



Instructions for installation and use  
Read product description carefully



# GREEN

## INTERNATIONAL



GREEN OF B

ENGLISH

DE ACHTUNG

Die Montage und die Verwendung der Sicherungseinrichtung ist erst zulässig, nachdem der Monteur und der Anwender die Original Aufbau- und Verwendungsanleitung in der jeweiligen Landessprache gelesen hat.

EN ATTENTION

Assembling and using of the safety product is only allowed after the assembler and user read the original installation and application instruction in his national language.

FR ATTENTION

Le montage et l'utilisation du dispositif de sécurité ne sont autorisés qu'après lecture par le monteur et par l'utilisateur de la notice d'origine de montage et d'utilisation dans la langue du pays concerné.

IT ATTENZIONE

Il montaggio e l'uso del dispositivo di sicurezza è ammesso soltanto dopo che il montatore e l'utente hanno letto le istruzioni per l'installazione e l'uso nella rispettiva lingua nazionale.

ES ATENCIÓN

No está permitido montar ni usar el dispositivo de protección antes de que el montador y el usuario hayan leído las instrucciones de montaje y uso originales en la lengua del respectivo país.

PT ATENÇÃO

A montagem e o emprego do mecanismo de proteção somente serão permitidos, após o montador e o usuário terem lido as instruções de uso originais, no respectivo idioma do país, sobre a montagem e o emprego do mesmo.

NL ATTENTIE

De montage en het gebruik van de veiligheidsinrichting is pas toegestaan, nadat de monteur en de gebruiker de originele montage en gebruikershandleiding in de desbetreffende taal gelezen hebben.

HU FIGYELEM

A biztonsági berendezés felszerelése és használata csak az után megengedett, miután a szerelést végző és a használó személyek a nemzeti nyelvükre lefordított, eredeti használati utasítást elolvasták és megértették.

SL POZOR

Montaža in uporaba varnostnih naprav je dovoljena šele takrat, ko sta monter in uporabnik prebrala originalna navodila za montažo in uporabo v konkretnem jeziku.

CZ POZOR

Montáž a používání zabezpečovacího zařízení jsou povoleny až poté, co si pracovníci provádějící montáž a uživatelé přečetli v příslušném jazyce originální návod k montáži a používání.

TR DİKKAT

Güvenlik tertibatının montajına ve kullanımına, ancak montaj teknisyeni ve kullanıcı, orijinal kurulum ve kullanma talimatını kendi ülke dilinde okuduktan sonra, izin verilir.

NO OBS

Monteringen og anvendelsen av sikkerhetsinnretningene er gyldige først etter at montøren og brukeren har lest den originale oppbygnings- og bruksanvisningen i det tilsvarende landets språk.

SV OBS

Säkerhetsanordningen får inte monteras och användas förrän montören och användaren har läst igenom konstruktionsbeskrivningen och bruksanvisningen i original på resp lands språk.

FI HUOMIO

Turvalaitteiden asennus ja käyttö on sallittu vasta, kun asentaja ja käyttäjä ovat lukeneet alkuperäisen asennus- ja käyttöohjeen omalla kielellään.

DA GIV AGT

Montagen og brugen af sikkerhedsudstyret er først tilladt, efter at montøren og brugeren har læst den originale vejledning i samling og brug på det pågældende lands sprog.



PROJECT DATA

SYSTEM DESCRIPTION

INSTALLATION FIRM

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## 1. General safety instructions

- The attachment to the GREEN anchorage device must always be performed using a carabiner to the anchorage eye and must be done with a harness in accordance with EN 361 and a force-absorbing fall absorber with lanyard (EN 355 and EN 354).
- Attention: For horizontal application, only fasteners suited for this purpose and for the corresponding edge designs (sharp edges, trapezoid sheet, steel beam, concrete, etc.) may be used.
- The combination of individual elements of the equipment referred to can cause risks, because the safe functioning of an element can be impaired. (Note the respective operating instructions!)
- The entire safety system must be checked before use for obvious defects by visual inspection (e.g. loose screw connections, deformations, abrasion, corrosion, defective roof sealing, etc.).
- If there are doubts as to the safety of the security system, it must be inspected by an expert (written documentation).
- The entire safety product must at least once be subjected to an annual inspection by an expert. The inspection by an expert must be documented on the provided control sheet.
- After a fall event, the further use of the entire system is to be avoided and must be checked by an expert (component parts, fastening to the ground, etc.).
- The GREEN anchorage devices were developed for personal safety and may not be used for other purposes. Never attach undefined loads to the restraint systems.
- Do not make any changes to the approved anchorage devices.
- For sloping roofs, roof avalanches (ice, snow) must be prevented by suitable devices to intercept snow.
- If you provide the safety system to external contractors, the instructions for assembly and use are to be provided in writing.
- The GREEN OF B anchorage device may only be installed by persons with proper knowledge of the roof safety system.
- The system may only be installed or used by persons who are familiar with these operating instructions, as well as with the local safety regulations, are physically or mentally healthy and trained on PPE (personal protective equipment).
- Health restrictions (cardiac and circulatory problems, medication intake, alcohol) can affect the safety of the user when working at height.
- The respective accident prevention regulations (e.g.: work on roofs) must be observed during assembly / use of the GREEN "OF B" anchorage device.
- There must be a plan covering rescue measures in all possible emergencies.
- Before commencing work, measures must be taken to ensure that no objects can fall down from the workstation. The area under the workstation (footpath, etc.) is to be kept free.
- The anchorage device on the roof is designed for loading in all directions parallel to the mounting surface or perpendicular to the supports.
- If any uncertainties occur during assembly, please contact the manufacturer.
- The sealing of the roofing has to be carried out according to the relevant guidelines.
- The proper fastening of the safety system on the structure must be documented in logs and by photos of the respective installation situation.
- Stainless steel must not come into contact with grinding dust or steel tools. This can lead to corrosion.
- All stainless steel bolts must be greased with a suitable lubricant before assembly.
- The anchorage point should be planned, installed and used so that falling over the edge is not possible with appropriate use of personal protective equipment.
- When accessing the roof securing system, the positions of the anchorage devices (e.g.: sketch of roof top view) are to be documented in design plans.

- The minimum clearance from the falling edge to the ground is calculated as:
  - Manufacturer specification of the personal protective equipment to be used, incl. rope deflection
  - + body size
  - + 1 m safety margin.
- Attention: Snow clearance at the facility required due to snow pressure load
- Installation and use of the anchorage system are only permitted after the fitter has read the installation instructions and the users have read the safety instructions in the respective language.
- Users of the anchorage device must read the generally applicable brochure "Safety information for GRÜN anchorage systems" carefully before using the anchorage system

## 2. Technical specifications

Standards/certifications of the anchorage system:

DIN EN 795:2012 Type A for 1 person

CEN/TS 16415:2013 for 4 persons

DIBt approval Z-14.9-725

Anchorage system "GREEN OF-B":

Installation height: 200 mm to 1,000 mm

Material: Stainless steel A2

Mounting surface:

- Concrete quality min. C20/25 DIN EN 206-1 cracked and non-cracked

- Concrete thickness min. 160 mm

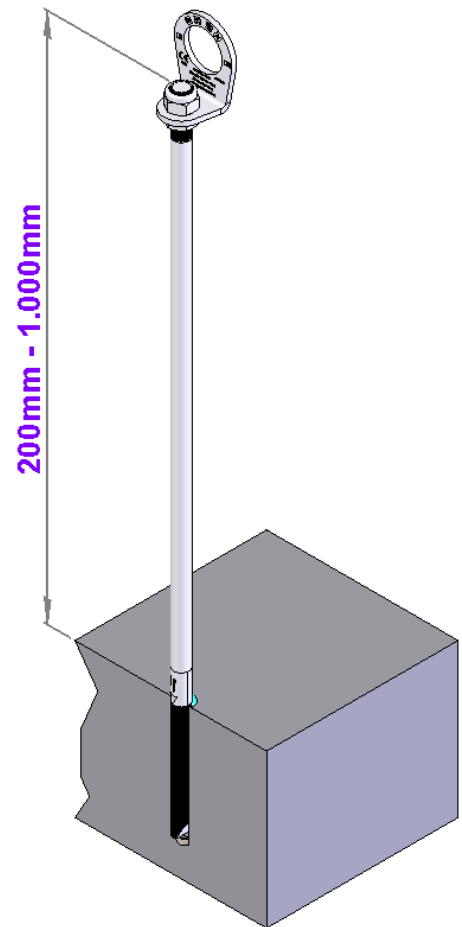
Load capacity of the anchorage device:

max. 4 users per anchorage device

GREEN OF B has been tested and certified according to EN

795:2012- Class: A The test was performed statically and dynamically on the original mounting surface.

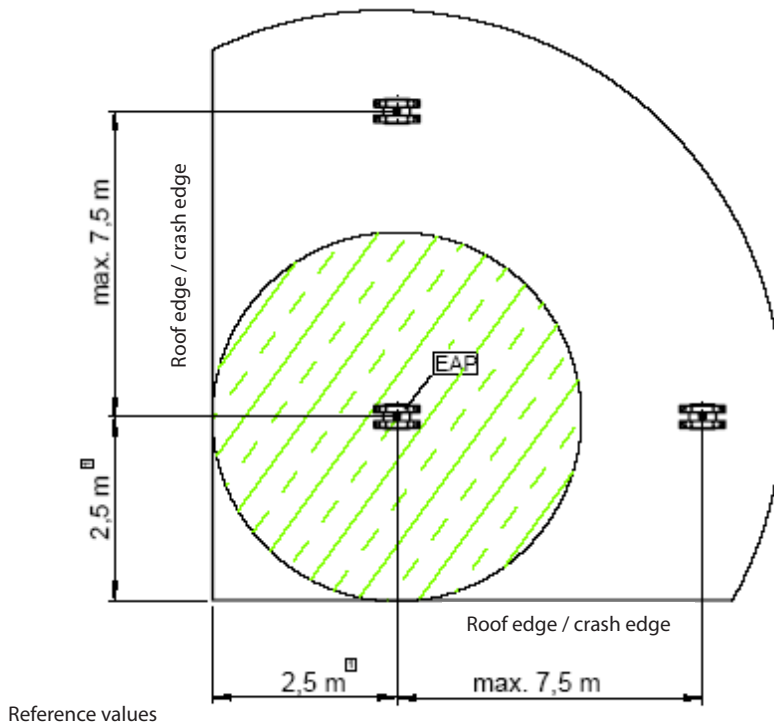
GREEN OF B is suitable as a substructure for the fastening of components of a horizontal



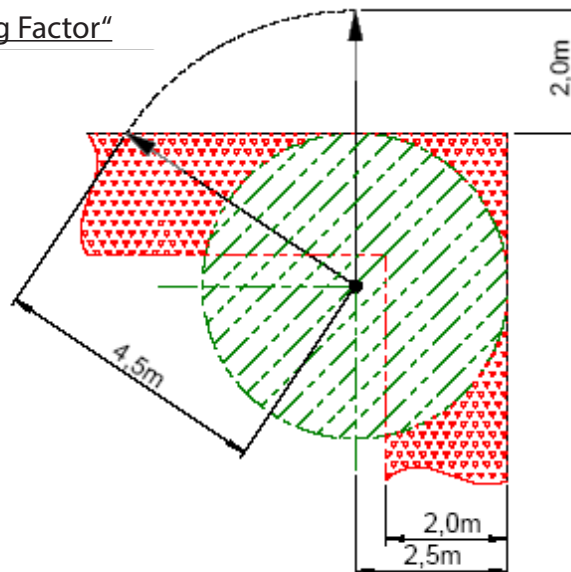
### 3. Assembly and installation of the anchorage device

The construction and installation applies to every installation height for the anchorage system. The "GREEN OF B" anchorage system should be installed at a recommended minimum distance of 2.5 m from the roof edge/falling edge. The basic prerequisite is a statically stable substructure, and compliance with the installation instructions and the safety instructions. If there are doubts about the subsurface consistency, a structural engineer should be consulted. Each single attachment point must be positioned in such a way that the maximum fall factor 1 (= max. 2 m) occurs in the event of a fall over the fall edge. --> see "camber factor" sketch.

Position plan „roof“



Plan „Falling Factor“



## 4. Installation variants: Mortar with concrete

GREEN OF B 500:

Item no. 4615 00 00  
Mortar with concrete without base plate

Fixing material – order separately:

1 cartridge of injectable mortar:

Item no. 4790 50 02  
Fischer Superbond "FIS SB 390-S" (180 scale units)

Recommended tools:

Hammer drill  $\varnothing$  18 x 200 (e.g. Hilti TE-TX 18/32)

Item no. 9961 00 18

Fischer dispensing gun "FIS DM S"

Hand air blower and brush  $\varnothing$  18

Item no. 4790 50 01

Fasteners:

Injectable mortar Fischer "FIS SB 390- S", thread penetration depth in concrete min. 120 mm, concrete quality min. C20/25, component thickness min. 160 mm, distance from concrete edge min. 300 mm (follow the mortar manufacturer's original instructions!) Only fixing material supplied by GRÜN GmbH may be used. Items may not be exchanged. The concrete strength of the anchor base must be determined before installation.

### 4.1. Installation instructions: Mortar in concrete ("Installation sketch 1")

The original Fischer "FIS-SB" operating instructions must always be observed when attaching to the subsurface!

- Determine the position of the anchorage device on the subsurface.
- The "GREEN OF B" anchorage device is anchored with injectable mortar. The required minimum drill hole depth is 125 mm.
- For this, drill 1 hole at right angles to the surface of the anchor base with a hardmetal hammer drill (with a nominal diameter of 18 mm) – blow out drill hole 2x with hand blower and clean 2x with brush  $\varnothing$ 20 mm, and blow out again with hand blower 2x.
- Fill the cleaned borehole with mortar from the bottom of the borehole upwards with bubble-free mortar (9 units).
- Immediately insert the longer threaded side of the "OF-B" anchorage device into the drilled hole filled with mortar up to at least the setting mark: "Installation depth" (120 mm) with a slight twisting motion. Mortar must leak from the edge of the borehole when the setting mark is reached. – Then allow the mortar to harden according to the manufacturer's instructions!

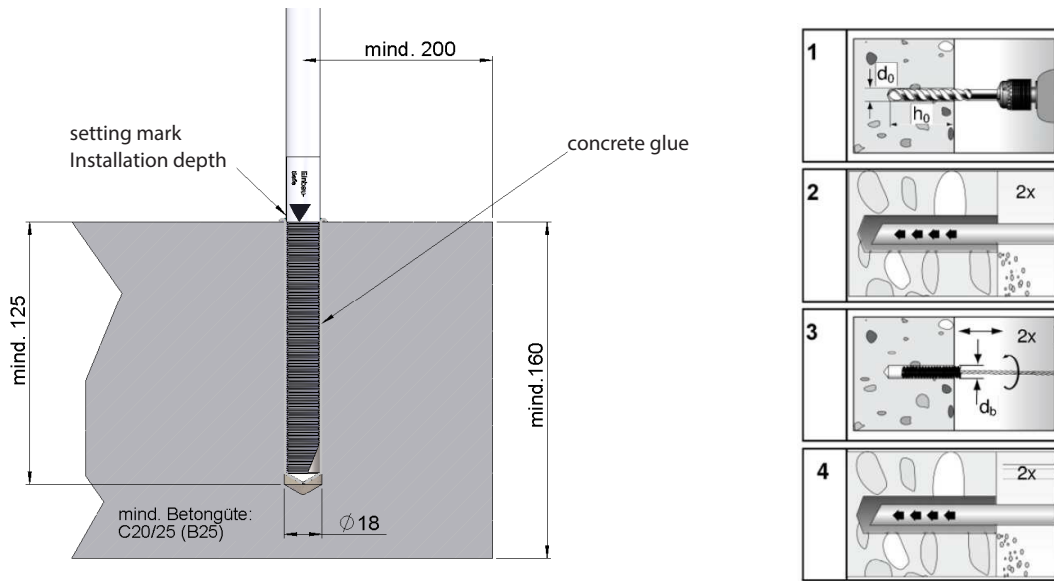
### WARNING!

Drill fixing holes only in strong construction concrete! Anchorages are not possible in screed, levelling concrete, aerated concrete, etc.!

For mounting of attachment point (360° - swivel eyelet) see separate brochure: "Safety instructions for GREEN anchorage devices"



### 5. Installation sketch



Temperature (°C)	t <sub>work</sub>			t <sub>cure</sub>		
	FIS SB LOW SPEED	FIS SB (standard)	FIS SB HIGH SPEED	FIS SB LOW SPEED	FIS SB (standard)	FIS SB HIGH SPEED
> -20 °C - -15 °C	-	-	60 min.	-	-	24 h
> -15 °C - -10 °C	-	60 min.	30 min.	-	36 h	8 h
> -10 °C - -5 °C	-	30 min.	15 min.	-	24 h	180 min.
> -5 °C - +0 °C	-	20 min.	10 min.	-	8 h	120 min.
> +0 °C - +5 °C	30 min.	13 min.	5 min.	17 h	4 h	60 min.
> +5 °C - +10 °C	15 min.	9 min.	3 min.	8 h	120 min.	45 min.
> +10 °C - +20 °C	12 min.	5 min.	2 min.	4,5 h	60 min.	30 min.
> +20 °C - +30 °C	8 min.	4 min.	1 min.	60 min.	45 min.	15 min.
> +30 °C - +40 °C	5 min.	2 min.	-	60 min.	30 min.	-

### 6. Notified body involved



DEKRA EXAM GmbH  
 Prüflaboratorium für Bauteilsicherheit (Testing laboratory for component safety)  
 Dinnendahlstraße 9  
 D - 44809 Bochum  
 Reference number of delivery point: NB 0158

## 7. "GREEN OF B" fastening component

During roof access (system access), this notice by the owner shall be displayed in a clearly visible way:

Notes on the existing roof safety system

The device must be used strictly in accordance with the instructions for assembly and use.

Depository of the assembly and use instructions, test records, etc. is:

- Schematic plan with the location of the anchorage devices:



- Manufacturer and system description: "GREEN OF B" \_\_\_\_\_
- Date of last inspection: \_\_\_\_\_
- Maximum number of persons to be secured: 4 people \_\_\_\_\_
- Necessity of fall absorbers: yes \_\_\_\_\_
- The required minimum clearance below the falling edge to the ground is calculated from:
  - deformation and displacement (max. 1 m) of the anchorage device in case of a loading event
  - + manufacturer's information on personal protective equipment used, including rope displacement.
  - + body height
  - + 1 m safety distance.

## 8. Installation protocol

BV/Object: \_\_\_\_\_ Location of the device: \_\_\_\_\_  
Street, house number

Product: \_\_\_\_\_  
ZIP/City

Client: \_\_\_\_\_ Contractor: \_\_\_\_\_ Installation firm: \_\_\_\_\_

Company name / surname, first name      Company name / surname, first name      Company name/surname, first name

Street, house number      Street, house number      Street, house number

ZIP / City      ZIP / City      ZIP / City

Tel. (office, mobile)      Tel. (office, mobile)      Tel. (office, mobile)

Installation protocol					
Date	Place	Mounting surface	Fastener material <small>(Dowels, screws, etc.)</small>		Tightening torque

The undersigned installation company assures the proper processing of the dowel according to the manufacturer's guidelines. (Proper cleaning of bores, compliance with curing times and processing temperature, edge spacing of the dowels, inspection of the mounting surface, etc.)

Photo documentation		
Date	Place	Photos/File name

- Client: the client accepts the services of the contractor.
- The assembly and use instructions, fastening protocols, and photo documentation have been handed over to the client (building owner) and are to be made available to the user. When accessing the safety system, the positions of the anchorage devices are to be documented by the building owner on plans (e.g. a sketch of the roof-top view).
- An expert fitter familiar with the safety system confirms that the installation work has been carried out professionally, in accordance with the current technology levels and in accordance with the manufacturer's assembly and use instructions. The safety-technical reliability is confirmed by the installation company.

Remarks: \_\_\_\_\_

## 9. Control card

Activities undertaken	Declarant Defects		Date	Company/ Name/ Specialist	Description of defects/ Measures	Date of next regular in- spection
	Yes	No				
<p>System check</p> <ul style="list-style-type: none"> <li>• No deformation of the individual parts detectable</li> <li>• all screws and connections tightened</li> <li>• Rope guides without damage</li> </ul> <p>Visual inspection of the attachment points and accessories (fasteners, etc.) by an authorised expert.</p>						

\*\*\* The anchorage device must be immediately removed from use and sent to the manufacturer or a specialist workshop for inspection and repair in the event of stress caused by a fall or in case of doubt. This also applies if the slinging material is damaged.

The document must be filled in by the person responsible and kept in a safe place together with the instructions for use (e.g. property management).

When accessing the roof safety system, the positions of the anchorage devices are to be documented by plans (e.g. a sketch of the roof-top view)!

10.Notes

## 11.Notes

12.Notes

## WORK SAFETY IN THE GREEN FIELD

Fall safety is mandatory in Austria. For several years, every professional has been obliged to carry out his work safely on the roof. This is now strictly controlled by the Labour Inspectorate. Not just in the case of installation companies, but also for building owners. So, everyone must be secured.  
Do it the GREEN way.



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