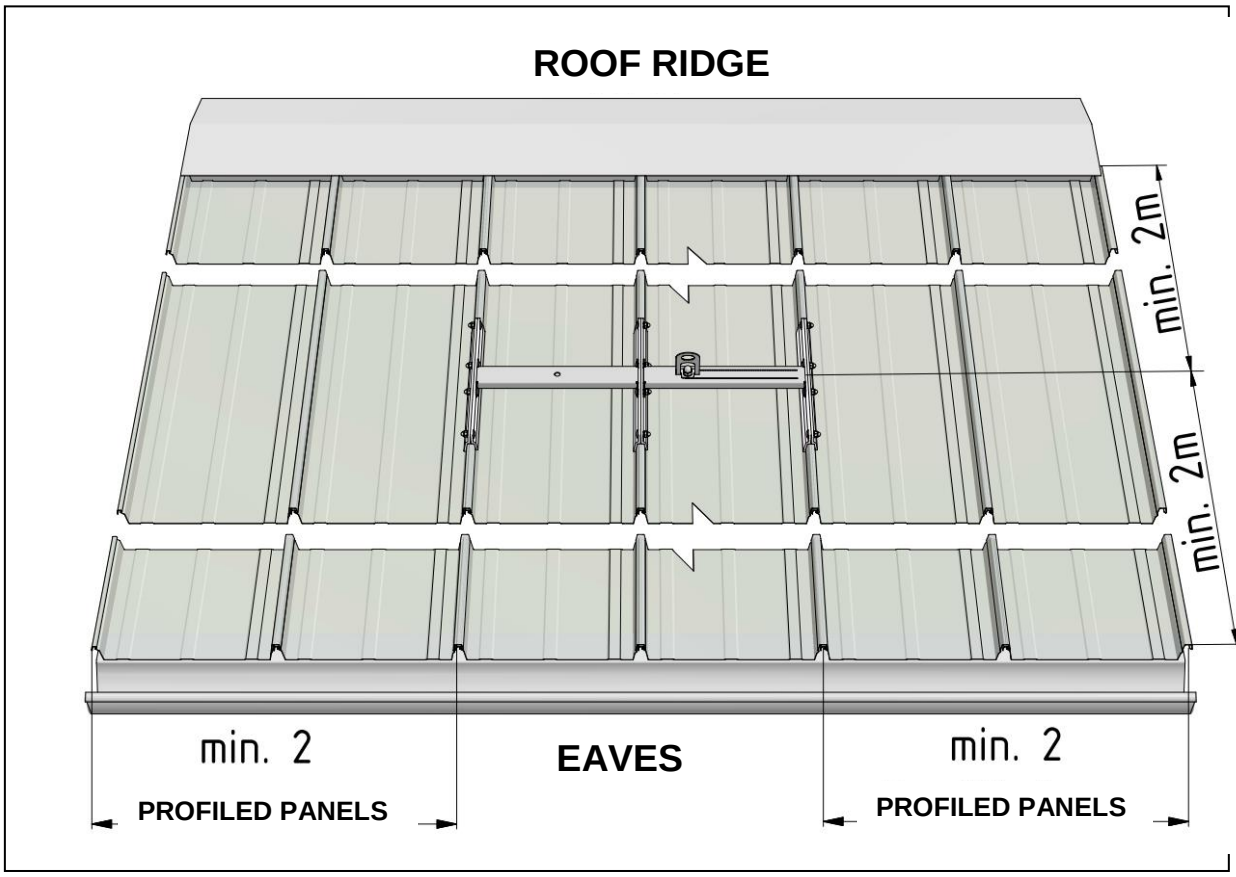
LUX-top® GBD / FALZ-PLUS Evolution (-P) are anchor points according to DIN EN 795:2012 Type A + DIN CEN/TS16415:2017. Their intended use is to attach the PFPE during works in danger zones as well as to install **LUX-top® FSE 2003** rope systems according to DIN EN 795:2012 - Type C.

CONCERNING THE EXACT APPLICATION FIELDS PLEASE REFER TO TABLE 2 AND THE IMAGES 2-4 WHICH ARE GIVEN ON PAGE 8-10!

The anchor device **LUX-top® GBD / FALZ-PLUS Evolution (-P)** consists of following components:

- **LUX-top® GBD / FALZ-PLUS Evolution (-P)** complete anchor point with anchor eye or rather rope guidance, clamping rails and fixing material
- Manual
- Installation instruction

Installation spaces (Image 1):



The distances to the roof edges are to be selected by national regulations and in dependence to the roof geometry.
The correct selection and the arrangement of the anchor device which shall rest permanently on the roof top has to be chosen in dependence of art and method and under consideration of special features on the roof top.
Information to the recommended execution and the positioning of anchor points on the roof top are given by DGUV I 201-056 „Planungsgrundlagen von Anschlageinrichtungen auf Dächern", which has been coordinated by the international task force D-A-C-H-S.
You can find a free download of an appropriate brochure on our website: www.lux-top-absturzsicherungen.de
National regulations stay unaffected from these recommendations. As far as these proposals will differ from national law, the user of this recommendation takes the whole risk in the scope of the deviation.

Allowable distances between anchor points in the LUX-top® GBD, or rather Evolution/-P systems	
As pure, individual anchor points	Maximum 3.0 m*
With temporary horizontal anchor devices	Maximum 7.5 m
With **LUX-top® FSE 2003** stainless steel rope systems	Maximum 7.5 m
If you are at all uncertain, please contact the manufacturer	

**Results from the edge fall problem of connectors for horizontal use.*
Directly at the fall edge, work to the side of the anchor point should be limited to max. 1.5 m distance from the anchor point!

Important installation hints:

- The **LUX-top® GBD** may only be installed by qualified installation personnel using the clamping-rails fixings supplied by the manufacturer and according to the installation instructions! The installation must be checked appropriately!

- The industrially prefabricated profiles must be machined according to the respective manufacturer's specifications. Their installation guidelines are prerequisite and binding for installation of the **LUX-top® GBD** fall protection devices.

- The anchor points must be installed on a surface/substrate with sufficient load bearing capacity in accordance with the manufacturer's specifications. Always ensure compliance with the minimum component dimensions and distances from edges given in the installation instructions!

- The overall construction must be checked on site to ensure it can absorb the transferred forces!

- The installers must ensure that the surface is suitable for fixing the anchor device.

- The anchor points may only be fixed on the fixing substrates named in table 1 with corresponding material thickness.

- All connections of the anchor device must be properly and conscientiously installed and checked according to the manufacturer's specifications. This must be confirmed by the responsible fitter in the installation documentation form attached to these user instructions.

- The installation documentation form must be filled in full following installation and handed over to the building owner/user or kept in a protected place with the parts of the equipment that are not permanently installed.

- Additionally, we recommend a proper documentation of the installation with pictures and with other important installation data. We recommend that you use our documentation app for this, available at www.quick-doku.eu
  Additional information to installation documentations are provided in EN 795:2012 (Annex A).

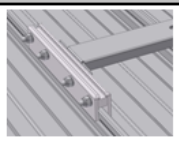
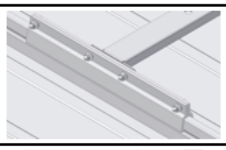
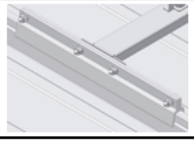
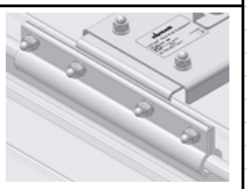
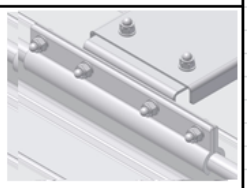
- The installation documents verify to the user that the installation has been carried out properly and provide the basis for subsequent inspections of the anchor device. Therefore, a copy should be kept in the building.

- You must comply with the relevant national regulations and the accident prevention regulations during installation of the anchor device.

- The installers must take measures so that neither components of the anchor device nor tools can fall from the work area.

- In case of sloped surfaces and roofs, snow guards must be installed to prevent loading of the **LUX-top® GBD** system with snow load.

General data to suitable fixing surfaces (Table 1)

LUX-top® product	Roofing system	material	min. material thickness	Clamping rail
LUX-top® GBD-RR 465	ZAMBELLI RIB-ROOF 465 and DOMICO GBS-roof	aluminium *	0,7 mm	
		steel *	0,63 mm	
LUX-top® GBD-Z 500	ZAMBELLI RIB-ROOF Speed 500	aluminium	0,7 mm	
		steel	0,63 mm	
LUX-top® GBD-Z 500 intermediate point aluminium		aluminium	0,7 mm	
LUX-top® GBD-Z 500 intermediate point steel		steel	0,63 mm	
LUX-top® FALZ-PLUS EVOLUTION - P	ZAMBELLI RIB-ROOF Evolution	aluminium	0,7 mm	
		steel	0,63 mm	
LUX-top® FALZ-PLUS EVOLUTION		aluminium	0,7 mm	
		steel	0,63 mm	

* not included in the national technical approval

Information on permissible use cases + maximum number of users (Table 2)

	Useable with /as	Stainless steel rope system LUX-top® FSE 2003 Beginning-/ End-/Cornerpoint	Intermediate point		Temporary rope system*		Single anchor point	
Anchor point type	LUX-top® GBD-RR 465	✓	✓	max. 3 persons in the whole system	✓	Reffered to the user manual, but max. 3 persons	✓	max. 3 persons
	LUX-top® GBD-Z 500	✓	✓		✓		✓	
	LUX-top® FALZ-PLUS EVOLUTION - P	✓	✓		✓		✓	
	LUX-top® GBD-Z 500 Zwischenpunkt Alu	-	✓		-		-	
	LUX-top® GBD-Z 500 Zwischenpunkt Stahl	-	✓		-		-	
	LUX-top® FALZ-PLUS EVOLUTION	-	✓		-		-	

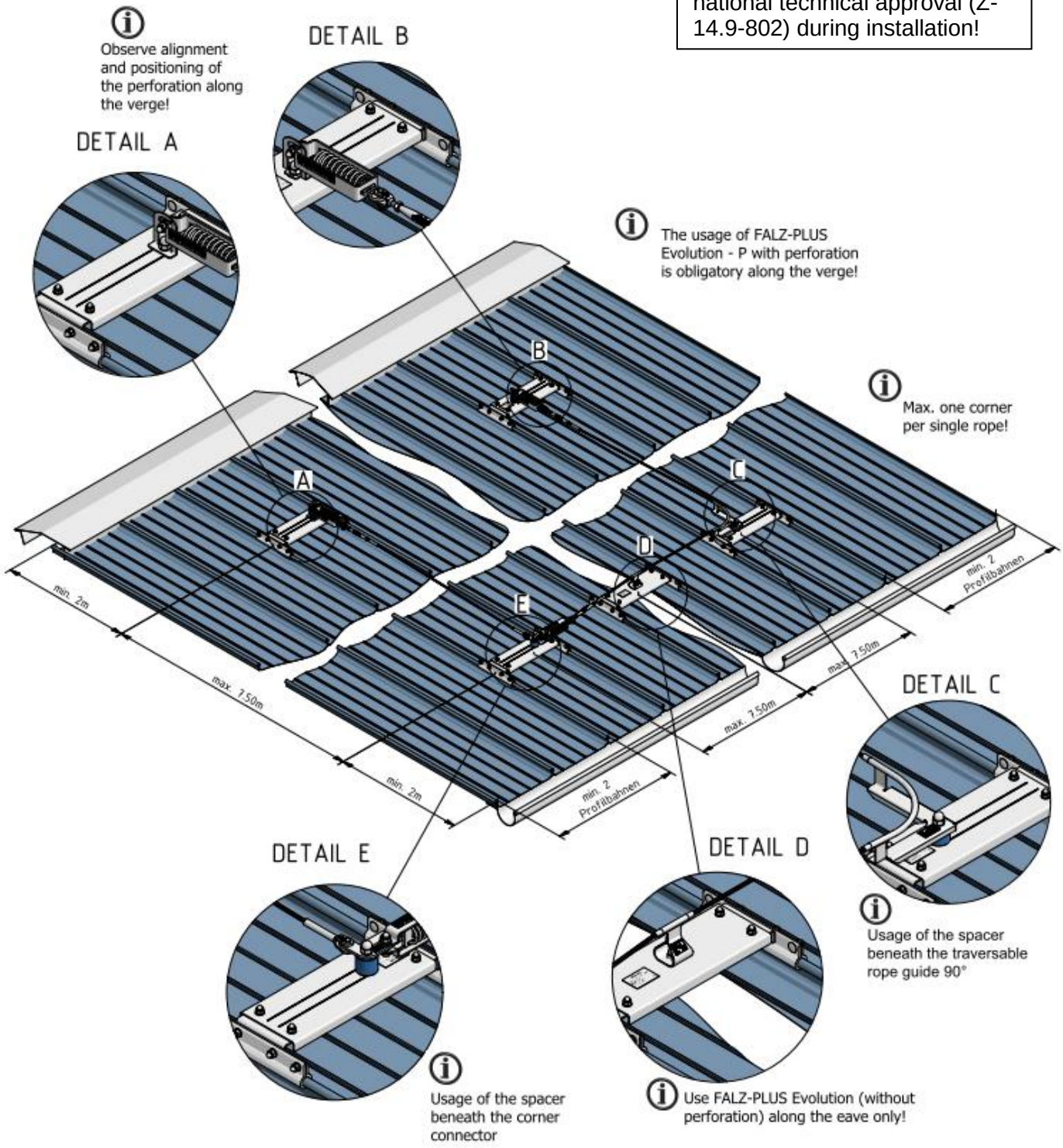
✓ = allowed

* Observe the manual of the temporary rope system!

Hint: An anchor point which has been bended due to a fall of heights can generally be used for the rescue of a dropped person.

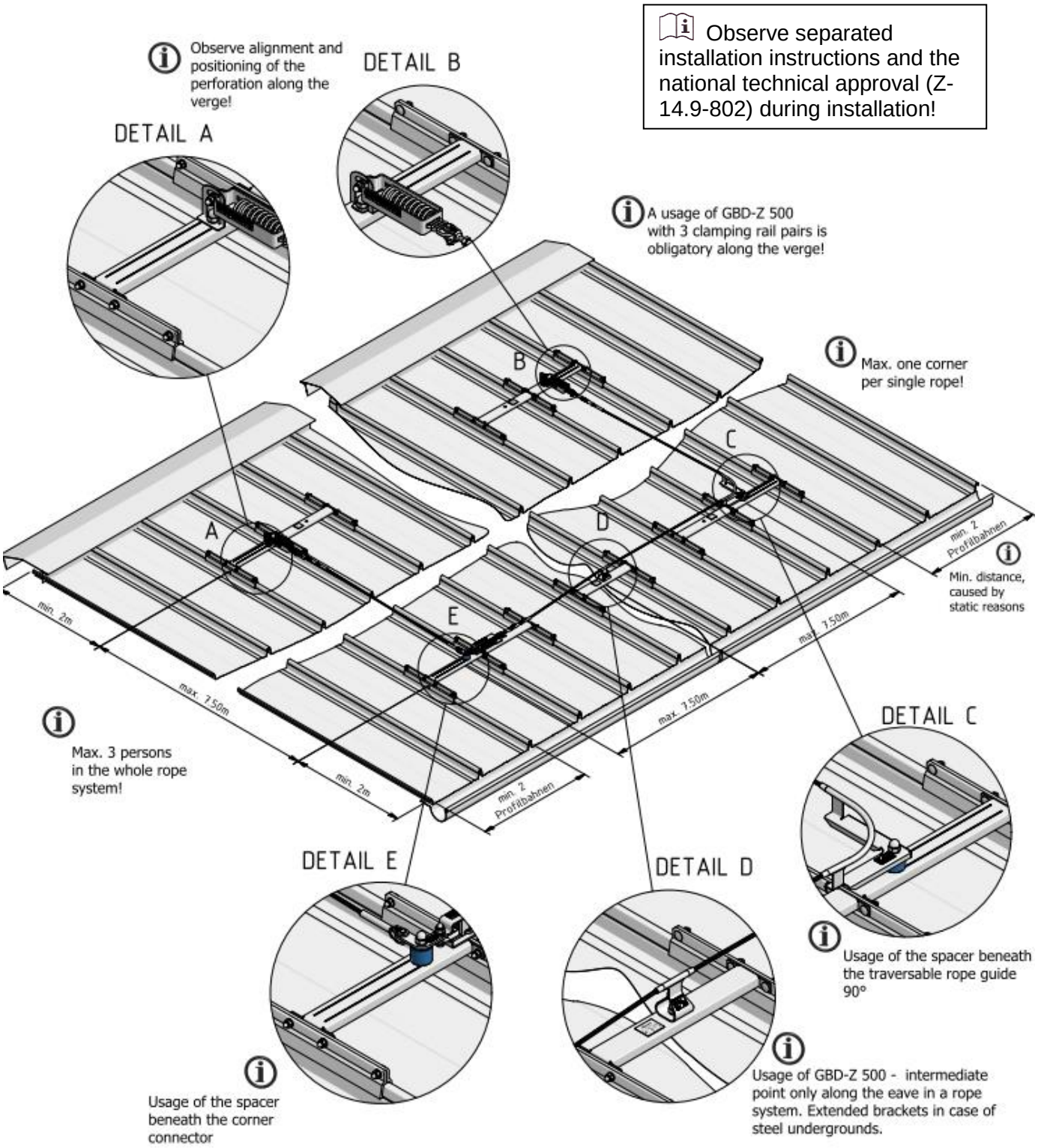
LUX-top® FALZ-PLUS Evolution/-P – Important Information at one glance (Image 2):

Observe separated installation instructions and the national technical approval (Z-14.9-802) during installation!



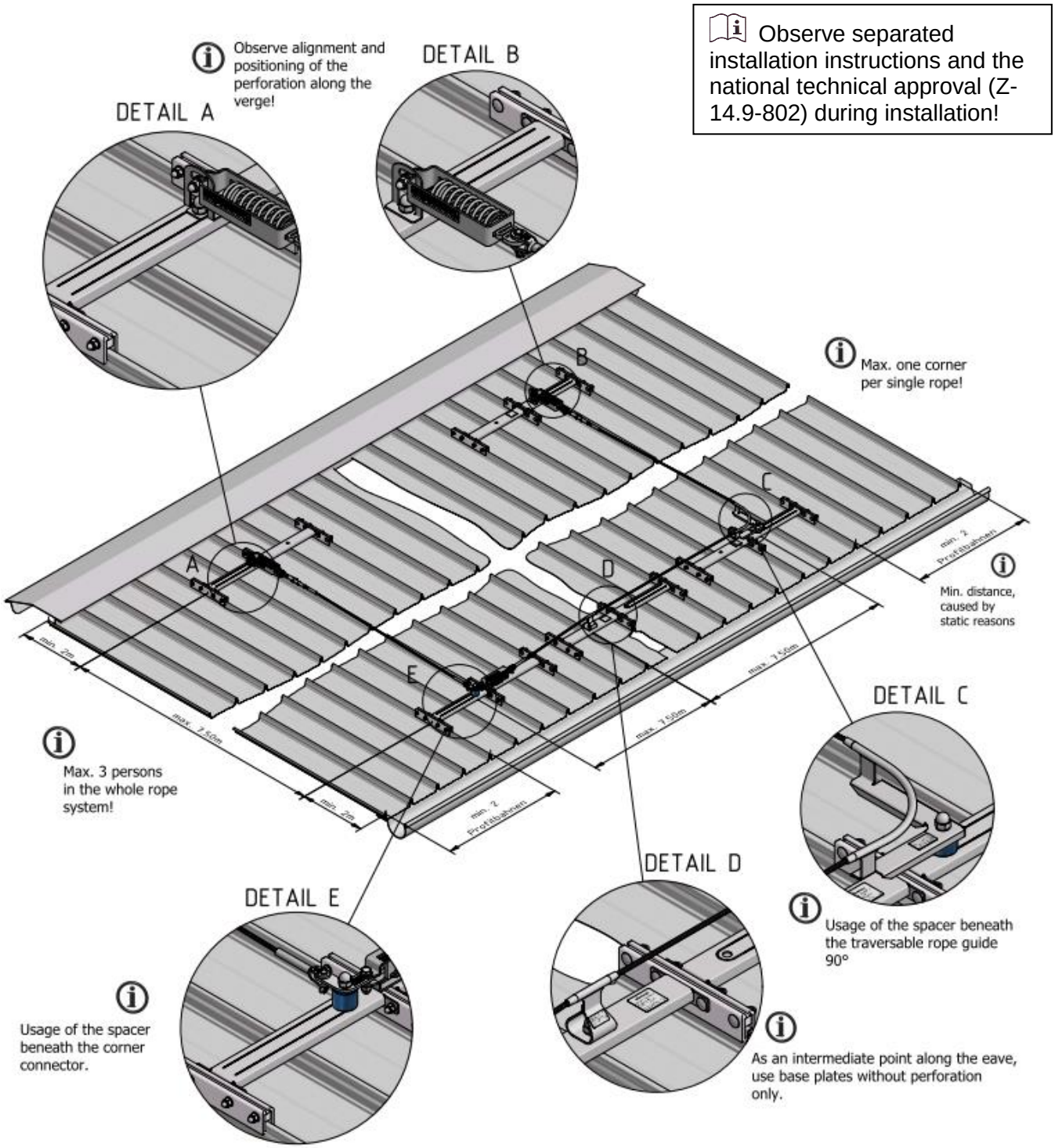
Key: Profilbahnen = profiled panels

LUX-top® GBD-Z 500 - Important Information at one glance (Image 3):



Key: Profilbahnen = profiled panels

LUX-top® GBD-RR 465 - Important Information at one glance (Image 4):



Key: Profilbahnen = profiled panels

Application / Product suitability / Rated value:

The installation can be done on surfaces given on table 1 and the respective installation instructions.

The anchor devices are not suitable for overhead-, ceiling-, and wall installations and may only be applied on described surfaces, if, in event of a fall, the force application occurs parallelly or differs max. 10% of that.

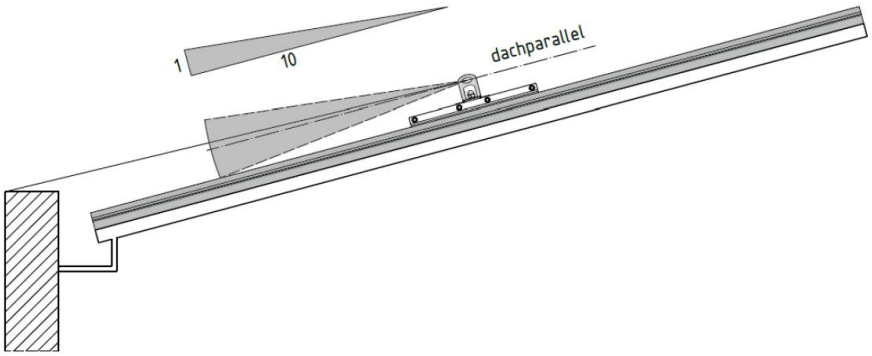


Image 5: Illustration of force application

Key: dachparallel = roof parallel

The design value $F_{e,d}$ [kN] for the effect on the substructure in the event of a fall when used in accordance with regulations is max. 9kN.
(Details can be found at Z-14.9-802).

LUX-top® GBD / FALZ-PLUS Evolution (-P) can be used in following fall protection systems by EN 363:2008:

- Restraint system
- Work positioning system
  (! Only holding function or rather leaning function! No rope supported access technique !)
- Fall arrest system
- Rescue system

The respective user instructions of the other PFPE and abseiling (descent) and rescue equipment used must also be noted and followed!

LUX-top® GBD / FALZ-PLUS Evolution (-P) is not suitable as an anchor point for load-bearing systems for rope-assisted access techniques (descent work, etc.)!

Maintenance, care and testing:

Before each use the anchor devices must be checked for secure fit and intactness. Loose, deformed or otherwise damaged anchor devices must be fixed or replaced.
If the fall protection system is damaged or used in a fall it may no longer be used. In these cases the anchor device and the anchoring on the structure must be inspected by a competent person and if necessary dismantled and completely replaced.

The owner/building operator is obliged to ensure that the anchor device is in proper condition at all times. It is therefore recommended that the anchor device be inspected by a competent person precisely following the manufacturer's user instructions as and when needed, however, every 12 months at least (e.g. as part of the general roof maintenance).

This inspection is essential, as the safety of the user depends on the effectiveness and durability of the anchor device.

The inspection should be arranged by the owner.

An inspection log card is included in the appendix to these user instructions, on which the inspection by the competent person can be documented.

The checklist also given in the appendix can be used as an aid.

The date of the next scheduled inspection should be entered on the inspection log card.

Prevent contact between the stainless steel anchor device and "black" steel (including in the form of grinding dust), as well as chemicals and other aggressive substances.

The **LUX-top® GBD / FALZ-PLUS Evolution (-P)** anchor device is permanently weather-resistant.
Depending on the use conditions, the anchor device must be cleaned occasionally with hot water.

Never use aggressive cleaning products or chemicals!

Miscellaneous:

Changes or additions may only be made with the prior written consent of the manufacturer. Equally, all repairs may only be carried out in agreement with the manufacturer. If sold on to another country, to ensure the safety of the user the instructions for use, maintenance, the regular checks and repairs must be available in the respective language.

LUX-top® GBD / FALZ-PLUS Evolution (-P)

STANDARDS

The **LUX-top® GBD / FALZ-PLUS Evolution (-P)** has been tested and certified to EN 795:2012 Type A + CEN/TS16415:2013

SYMBOLS AND MARKINGS

A label must be attached and must contain the following information:

- Type designation: **LUX-top® GBD / FALZ-PLUS Evolution (-P)**
- Number of the relevant standard: **DIN EN 795:2012 Type A + CEN/TS16415:2013**
- Name or logo of the producer
- Manufacturer's serial number / year made: **XX/20XX**
- Max. allowable number of persons: MAX
- Übereinstimmungszeichen / Ü-Zeichen:
- Symbol indicating that the user instructions must be noted and followed:

The legibility of this product labelling must be checked following installation and during the recommended annual inspection!

If the label is no longer accessible following installation, it is advisable to attach additional labelling near the anchor device!

Manufacturer: ST Quadrat S.A.
11, rue Flaxweiler
L-6776 Grevenmacher/Potaschberg
Luxembourg

Certification body used for the type test:
DEKRA EXAM GmbH Zertifizierungsstelle - Dinnendahlstraße 9, D – 44809 Bochum

Installation documentation for **LUX-top®** anchor devices

Object data

Building / Construction project

Street / Zip Code / City

Installation company

Company

Street / Zip Code / City

Contact person

Installer

Details for the anchor point and fixing surface

Type/Model/ Overall height

Production year/Serial No.

No. on site sketch

Fixing surface/Construction material

Structural member/Element dimensions

Date of completion

Roof layout/Site sketch (use additional sheet if necessary)

Confirmations by the installation company

☐ **The installation of the LUX-top® Anchor device has been installed by a qualified installer by the rules of Company ST QUADRAT Fall Protection S.A. and in case of an installation in Germany by the rules of the national technical approval Z-14.9-802 and if necessary Z-14.9-789.**

☐ **The fixings used have been installed in accordance with the relevant manufacturer`s guidelines (proper cleaning of the drillholes, distances from the edges, checking the substrate, etc.)**

☐ **The layout and instructions for use as well as the technical documentation have been handed over to the customer and are to be made available to the user.**

(City, Date) **(Stamp, Signature)**

This documentation must be handed over to the building owner.
A detailed installation documentation with pictures can be generated on the website www.quick-doku.eu

This list is available as a download: www.lux-top-absturzsicherungen.de

CHECKLIST

for regular inspection of LUX-top® Anchor devices by a competent expert.

LUX-top® Anchor points

1 Corrosion

Is any corrosion visible? (Bolt, foot plate, anchor eye…)	☐ Yes, at following locations: …… ☐ no
Is there any reasons for corrosion visible? (e.g. chimney etc.)	☐ yes, …… ☐ no
Is the load-bearing capacity of the anchor device limited?	☐ yes ☐ No
Is the fixing accessible for examination?	☐ yes ☐ no
If yes, has the fixing been carried out completely and correctly? (if applicable, check tightening torque!)	☐ yes ☐ no

2 Dirt / soiling

Is there any component polluted? (e.g. bird dropping mosses, algae)	☐ Yes, at following locations: …… ☐ no
Does the pollution have an impact on the functionality?	☐ yes, …… ☐ no
Is there any possibility to prevent pollution in the future?	☐ yes, …… ☐ no

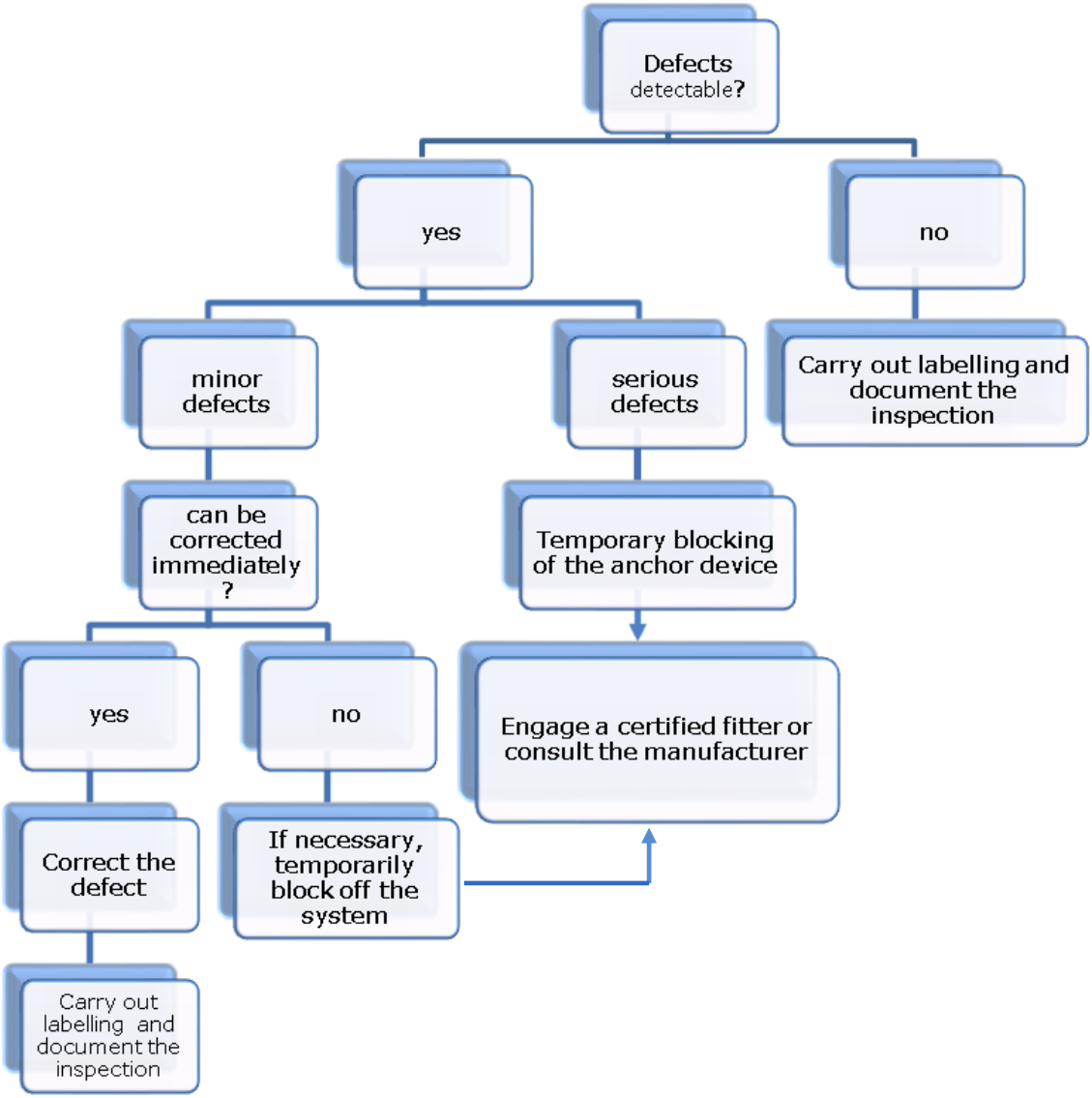
3 Appearance

Are the anchor points visibly deformed? (e.g. due to fall load)	☐ Yes, at following locations: ……..…… ☐ no
On slope roofs: Is there any identifiable damage due to snow loads?	☐ yes, ……..…… ☐ no
Is there any identifiable damage due to lightning strikes?	☐ yes ☐ no
Are there any signs of external effects or tampering?	☐ yes, …… ☐ no
Is the labelling attached and readable?	☐ yes ☐ no
Are all the components of the anchor point still Installed in accordance with the installation instructions and parts list? (e.g. anchor eye, safety lock washer, lock nut)	☐ yes ☐ No, following pieces are missing:
Is the anchor eye secured against turning?	☐ yes ☐ no

4 Documentation

Are the user instructions available?	☐ yes ☐ no
Is the installation documentation available and correctly filled out?	☐ yes ☐ no, ……..……
Is the fixing documentation available (if applicable with photos)? Refer to EN 795:2012 (Annex A).	☐ yes ☐ no, ……..……

5 Evaluation of the inspection



Please contact the manufacturer if you are at all unclear or have any questions.

Inspection log card / Log book

Anchor device for personal fall protection equipment

LUX-top®

Hersteller: www.lux-top-absturzsicherungen.de

Type/Model	**LUX top® GBD / FALZ-PLUS Evolution**	**STANDARD: DIN EN 795 Type A + CEN/TS16415**
Serial number + Manufacturing year		
Installation date		
Date of initial putting into service		
Project / property name		
Address of the building owner (user) / customer		

Regular system check, inspection and repair

Date	Reason for entry (regular inspection or repairs)	Damages + defects found (Description / Actions etc.)	Product released for safe use (yes/no)	name + signature of the competent person	Date of the next inspection

Sketches, information, notes: