



ATTENTION:

When using the anchor device, observe the GRÜN safety instructions.

When mounting the anchor device, observe the assembly instructions.

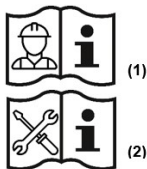


It is essential to follow the assembly instructions provided!

Assembly instructions are also available at gruen-gmbh.de.

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Abbreviations	Meaning
EAE	Einzelanschlageinrichtung (Single anchor device)
SYS	Seil-System (Cable system)
ASP	Abseilpunkt (Abseil point)
BEF	Befestigungsset (Screw set)
ZUB	Zubehör (Accessories)

ATTENTION:

To use the anchor device, observe the GRÜN safety instructions (1).
To attach the anchor device, observe the assembly instructions (2).

Only assembly instructions from GRÜN apply.
It is only permitted to use fastening materials supplied by GRÜN. It is not permitted to replace individual parts.

1 Important general instructions

- When selling to other countries, the dealer must ensure that the safety instructions and assembly instructions for the anchor device are supplied in the respective language.
- Anchor devices are only permitted to be assembled by competent persons familiar with the fastening method and the anchor device.
- Structural modifications to an anchor device require written approval from the manufacturer.
- Anchor devices are to be used according to their identification conforming to EN 363.
- Before starting work, measures must be taken to ensure that no objects can fall down from the work area. The space below the work area is to be kept clear.
- If there is any doubt about the safe function or if the anchorage device has been stressed by a fall, the anchorage device must not be used and must be checked by an expert. The test result must be confirmed with a signature.
- If any anchor devices are defined as retention systems, these should be identified separately.
- It is not permitted for stainless steel to come into contact with metal grinding dust or steel tools; this can result in corrosion.
- Specified screw tightening torques are to be implemented using a tested torque wrench.
- All self-locking stainless steel nuts must be lubricated with a suitable lubricant prior to assembly.
- The General Terms and Conditions of Business of GRÜN GmbH also apply.
- Contact the manufacturer in the event of any queries or if any clarification is required.

2 Notes on compatible equipment

- When using the anchor device, personal protective equipment against falls (fall protection PPE) must be used in compliance with: EN 361 (safety harnesses), EN 362 (connecting elements) and EN 363 (safety harness, force-absorbing fall arresters EN 355 (max. 6kN) with lanyards EN 354).
- By combining individual elements of the PPE, hazards can arise that impair the safe functioning of the system. Therefore, it must be ensured that the equipment assembled into a system fits together. Observe the instructions for use for the relevant PPE being used!
- In the case of fall arrest systems with a possible risk of falling over an edge, suitable connection equipment is to be used.
- Each user must use separate connection equipment (DIN EN362 carabiner) to use the anchor device!

3 Notes on the annual inspection

- The operating firm must ensure that anchor devices are subjected to an inspection by a competent person before use. This check must not be more than 12 months old.
- The inspection by an expert must be documented, and the documentation must be kept available on site.
- Documentation templates available at:
<https://gruen-gmbh.de/de/absturzschutz/download/>



4 Environmental conditions

- Anchor devices must be protected on site against damage caused by external influences (e.g. roof avalanches, snow pressure).
- Before using anchor devices concealed by snow, for example, the respective locations are to be determined, e.g. using a top view sketch of the roof.
- **Lightning protection:**
Anchor devices are not permitted to be used as a natural fall arrest device and must be protected from direct lightning strikes.
If necessary, connections to a lightning protection system are to be planned and implemented by a lightning protection specialist.

5 Safety instructions for users of anchor devices

- Before using the anchor device, a risk assessment must be carried out; in particular in the case of fall arrest systems, a rescue concept must be drawn up before use.
- Users must be able to secure themselves correctly in accordance with DGUV Rule 112-198.
- Restraint systems are preferable to fall arrest systems as they prevent a fall.
- Plastically deformed anchor devices (e.g. according to the falling load) are to be replaced.
- The user must check the identification / type plate before each use and check the anchor device for obvious damage (e.g.: loose screws, deformations, wear, corrosion, cable breakage), not use the device if any damage is found and inform the system operating firm.
- If users are holding onto the anchor system (rod, eyelet or cable), care should be taken that no force > 70 kg is exerted, otherwise plastic deformations may occur.

6 For users of cable systems

- Check load indicators on the end locks. Check the distance or gap dimension of the indicator clamp! (Max. gap dimension 2mm)
- It is only permitted to use the cable sliders approved by the manufacturer.

7 For users of load-bearing anchor devices (type E)

GRÜN EAE / SYS TOPGRÜN, GRÜN EAE / SYS TOPGRÜN LIGHT and GRÜN EAE/SYS TOPKIT

- Load-bearing anchor devices are not permitted to be used in freezing conditions or if there is a risk of frost if this results in a potential hazard.

8 For users of abseil points (ASP)

- The abseil point (ASP) for systems with cable-supported access conforming to EN 363 has been designed for a working load (WLL) of 3 kN (~ 300 kg).

9 For users of safety roof hooks (GRH)

- Safety roof hooks conforming to EN 517 type B were designed for use by a person with a fall arrester.
- The specifications of EN 517 apply to safety roof hooks, deviating from the aforementioned information regarding documentation and maintenance: "The equipment must be inspected by a competent person at least every 12 months".

10 Example calculation: Minimum clearance under falling edge

- **Note:** In the case of fall arrest systems, it is essential for safety to ensure the necessary clearance below the user before each use, so that in the event of a fall, no impact on the ground or other obstacle is possible. The possible free fall must be kept to a minimum.

- The required minimum clearance under the fall edge to the ground is calculated as follows:
 - ① Standing height + connecting equipment ≈ 1.5 m
 - ② Opening length of the fall arrester and of the braking path of the height safety device: see manufacturer's instructions
 - ③ Displacement of the arrest eyelet on the belt/body and the expansion of the belt material ≈ 0.5 m
 - ④ Body size of the user ≈ 1.8 m
 - ⑤ Deformation / deflection of the anchor device $\approx 0.5 - 2.5$ m.
Possible with load-bearing 1m slider path.
In the event of a fall of a person secured to the anchorage device, the resulting deformation of the anchorage device (max. 400 mm) must be taken into account for the fall arrest distance (displacement of the safety harness on the body, tearing of the energy absorber and extension of the rope).
 - ⑥ Safety distance ≈ 1 m

Figure 1

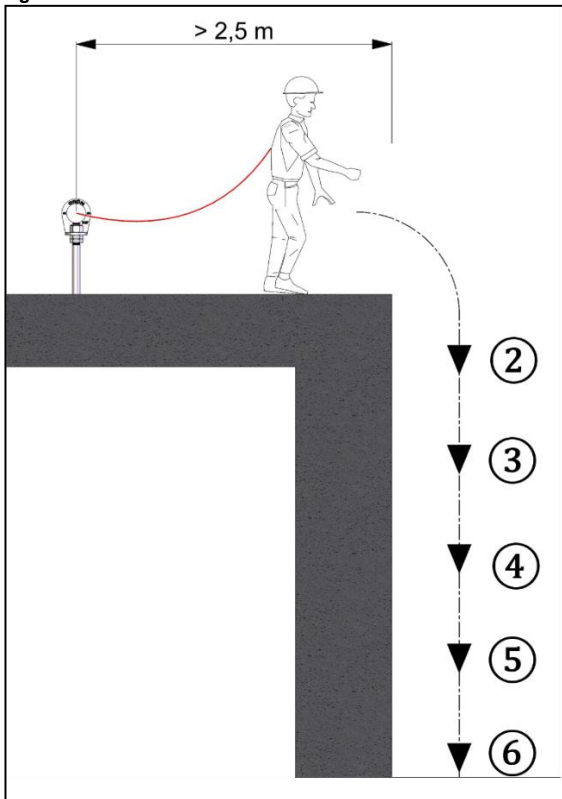
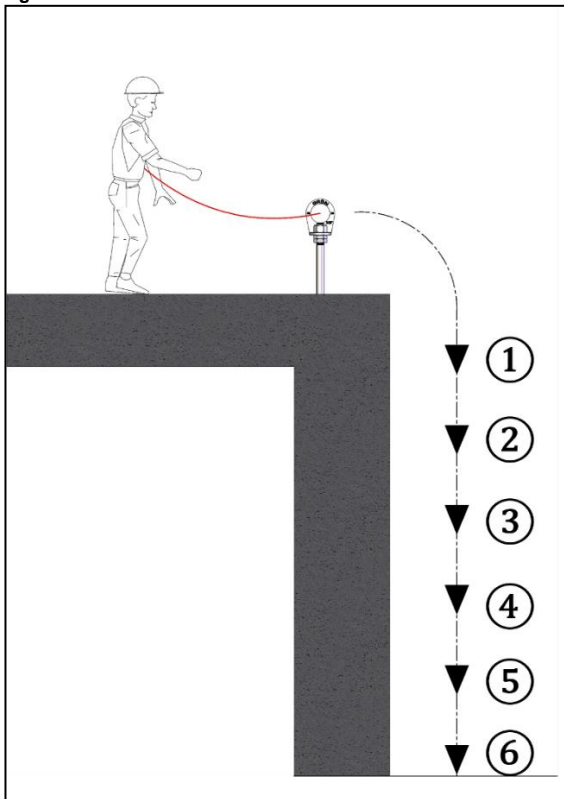


Figure 2



11 Cable deflection for cable systems

GREENLINE safety systems

Theor. cable deflection of the cable systems

Product	Intermediate distance [m]	Theor. 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 individual anchor devices with a corresponding support height.

12 Identification

Type plate



Example figure for identification

Swivel eye (attachment point)



Example figure for identification

- | | | | |
|---|--|---|---|
| ① | Manufacturer | ⑦ | DEKRA seal |
| ② | Product designation | ⑧ | Mark of conformity |
| ③ | Article number | ⑨ | Observe assembly instructions & safety instructions |
| ④ | Max. users | ⑩ | Serial number, year of manufacture |
| ⑤ | Standard with year of issue | ⑪ | In the event of fall, plastic deformation of the product occurs |
| ⑥ | General building inspectorate approval | ⑫ | Abseil point for one person |
- If the identification of the anchor device is no longer accessible/legible after installation, additional marking must be carried out in the same area.
 - We recommend marking the anchor device with the date of the next inspection.

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