



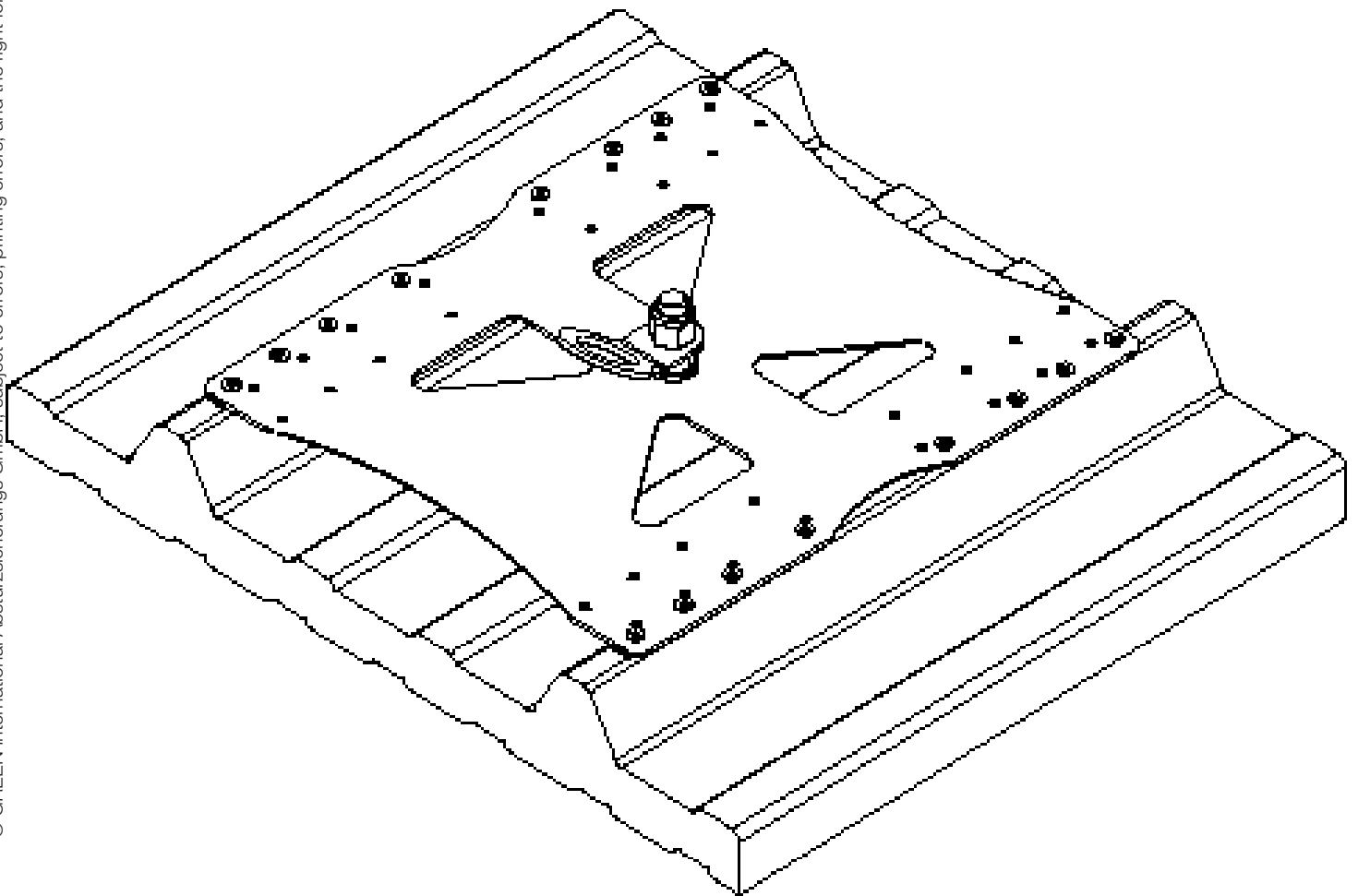
Installation and User Manual

Read the product description carefully



GREEN

INTERNATIONAL

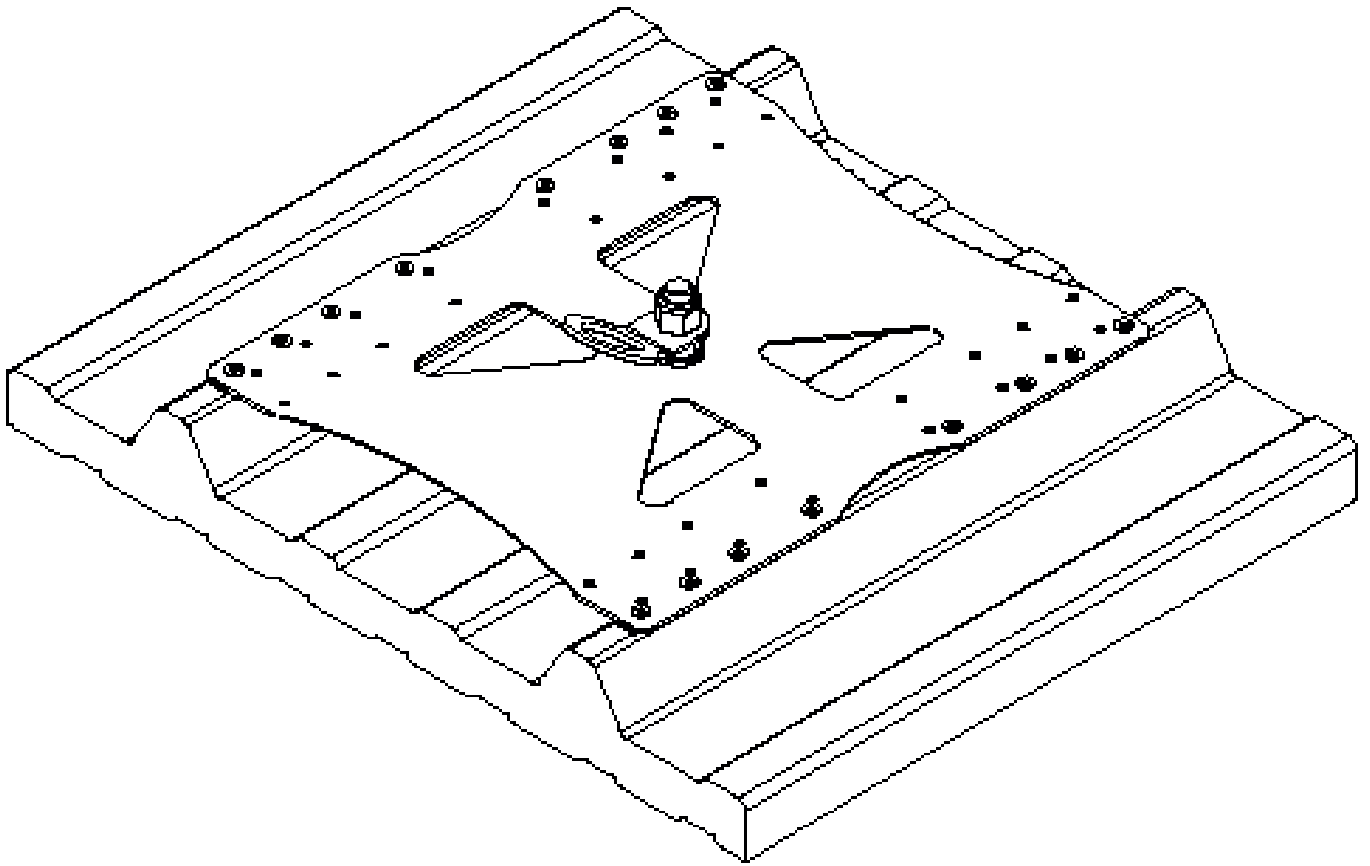


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SDW 1+2 EAP

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 COMPANY

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1. General safety instructions

- The Sandwich “SDW-1” and “SDW-2” 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 Sandwich “SDW-1” and “SDW-2” 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 installers must ensure that the subfloor is suitable for the attachment of the anchorage device. In case of doubt, a structural engineer must be consulted.
- The anchorage device on the roof is designed for loading in all directions parallel to the mounting surface.
- If any uncertainties occur during assembly, please contact the manufacturer.
- The possible 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, because this can lead to corrosion.
- All stainless steel bolts must be greased with a suitable lubricant before assembly in order to prevent a cold binding of the bolts.
- 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.
- The fastening to the anchorage device Sandwich “SDW-1” and “SDW-2” is performed through the anchorage eye always with a carabiner 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 Sandwich “SDW-1” and “SDW-2” was developed for personal safety and may not be used for other purposes. Never hang loads on the anchorage device.
- Do not make any changes to the approved anchorage device.
- 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.
- Attention: Snow clearance at the facility required due to snow pressure load.

2. Product description

The Sandwich "SDW-1" and "SDW-2" flat roof fall protection devices are constantly usable safety fasteners that are permanently installed on the roof structure, and serve as a single anchorage point or anchorage construction for the catch or support system of a craftsman working on a roof edge.

The safety supports are tested on the substructure, and are designed in accordance with the principles for testing and certification of personal protection devices for 3 people per anchorage or 2 persons per working field, however max. 4 persons on a horizontal mobile guide (fastener rope) between 4 fastening points and tested according to EN 795 A.

3. Technical specifications SDW 1+2

Security holder for trapezoidal and sandwich roof elements

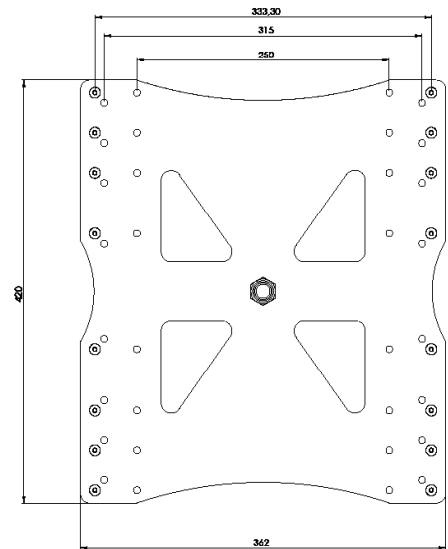
GREEN Sandwich „SDW-1“ and „SDW-2“ has been tested and certified according to EN 795 A. The test was carried out statically and dynamically on the original surface. GREEN sandwich „SDW-1“ and „SDW-2“ is also suitable as a substructure for the attachment of cable spacers for horizontal rope safety systems. The maximum applied force is max. 12 kN. The test was carried out with 18 kN.

Type: „SDW-1“

suitable for roof elements made of steel min. 0.55 mm
with edge distance: 243/ 250/ 310/ 333 mm

Base plate: 2 x 362 x 420 mm
Material: Stainless steel, quality: 1.4301
Overall height: ~ 100 mm

3x 2 pieces hole rows with 8 holes in each
for 16 pieces of bore-fastened „SL2 S16-6.3x28“ with sealing washer

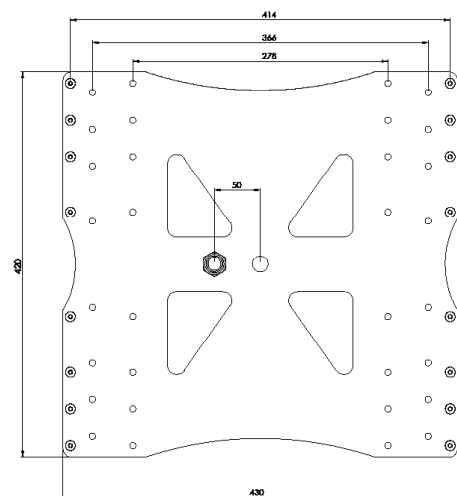


Type: „SDW-2“

suitable for roof elements made of steel min. 0.55 mm
with edge distance: 183/ 207/ 275/ 280 mm

Base plate size: 2 x 420 x 430 mm
Material: Stainless steel, quality: 1.4301
Overall height: ~ 100 mm

3x 2 pieces hole rows with 8 holes in each for 16 pieces of
bore-fastened „SL2 S16-6.3x28“ with sealing washer



4. Construction and assembly for supporting structures SDW 1+2

4.1. Fixing to the ground Type: SDW 1+2

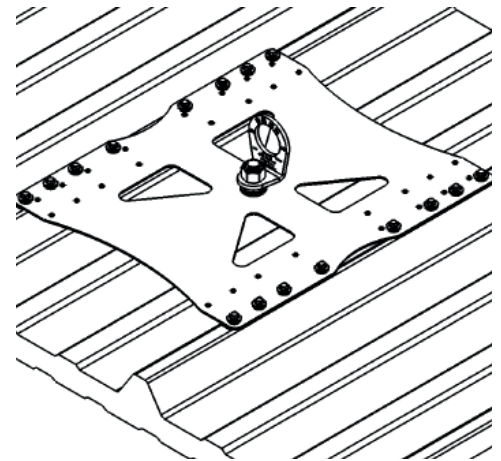
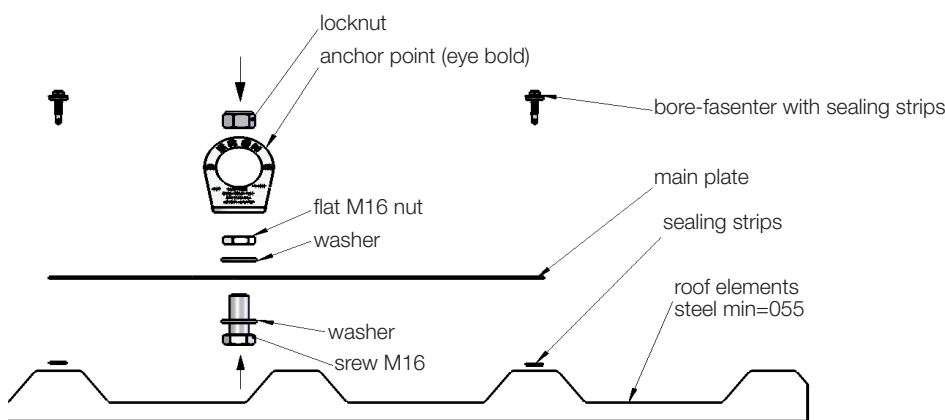
The anchorage points can be fastened on different sandwich roof elements depending on the type. The precondition is a statically bearing substructure for the roof elements and the use of the originally supplied fasteners. In case of doubt, a structural engineer must be consulted.

4.2. Installation steps

Tool: 2 spanners SW24
Power screwdriver with hexagonal socket wrench insert SW 8 Knife

The installation of the anchorage points is performed with a minimum distance of 2.5 m to the roof edge. The intermediate distances of each anchorage point may amount to 4 - 6 m (max. 7.5 m) when used as an anchorage construction. The anchorage points SDW-1/SDW 2 must be fastened with the original bore-fastener, because only these provide the required strength of the anchorage points to the substructure.

Version 1 - „SDW 1 + 2“ with cable holder



Method:

- Find the position of the fastening points on the roof surface.
Note: The anchorage plate „SDW-1“ is always fastened on two raised edges of the roof elements. The anchorage plate „SDW-2“ is partly fastened through three raised edges (see Figure 3). For this reason, the anchorage plate has an additional eccentrically arranged receiving bore for mounting the single anchorage point (eye).
- Mounting of a single anchorage point (eye) on the main plate is performed according to Fig. 1; insert the bolt M16 with a washer in the main plate and screw from the opposite side another washer and a flat M16 nut and lock firmly together. Then install the single anchorage point (eye) on the outstanding thread and completely screw the supplied locknut up to the eye.
To prevent looping through the PPE during later use, the anchorage point should be able to rotate around the screw axis freely. For this, undo the locknut ¼ turn after having tightened, so that the anchorage point (eye) can now rotate freely.

Control:

Min. 2 threads of the screw M16 should be visible after installation above the locknut.

Installation - Procedure

- For each edge width of the roof elements determine the matching hole rows (2 pieces each with 8 holes) in the main plate of the anchorage point by installing and aligning centrally.
The two selected perforated rows drilled at the factory must be located in the middle or around the outer third of the respective raised sections. Then glue the corresponding two rows of perforations with the double-sided adhesive butyl tape on the underside

ATTENTION:

If the rows of holes do not match, no additional holes should be drilled without proper authorization. Be sure to use only the anchorage plate that matches the edge width of your roof elements.

- Now pull off the remaining protective film of the butyl type and align and press on the anchorage point on the previously identified raised edges.
- After screwing on the single anchorage point (eye) and sticking the two sealing strips, screw each anchorage plate with the originally supplied 16 pieces of self-drilling screws on the raised edges of the roof elements.

Note:

The thread-free zone under the self-drilling screw head prevents the over-screwing of the thread in the sheet metal.

The sheets are forcibly drawn in this zone and optimally gripped. The self-drilling screws shall be applied without a depth stop and without a torque clutch.

4.3. Marking and standards

Designation:	GREEN „SDW-1“ / „SDW-2“
Number(s) of the corresponding standard(s):	EN 795 A/C :1996
Name or logo of the manufacturer / distributor:	GREEN
Serial number and year of manufacture:	xx / 20 xx

Sign that the instructions for use must be observed:



5. Accessories for flat roof - fall safety devices:

Identification	Article number
Safety lanyard „HA 22 -13 m / horizontally movable guide (not weatherproof) 16 mm Ø m. carabiner hook, rope shortener / fall absorber, 13 m long as above, however, 16 m long as above, however, 22 m long	4600 16 00 4600 17 00 4600 18 00
Safety anchorage rope 12 mm Ø on one hand with carabiner hook, rope shortener / fall absorber, on the other side with carabiner hook, 3 m long 10 m long 15 m long	4295 00 00 4296 00 00 4297 00 00
Harness „AGU 10“ Dura-Flex	4293 10 00
Harness „AGU 90-R“ Dura-flex with 40 cm rear eye extension	4293 20 00
Fastener with fall absorber 2 m „Manyard ME-83“	4294 00 00
Storage case for safety harness (metal)	4289 00 00
Rope container cabinet (large) with door and lock, for wall mounting (indoor)	4288 00 00
Safety kit (fall absorber, 0.5 m fastener - strap, harness and case)	4305 00 00

6. Operation instructions for the Sandwich SDW 1+2 safety system

- The anchorage system may only be used with the horizontally movable guides:
(Temporary connection security rope between the individual anchorage points)

Article no. 4600 16 00 = "HA22-13.0m" (non-weatherproof)

Article no. 4600 17 00 = "HA22-16.0m" (non-weatherproof)

Article no. 4600 18 00 = "HA22-22.0m" (non-weatherproof)

by GREEN GmbH.

- The security holders can be used as an anchorage point or anchorage construction.
The forces of 8.5 kN introduced by the anchorage point or anchorage construction in the mounting base to the anchorage eye in case of a fall shall be tested on site.
In the area of the fall edge it is to make sure that the total required distance below the user is at least 3 m plus the required height headroom of the ailing suspension system according to the instructions.
The permissible stress of the components caused by sharp edges must be prevented.
- The horizontal flexible guides (guide ropes) are available in different lengths and are made of a connection rope $\varnothing 16$ mm with spliced carabiner hooks, 2 loosely guided carabiner hooks and a rope shortener.
Personal fall protection equipment, consisting of safety rope, harness and fasteners, shall always be stored at a dry place after use, for example in the storage case or rope container cabinet.
- The safety anchorage points and the attached suspension or holding system must be verified by visual inspection for proper functioning and damage before using the safety device. Damaged parts or those involved in a fall may not be used and must be replaced with original parts.

- The documents supplied with the system (control sheet) are to be filled in and stored together with the not permanently installed parts of equipment in a safe place (e.g. rope cabinet).
- The horizontal movable guide (connecting rope) is fastened between 2 to 4 security holders with the fasteners located on the guide and tensioned by the rope shortener. At the horizontally movable guide (connection rope), the craftsman can hang his suspension or support system. It should be noted that the existing carabiner hooks are locked as intended.
- The horizontally movable guide (connecting rope) is always guided parallel to the roof edge and must not be stretched round corners. At each corner it must be re-connected.
- The anchorages on the anchorage point / anchorage construction may only be used with safety harness according to DIN EN 361, fall absorber in accordance with DIN EN 355 and fasteners in accordance with DIN EN 354 as fall protection in accordance with the instructions of the respective manufacturer. The fasteners according to DIN EN 354 must be provided with length adjustment. The opening of the carabiner hook must be over 16 mm.
- If the possibility of falling is excluded, the anchorage device can also be used with a support system according to DIN EN 358. The information in the corresponding operating instructions are to be considered. When using a support system, the fasteners shall be set so long that a fall of the person to be secured is not possible. In this case also the deflection of the movable guide under load by the fasteners is taken into account. The deflection should be determined before starting work from a safe standing position. For this purpose, the movable guide of the support system shall be loaded at the middle span in the direction of stress with appr. 300 N (appr. 30 kg) (from 2 users, double the load) and measure the deflection.
- An unauthorized use of the safety holder is not allowed (e.g. anchorages of lifting equipment, etc.)
- The entire safety product must at least once be subjected to an annual inspection by an expert. The guidelines for safety and rescue harnesses are to be observed. The inspection by an expert must be documented on the provided control sheet. It should be noted that in case of missing or incomplete documentation, claims for compensation of any kind are excluded. The rules for the use of personal protective equipment against falls, BGR 198 (ZH 1/709) must be observed! The anchorage point or anchorage construction serves exclusively for safety of persons and must only be used according to the provisions of the Construction Trade Association.

7. General notes

7.1. Personal Protective Equipment

Check harnesses, fall absorbers and carabiner hooks for proper condition (damage). Do not use the anchorage device if there are doubts about its safe condition. In such case, the anchorage device must be checked by an expert or the manufacturer immediately and replaced if necessary.

Any anchorage device that experienced a fall case must be taken out of service and replaced by a qualified person or the manufacturer.

7.2. Using the system

When using the anchorage device, it must be ensured that the slings are not exposed to fire or other heat sources. This leads to the immediate destruction of the slings. Furthermore, scraping or slipping over sharp edges should be avoided.

Run a visual inspection before using the system. Check the system for signs of damage, breakage or excessive wear or damaged holders.

The anchorage system must not be used if the personal protective equipment cannot be fully connected to the system., or the horizontally movable guides show damage.

8. Notified pick-up point for the stop device



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Ridlerstrasse 65
D – 80339 München
NB 0123

9. Fastening element „SDW-1“ and „SDW-2“

For roof access (system access), this notice by the owner shall be placed and be clearly visible:

NOTES ON THE EXISTING ROOF SAFETY SYSTEM

The use is restricted to adhering to the assembly and use instructions.

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

- Overview diagram showing the position of the anchorage devices



- Manufacturer and system name: GREEN „SDW-1“ and „SDW-2“
- Date of last audit: _____
- Highest number of persons to be protected: 3 persons
- Need for energy absorbers: yes
- The minimum clearance from the roof 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.

Template

11. Control card

Performed activities	Identified Defects		Date	Company / name / Expert	Description of defect / Activities	Date of the next scheduled review
	Yes	No				
<p>System review</p> <ul style="list-style-type: none"> • No deformation of the individual parts recognizable • all screws and connections tight • Rope guides undamaged <p>Visual inspection of the attachment points and accessories (fasteners, etc.) by an authorized expert.</p>						

*** In the event of a fall or in case of doubt, the anchorage device shall be withdrawn immediately from use and sent to the manufacturer or a specialized workshop for inspection and repair. This also applies to damage to the slings.

The document must be completed by the person in charge 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 in plans (e.g. a sketch of the roof-top view)!

12. Notes

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13. Notes



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