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.

GRÜN GmbH Spezialmaschinenfabrik | Siegener Straße 81 - 83 | D -57234 Wilnsdorf-Niederdielfen
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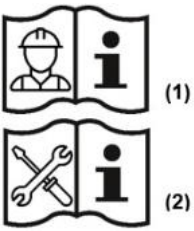

Abbreviations	Meaning
EAE	**E**inzel**a**nschlag**e**inrichtung (Single anchor device))
SYS	Seil-**Sys**tem (Cable system))
ASP	**A**b**s**eil**p**unkt (Abseil point)
BEF	**Bef**estigungsset (Screw set))
ZUB	**Zub**ehör (Accessories)

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.

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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 must only be used by competent persons who have been instructed in their safe use and who possess the relevant knowledge.
- 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 (not for use with lifting devices).
- 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.
- Use a tested torque spanner for the specified screw tightening torques.
- 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!
- 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 equipment must not be used!

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/absturzsicherung/downloads/)
- Documentation with the GRÜN DOKU possible at:
  (https://documentation.gruen-gmbh.de)
- In the case of railings, a visual and functional inspection should be carried out by a qualified inspector at intervals of no more than 24 months, or following any exceptional events, in order to prevent safety-related defects.

4 Environmental conditions

- Anchor devices must be protected on site against damage caused by external influences (e.g. roof avalanches, snow pressure).
- It is recommended that DGUV Information 212-002 is observed when clearing snow from roof surfaces.
- **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.

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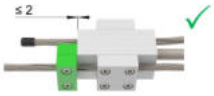
5 Safety instructions for users of anchor devices

- 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, must be in good physical and mental health, and must not have any health conditions.
- 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.



[mm]

[mm]

- It is only permitted to use the cable sliders approved by the manufacturer.

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

- Load-bearing anchor devices must not be used under conditions (e.g. frost, risk of frost, water accumulation, contamination, etc.) that pose a hazard.
- The use of fall arresting devices is not permitted.

8 For users of abseil points (ASP)

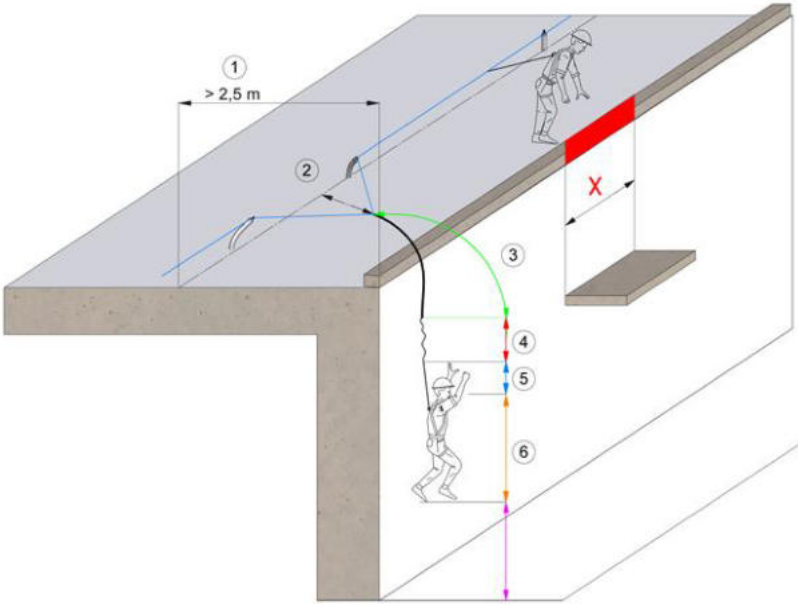
- The abseil point (ASP) for systems with cable-supported access conforming to EN 363 has been designed for a working load (WLL) of 3 kN (~ 300 kg).

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 collisions are ruled out in the event of a fall. The possible free fall must be kept to a minimum.
  The potential free fall must be kept to a minimum by the position of the anchor device and the manner in which the work is carried out.



① Distance of the anchor device from the fall edge

② Deformation of the anchor device in the event of a fall (EAE max. 1m/SYS max. 2.5m)

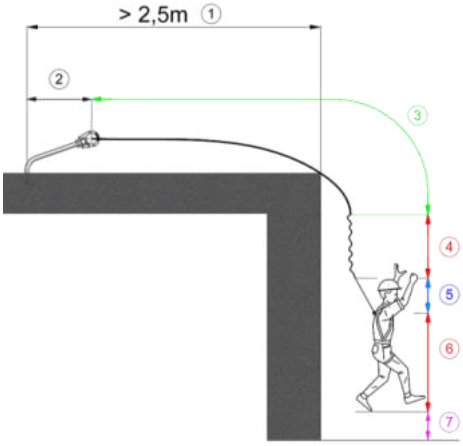
③ Lanyard length

④ Breakaway length of shock absorber / braking distance HSG

⑤ Displacement of the harness on the body

⑥ Body height of the user

⑦ Safety distance to the ground (1 m)



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11 Cable deflection for cable systems

Possible cable deflection in the fall protection system

Products	Field size [m]	Cable deflection [m]
GREENLINE GES 3,	6	1,60
GREENLINE GES 3 L,	7,5	1,80
GREENLINE GES 3 PLUS,	10	2,05
GREENLINE GES 3 L PLUS	15	2,50

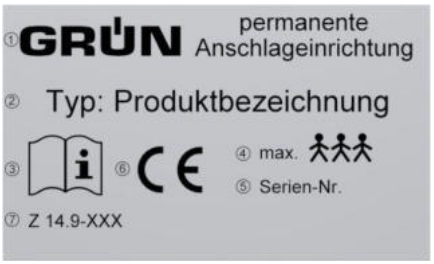
Take the possible deformation of the system supports into account for the deflection.

Possible cable deflection in the restraint system (0,5 kN)

Products	Field size [m]	Cable deflection [m]
GREENLINE GES 3,	6	0,40
GREENLINE GES 3 L,	7,5	0,45
GREENLINE GES 3 PLUS,	10	0,5
GREENLINE GES 3 L PLUS	15	0,75

12 Identification

Type plate



Swivel eye (attachment point)

Example illustration of labelling

① Manufacturer / Utilisation
② Product designation
③ Oberve assembly instructions & safety instructions
④ Max. users
⑤ Serial number
⑥ CE-marking
⑦ abZ / aBG

- 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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