

ACHTUNG:

Zur Verwendung der Anschlagereinrichtung diese GRÜN-Sicherheitshinweise (1) beachten

Zum Aufbau der Anschlagereinrichtung die Montageanleitung (2) beachten

ATTENTION:

When using the anchor device, observe the GRÜN safety instructions (1)

When mounting the anchor device, observe the assembly instructions (2)

DEUTSCH

ENGLISH



Assembly instructions are included in the scope of delivery
and are also available at gruen-gmbh.de.
The installation instructions described there must be observed!



1. Important notice

- These safety instructions should be studied carefully prior to the assembly or use of the anchor device and must be observed!
- The user of the anchor device must have read and understood these safety instructions before using the anchor device and must follow the manufacturer's instructions.
- The installer of the anchor device must have read and understood these safety instructions prior to installation and adhere to the manufacturer's instructions.
- If the anchor device is sold in other languages, the dealer must ensure that the safety instructions and the installation instructions for the anchor device are supplied in the language of the country concerned.
- No structural alterations may be carried out on the anchor device without the explicit, written permission of the manufacturer: GRÜN GmbH.
- Alterations will adversely affect the effectiveness of the anchor system and thus the safety of the user.
- The PPE anchor devices are not suitable for work with rope access in accordance with DIN EN 363:2019
- Before use, the entire anchor device must be visually inspected for obvious defects (e.g. loose screws, deformation, wear, corrosion, damaged roof surfaces).

If there is any doubt about the safe functioning of the anchor device, it must not be used and must be inspected by an expert with written documentation.

- Keep the stainless steel cable free of grease, ice and snow!

2. Notes on compatible equipment

- GRÜN GmbH is not liable for incidents resulting from the use of incompatible equipment.
- Personal protective equipment against falls from a height (PPE) in accordance with: EN 361 (harnesses), EN 362 (lanyards) and EN 363 (fall arrest system, force-absorbing energy absorber EN 355 (max. 6kN) with lanyard EN 354) must be used when using the anchor device.
- The combination of individual elements of the PPE can result in hazards that impair the safe function of the system. It must therefore be ensured that the equipment combined to form a system is compatible. The instructions for use of the PPE used must be observed!
- Full body harnesses (EN 361), lanyards with energy absorbers max. 6kN (EN 354 / EN 355) and fall arresters (EN 360) must be adapted to the respective object and comply with the current applicable standards.
- For fall arrest systems, it is essential for safety that the free fall is minimised by the position of the anchorage device or the anchorage points and the type of work design.
- Attention: For horizontal use, only lanyards that are suitable for this purpose and have been tested for the corresponding edge design (sharp edges, trapezoidal sheet metal, steel girders, concrete, etc.) may be used.
- In the case of a restraint system in accordance with EN 363, the lanyard must be selected in such a way that a fall during use is excluded. GRÜN GmbH accepts no liability if this is not observed!

3. annual inspection

- The entire anchor device must be inspected at least every 12 months by a competent person authorised by the manufacturer, following the manufacturer's instructions. The manufacturer's instructions must be followed. This inspection shall cover the detection of damage and wear.
- This regular inspection/check is absolutely essential, as the safety of the user depends on the effectiveness and durability of the anchorage device.
- The inspection by an expert must be documented. (e.g. inspection card, inspection logbook).
- Documentation templates available at:
<https://gruen-gmbh.de/de/absturzschutz/download/>
- All documentation must be kept together.

QR Code



4. Safety instructions for installation

- PPE anchor devices tested in accordance with EN 795:2012 may only be assembled by competent professionals familiar with the GRÜN GmbH anchor devices.
 - Health restrictions (e.g. taking medication, alcohol abuse, heart and circulation problems) can negatively affect the user's safety when working at height.
 - During assembly/use of the anchor device, the applicable accident prevention regulations must be observed and complied with.
 - Before using the anchor device, it must be determined which rescue measures are to be initiated in all possible types of emergencies.
 - The legibility of the product labelling (type plate) must be checked. The permissible number of users of the anchor device is also specified there.
 - When accessing the roof safety system, the positions of the anchor devices are to be documented by plans (e.g.: sketch of the roof elevation).
 - The anchor system should be positioned, mounted and operated in such a way that it is not possible to fall over the edge when personal protective equipment is used properly. Observe minimum clearance see chapter 11.
 - After a fall load, the anchor device must be withdrawn from further use and inspected by an expert (subcomponents, attachment to the ground, etc.)
 - The anchor device has been developed for personal protection and may not be used for other purposes. Never suspend undefined loads on the anchor device.
 - The anchor device is plastically deformable from ~70 kg!
 - In some situations, the user may hold on to the anchor device (bar, eyelet or rope) for safety reasons. This is permissible, but care should be taken not to apply too much force, otherwise, deformations may occur on the supporting brackets. The brackets are specially designed to deform to protect the substructure and users from excessive forces under load (e.g. falling).
 - Hazards may arise that impair the function of the equipment, e.g. slack rope, sharp edges, chemicals, electrical influences, abrasion, deformation. In this case, the anchor device must not be used!
 - The substrate (e.g. tin roof) must be inspected for obvious defects (e.g. cracks) before the anchor device is used. Contamination of the roof surface and/or the anchor device must be removed before use.
 - The anchor system must not be used in wind forces that exceed the usual level.
 - To connect the PPE with the anchor device, always use a connecting element according to EN 362 (karabiner).
- **For users of load-supported anchor devices (type E)**
- Load-supported anchor devices should only be used outside areas where there is no risk of reduced static friction (e.g. water accumulation, algae).
 - Load-supported anchor devices must not be used in frost conditions or where there is a risk of frost if this poses a hazard.

GRÜN EAE / SYS TOPGRÜN and GRÜN EAE / SYS TOPGRÜN LIGHT

- As the ballast layer (ballasting) can change due to external influences (frequent foot traffic, rain and wind erosion, etc.), the actual target layer thickness must be checked without exception before use in accordance with the assembly instructions.
- The ballast layer must always cover the fleece completely. If the layer thickness is insufficient, it must be topped up to achieve the required thickness.

4.1. Safety instructions for the user of the GREENLINE® horizontal anchor device

Before each use, the user must visually inspect the anchorage device for the integrity of the system components.

Before using the anchor device, the following must be checked:

- Labelling / type plate:
Check legibility of label and last maintenance status.
- Fall indicator clamp at the end connections
Check the distance and gap dimension of the indicator clamp! (gap dimension max. 2 mm)
- Spring pretension at the "GES3" end connections
The cable pre-tension can be 40-70 kg. If no cable pre-tension can be read off the scale on the "GES3" end connections, the anchorage device (cable system) must be checked by a certified expert before further use.
- Check for signs of damage, corrosion, cuts or deformation of the system components and the horizontal guide (stainless steel cable).
- If there are signs of damage to the system components or the horizontal guide (stainless steel cable), the entire anchor device must no longer be used.
- Extreme weather conditions can cause damage (e.g. snow pressure) to horizontal lifeline systems, so if the snow reaches the horizontal guide, the guide (rope) must be cleared of snow to prevent damage.

4.2. Using the GREENLINE® horizontal stop device

The GREENLINE® horizontal anchor device is attached directly to the stainless steel cable.

Each user must use a separate lanyard of the PPE against falls from a height (carabiner DIN EN362) in accordance with the instructions for use their instructions for use to use the anchor device!

For systems with freely traversable intermediate supports, the connecting element of the PPEgA is hooked into the carabiner of the GRÜN rope runner. Only rope runners authorised by the manufacturer may be used.

4.3. Note for use as a restraint system in accordance with EN 363

The "GREENLINE GES 3" lifeline system was developed for personal safety and is suitable for the following fall arrest systems according to EN 363:

- Restraint system
- fall arrest system
- Rescue system

Labelling when used as a restraint system:

If sections are defined as a restraint system, the sections must be labelled with additional signs, which are mounted directly and permanently at the beginning and end of the respective section.

5. Use / Max. service life

- Our products are made of high-quality stainless steel, which means that the typical life expectancy of these metal products is 25 years and more. The actual service life depends in particular on environmental influences and the type and intensity of use. It is actually influenced by the proper maintenance of the system and regulated by the mandatory annual expert inspection.
In extreme cases, PPE can be damaged during the first use and must be withdrawn from use immediately.

6. Cleaning

- Metal parts are to be cleaned by wiping with a cloth after use.
Other types of cleaning are not permitted (e.g. dry cleaning etc.)

7. Safety instructions for installation

- PPE anchor devices tested in accordance with EN 795:2012 may only be assembled by competent professionals familiar with the GRÜN anchor devices.
- The anchor devices should be planned and installed in such a way that no fall over the fall edge is possible if the PPE is used correctly. (see planning principles: DGUV 201-056).
- The separate installation instructions for each anchor device must be followed exactly.
- The installers must ensure that the substructure is suitable for mounting the anchor device. If in doubt, consult a structural engineer.
- Before starting work, measures must be taken to ensure that no objects can fall down from the work area. The area under the work area must be kept clear.
- If any uncertainties arise during the installation, the installer must contact the manufacturer.
- The professional attachment of the anchor device to the structure must be documented by assembly records of the respective installation situation. We recommend taking photos of the individual installation situation.
- The sealing of the anchor device in the roof covering must be carried out professionally in accordance with the applicable guidelines. If the marking of the anchor device is no longer accessible/visible after installation, an additional marking must be made nearby.
- Stainless steel must not come into contact with metal grinding dust or steel tools, as this can lead to corrosion.
- Lubricate all stainless steel screws with a suitable lubricant before installation.
- Specified screw tightening torques must be carried out with a tested torque spanner.
- When installed, the anchor device should not be more than 300mm above the roof structure.
- During installation, make sure that the product marking is still legible after installation.
- The anchor devices must be protected on site against damage caused by external influences. (e.g. roof avalanches, snow pressure)

8. Supplementary safety instructions for the installer of cable systems

8.1. Installation GRÜN SYS GREENLINE

- The GREENLINE® horizontal anchor device may only be installed by qualified persons who have been trained by GRÜN GmbH.
- The correct fastening / installation of the anchor device on the structure must be documented and appropriately checked by means of installation protocols for the respective installation situation (e.g. calculations, protocols). photos of the installation situations are recommended.
- Stainless steel must not come into contact with metal grinding dust or steel tools, as this can lead to corrosion.
- When accessing the roof safety system, an on-site operating instruction with information on the position and use of the anchorage device should be attached!
- The GREENLINE® horizontal anchor device must be integrated on roofs in the area protected against lightning strikes (lightning protection zone 0B) in accordance with EN 62305-3 (VDE 0185-305-3).
A connection set is available for integrating the anchor device into an existing lightning protection system. (Art. 4891 4900)

9. Markings

Type plate EAE



Marking example

Swivel eye (Removable anchor point)



Marking example

- ① Manufacturer
- ② Designation of the anchor device
- ③ Item number
- ④ Max. number of users
- ⑤ Norm with year of issue
- ⑥ General building authority approval
- ⑦ Acceptance point / DEKRA Seal
- ⑧ Marking of the PÜZ point / State Building Regulations
- ⑨ Serial no. / Year of manufacture
- ⑩ Assembly and safety instructions must be observed
- ⑪ Usage advice: In the event of a fall, plastic deformation of the product occurs

10. Notified bodies in the type examination

DEKRA Testing and Certification GmbH
 Persönliche Schutzausrüstung / Personal Protective Equipment
 Dinnendahlstr. 9
 44809 Bochum

No.: **CE** 0158

TÜV AUSTRIASERVICES GMBH
 Deutschstraße 10
 A-1230 Wien

No.: **CE** 0408

11. Calculation example: Minimum clearance under the fall edge

- **Note:** With fall arrest systems, it is essential for safety to ensure the necessary clearance below the user before each use so that no impact with the ground or another obstacle is possible in the event of a fall.
- The required minimum clearance below the fall edge to the floor is calculated from:
 - ① Standing height + lanyard ≈ 2 m
 - ② Tear open length of the energy absorber and braking distance of the retractable type fall arrester $\approx 0,5 - 1,5$ m
 - ③ Displacement of the eyelet on the belt/body and the stretching of the belt material $\approx 0,5$ m
 - ④ Body height of the user $\approx 1,8$ m
 - ⑤ Deformation / deflection of the anchor device $\approx 0,5 - 2,5$ m
 - ⑥ Safety distance ≈ 1 m

Illustration 1.

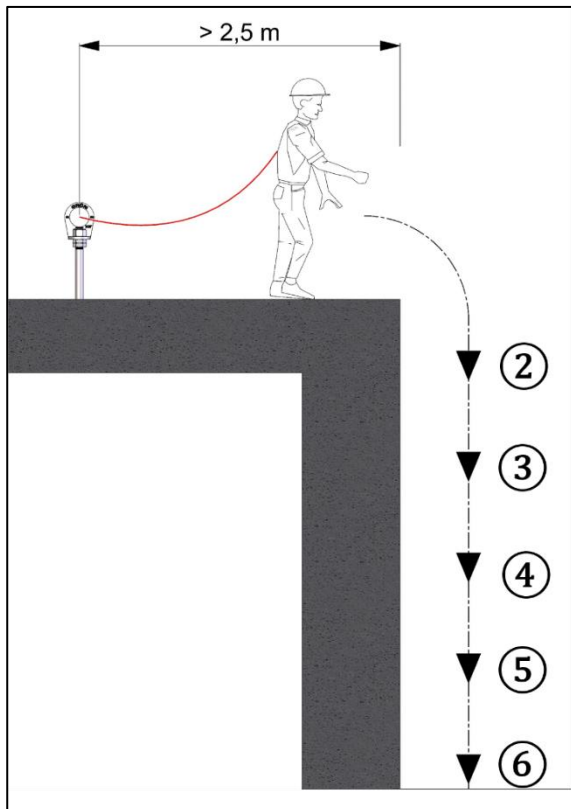
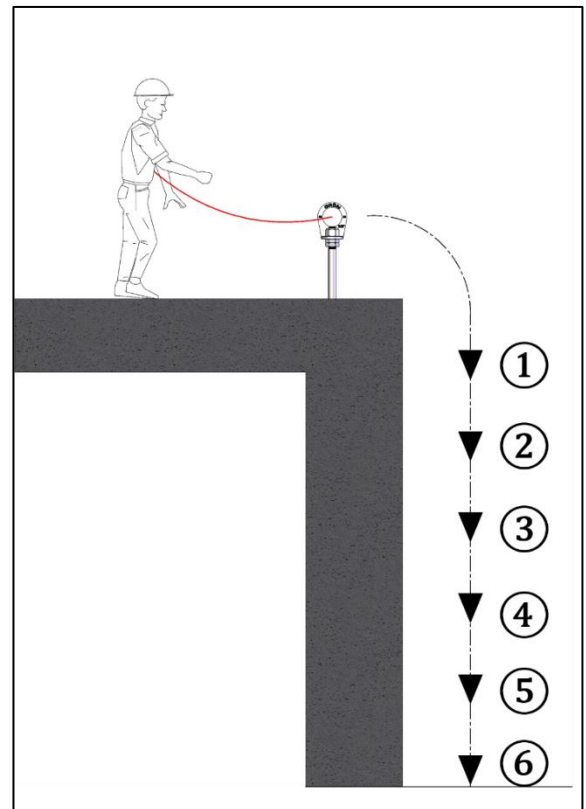


Illustration 2.



Safety systems

Theoretical rope deflection of the rope systems (EN 795:2012 Type C) and load-supported systems (EN 795:2012 Type E)

Product	Intermediate distance [m]	Theoretical cable deflection [m]
GREENLINE GES 3 & GREENLINE GES 3 L	6	1,60
	7,5	1,80
	10	2,05
	15	2,50

The deflection may increase if the cable system is mounted on a single anchor device in accordance with EN 795:2012 type A with the corresponding support height.

Ihr Komplettanbieter für Sicherheitssysteme gegen Absturz



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