



DIASAFE®

FALL PROTECTION SYSTEMS

DiaSafe® Single and Line
Maximum freedom of movement
with optimal safety



INTRODUCTION



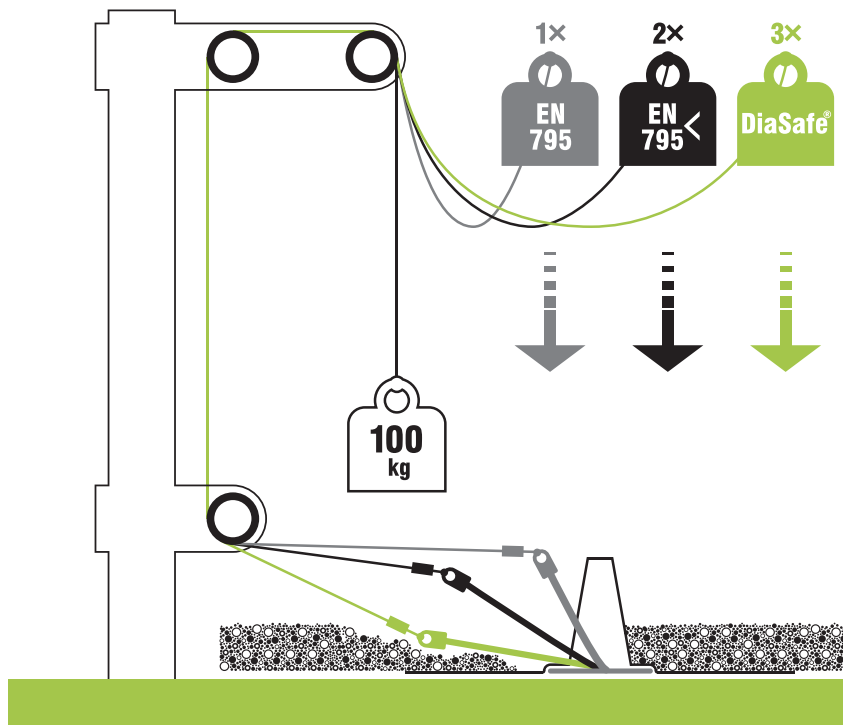
PRODUCT DESCRIPTION

DiaSafe® System is an anchoring device secured by roof layers which ensures the safety of any personnel working at heights, while providing unhindered movement* along the safety cable. The system uses the ballast provided by the gravel or the green roof growing media to provide the counterweight for a fall incident, avoiding any need for penetration of the roof structure. The specially developed components of the system allow the DiaGlider-Fix* to click on/off at any point on the line, and easily slide through the heads of the anchoring posts, and along the safety cable.

*in case of Line system

LEGAL REQUIREMENTS

Anyone working at heights needs to be secured against a fall. This protection is the responsibility of the employer, and/or the owner of the premises, and it is also the architect's responsibility, in designing the building, to meet the relevant regulations. All DiaSafe® systems comply with the latest EU standards. To achieve these standards, hundreds of fall tests were conducted on DiaSafe® systems, in the product development and testing centre, under the supervision of independent testing organisations.



Triple tested. Triple safety.

QUALITY ASSURANCE

The DiaSafe® Systems have been tested by TÜV Austria, Europe's leading safety validation organisation. The manufacturer's ISO 9001 and 14001 certifications also indicate the highest quality in production, from the initial selection of components through to the final quality control.

LEGAL BACKGROUND

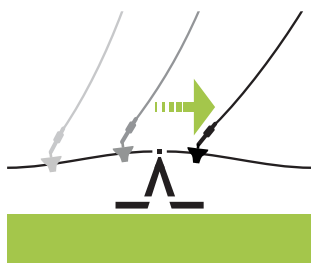
In the DiaSafe® Technical Manual.



SAFETY ON THE ROOF

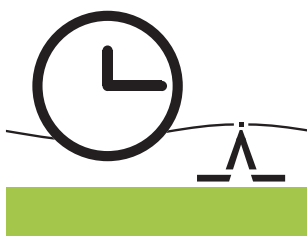


BENEFITS



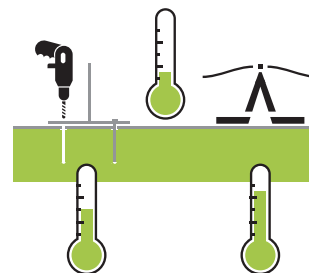
TRAVERSABLE SYSTEM

DiaSafe® Line users have maximum freedom of movement, as the DiaGlider-Fix slides freely along the cables and anchor posts without the need to detach and reattach.



FAST AND EASY INSTALLATION

The system consists of a minimal number of components. With appropriate technical skills, it can be installed in a few minutes.



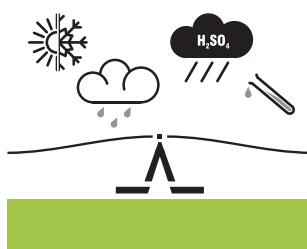
NO THERMAL BRIDGES

Thanks to its special design, there is no thermal bridge between the structure of the building and the DiaSafe® system, thus saving energy and avoiding mould.



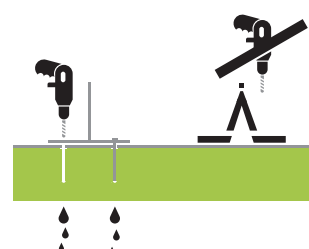
SUITABLE FOR MOST TYPES OF FLAT ROOFS

The DiaSafe® systems can be installed on warm or inverted flat roofs, made out of any structural material (concrete, steel, wood, etc.) and covered with any water insulation membrane (bituminous, PVC, EPDM, etc.).



INDUSTRIAL AND COASTAL REGIONS

All components of the DiaSafe® systems are made of materials resistant to acid environments primarily found in industrial areas and salt corrosion in coastal regions.

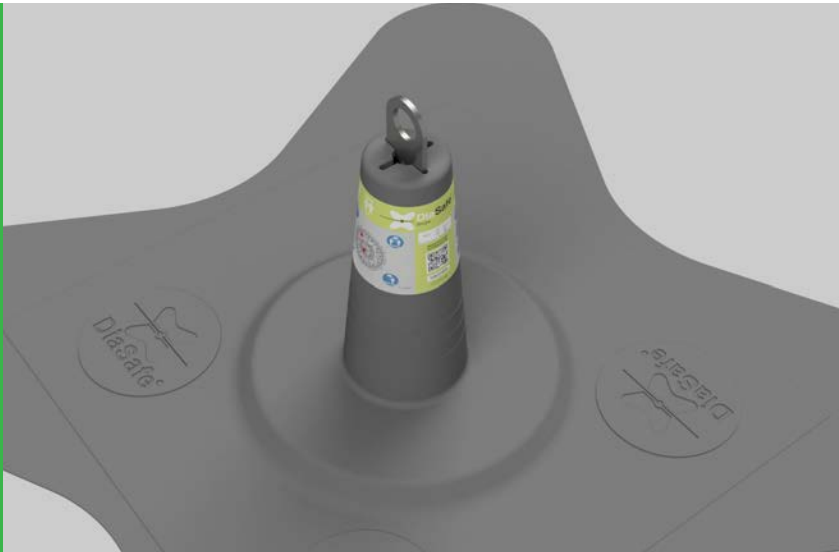


INTACT WATERPROOFING LAYER

The DiaSafe® systems do not require any mechanical attachment to the roof structure, so the waterproofing and insulation remains intact.

SAFETY ON THE ROOF

APPLICATION



DIASAFE® SINGLE SYSTEM

With standard 3x3 m damping mat and a ballast weight of 80 kg/m². Max. 1+1 person can connect to the system. Learning to use the Single System is very easy: the anchor point is the circular opening on the top of the stainless steel post and the user attaches the carabiner of the personal safety rope system directly to this post.

5° max

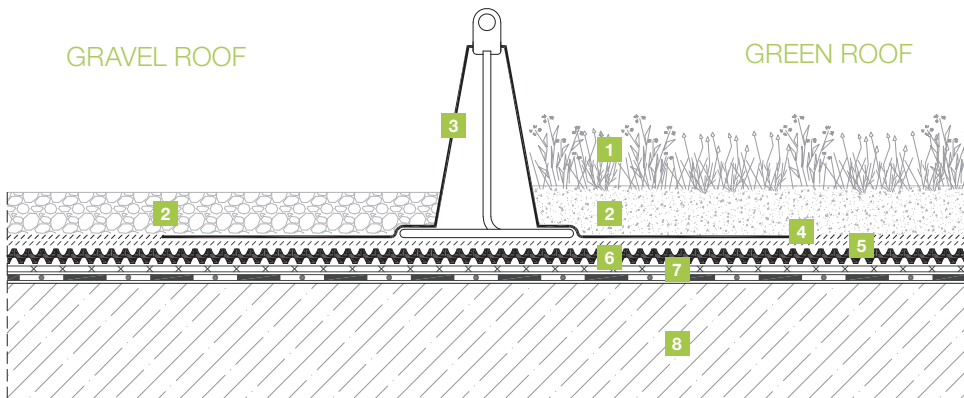


PERMITTED INCLINATION

The DiaSafe® Single system can be installed on flat at roofs with up to 5° incline.

GRAVEL ROOF

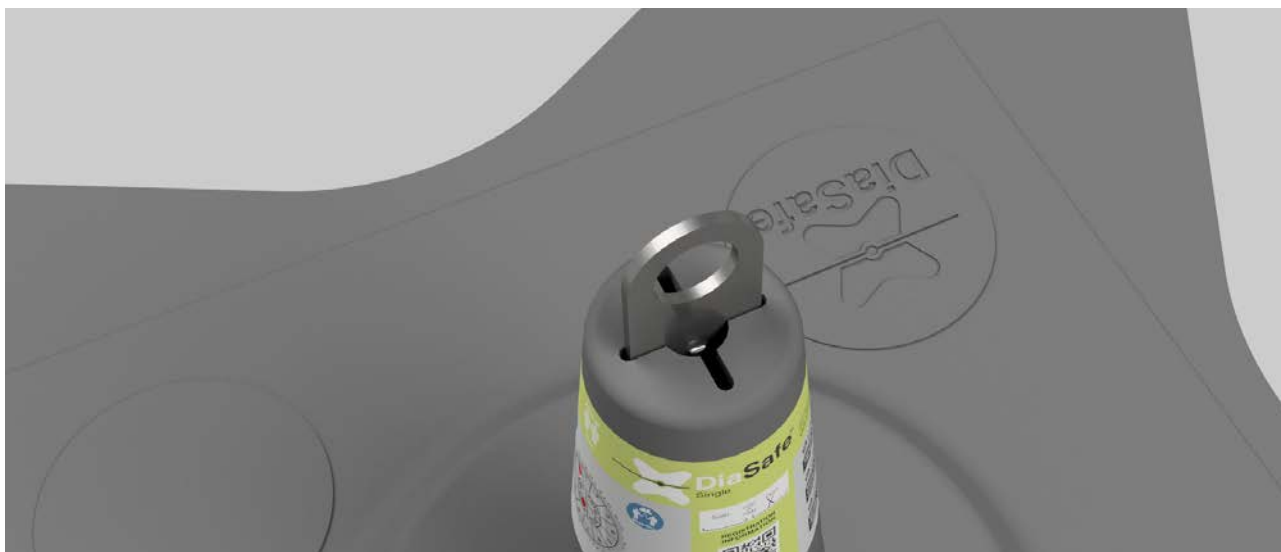
GREEN ROOF



LAYER BUILD-UP

- 1 Vegetation
- 2 Ballasting material
- 3 DiaSafe® damping plate
- 4 Filter geotextile
- 5 Drainage and water retention board
- 6 Protection geotextile
- 7 Root resistant layer
- 8 Existing build-up (roof deck)

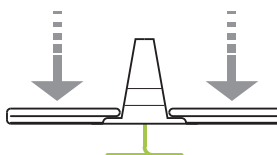
SAFETY ON THE ROOF



TOOLSET



- 1 After installing the filter or protection geotextile layer, place the DiaSafe® Single system on top in the exact position set out in the producer's plan, then unfold the damping mat without creases (standard unfolded size: 3×3 m).



- 2 Spread the ballasting weight evenly, make sure the weight is sufficient for the surface area of the damping mat.



- 3 The certified installer completes and attaches the control label (inspection tag) as well as the circular validation sticker onto the cone.



- 4 After installation, use the DIADEM® Online website (reg.diadem.com) or the DS Service Book to document the system!



DIADEM®
Online



TECHNICAL MANUAL

A safe and correct installation must be based on the Technical Manual. This brochure does not substitute or replace the technical manual.



DIASAFE® LINE SYSTEM

With standard 3x3 m damping mat and a ballast weight of 80 kg/m². When using the DiaGlider-Fix, max. 1+1 person can connect to the system, while when using a carabiner, this number is unlimited, provided that every second section has max. 1 + 1 user connected.

5° max



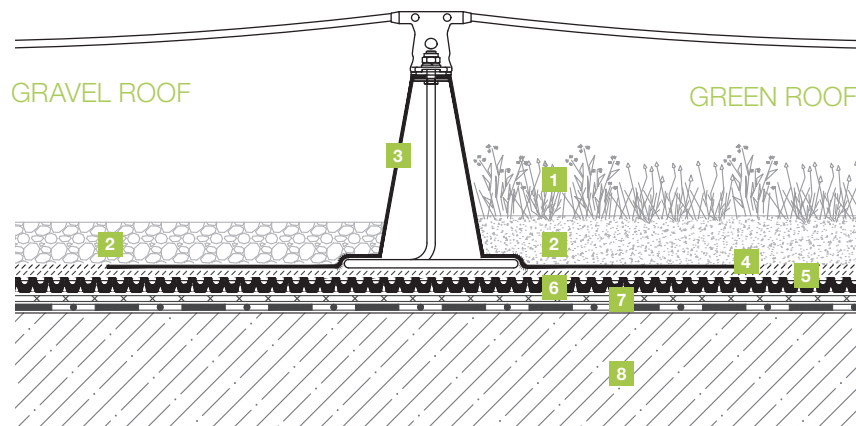
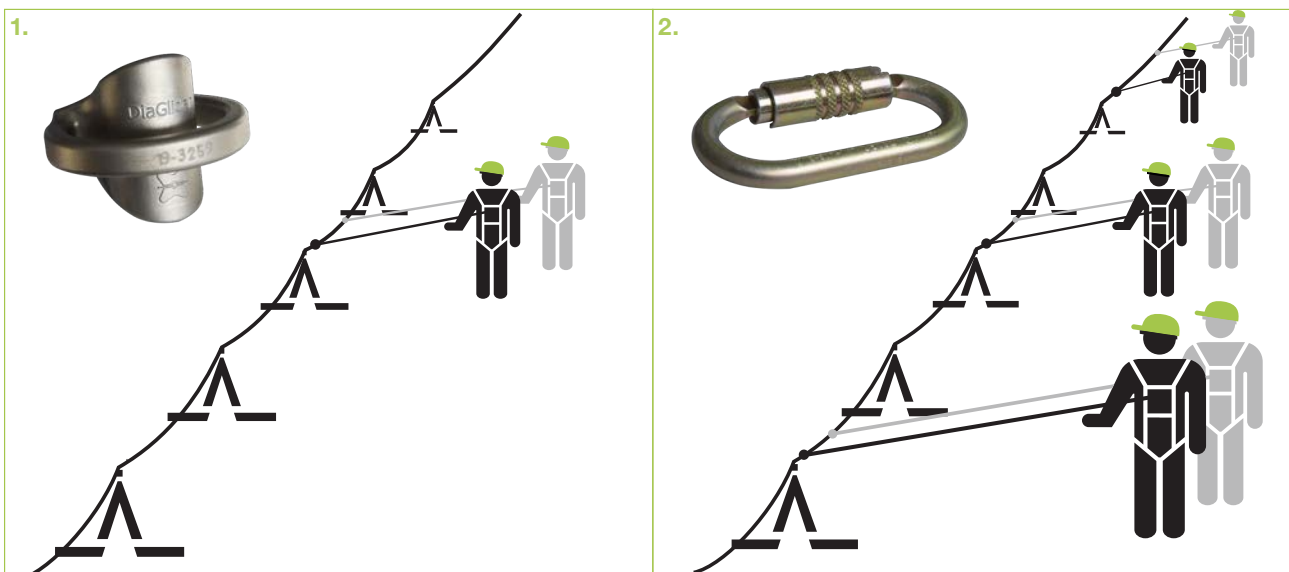
PERMITTED INCLINATION

The DiaSafe® Line system can be installed on flat at roofs with up to 5° incline.

APPLICATION

The DiaSafe® Line can be used in two ways:

1. Use with the DiaGlider-Fix for maximum freedom of movement, as the DiaGlider-Fix slides freely along the wire-rope and over the posts, without having to deattach.
2. Use it with a carabiner to move freely between two posts.



LAYER BUILD-UP

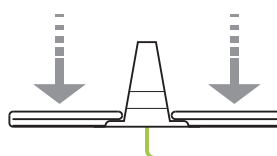
- 1 Vegetation
- 2 Ballasting material
- 3 DiaSafe® damping plate
- 4 Filter geotextile
- 5 Drainage and water retention board
- 6 Protection geotextile
- 7 Root resistant layer
- 8 Existing build-up (roof deck)

TOOLSET



INSTALLATION

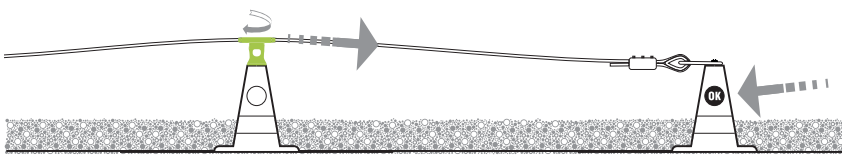
1 After installing the geotextile protection layer, position the system posts at the exact locations indicated in the installation plan. Place the damping plate with integrated damping mat onto the posts.



2 Screw the upper part of the post then unfold the damping mat without creases. Spread the ballasting weight evenly, making sure that the weight is sufficient for the surface area of the given DiaSafe® system.



3 Mount the tubular-shaped anchoring head onto the posts. After placing the cable into the tube it must be fixed with two threaded pins according to the installation instructions. Then close the system at the end using the DS Holder. Finally, attach the control label and if you are the certified installer, the circular validation sticker onto the cone.



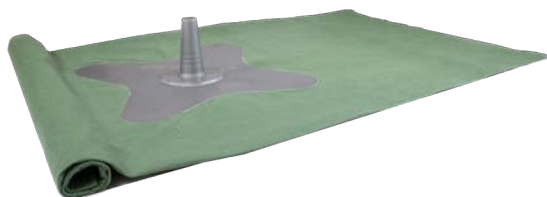
4 After installation, use the DIADEM® Online website (reg.diadem.com) or the DS Service Book to document the system!



TECHNICAL MANUAL

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SAFETY ON THE ROOF



DS AMOEBA-SHAPED DAMPING PLATE WITH BALLASTING MAT

Incorporates glass fibre reinforced cone and laminated damping mat. The structurally engineered damping plate with the ballast weight is key to the operation of the whole system.



DS SINGLE POST

Stainless steel console, shaped and welded from a circular-sectioned steel rod, height: 30 cm.



DS LINE POST

Stainless steel console, shaped and welded from a circular-sectioned steel rod, height: 30 cm.



DS DIAGLIDER-FIX

Manufactured from high-strength alloy, the DiaGlider-Fix offers unhindered movement along the system.



DS LINE PRO HEAD KIT

Designed to fit over the anchor post and accommodate the anchoring cable in such way that the DiaGlider-Fix will run through it. Cast from stainless steel.



DS CORNER HEAD KIT

The DS Corner Head Kit is used to create corners between 0 and 180 degrees without damaging the wire-rope.



DS HOLDER HEAD KIT

The DS Holder Head Kit is used to close the system at the end without having to mount a DS Line Pro head on the last post.



DS MULTI CLAMP

The DS Multi Clamp is used to secure the end of the wire-rope.



DS STAINLESS STEEL WIRE ROPE

The heavy-duty stainless steel safety cable connects the posts and creates a flexible line-anchoring system. DiaGlider-Fix is connected to this safety cable.



DS MULTI CABLE THIMBLE

The DS Multi Cable Thimble helps form the loop on the end of the wire-rope.



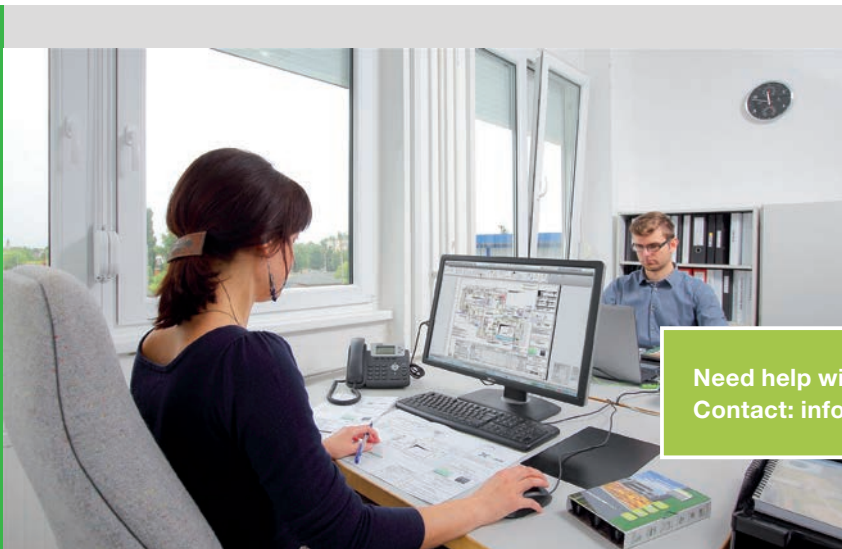
DS MULTI TURN BUCKLE

This turn buckle can also be post-installed and is intended to ensure correct tension, while allowing the DiaGlider-Fix to slide over it.



DS WIRE-ROPE TERMINATING SHRINKABLE TUBE

The DS Wire-rope terminating shrinkable tube is used to secure the very end of the wire-rope avoiding injuries.



Need help with DiaSafe® planning?
Contact: info@diadem.com

KEY INFORMATION NEEDED IN ORDER TO PROVIDE PLANS

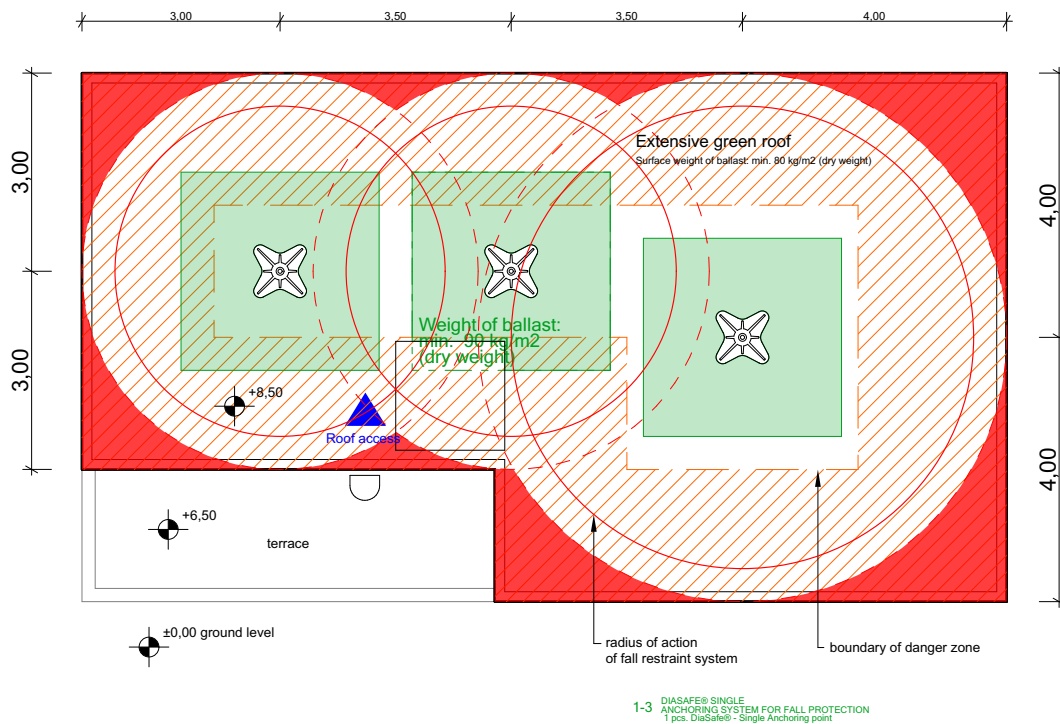
- 1 Roof plan with all the height measurements of the different rooftop surfaces, including all levels (i.e. rooftops, terraces, ground floor, parapet wall, superstructures)
- 2 Elevations and section drawings indicating the height levels
- 3 Inclination of the roof
- 4 Placement of superstructures or elements on the roof that were installed later
- 5 Layer build-up of the roofs,
- 6 Material of the ballast (e.g. substrate, gravel, paving)
- 7 A dwg-formatted file of the drawings (which will speed up the planning process), or a pdf file, if a dwg is unavailable.

PLANNING PRINCIPLES

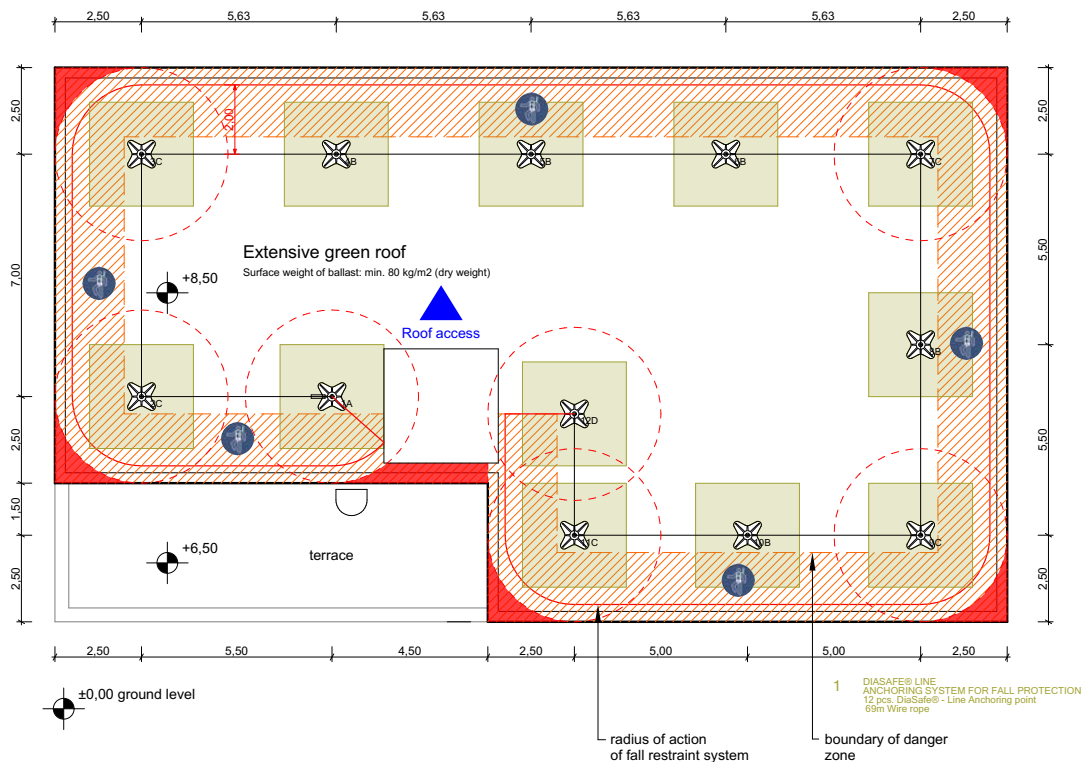
The installation plan for the fall protection system can be prepared by the manufacturer, or by a DiaSafe®-certified professional, taking building characteristics and local conditions into consideration. Wherever possible, the plan should specify fall restraint systems to ensure that the user cannot move beyond the safe area. Should building plans change during the design process or installation phase, the DiaSafe®-certified professional must approve the change. Among other key details, the plan must include the following information:

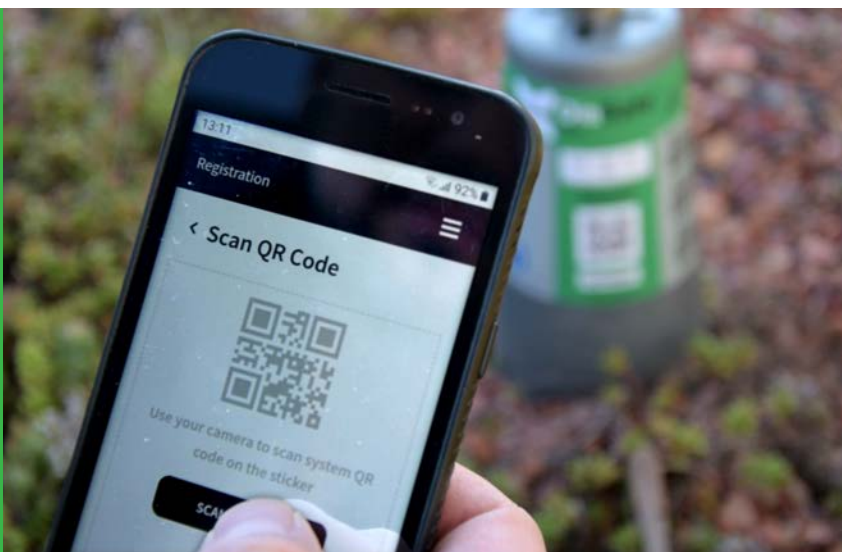
- the number of permitted users
- the permitted length of leash of the PPE
- the exact placement of the system posts and components
- the required ballast

DiaSafe® Single installation plan (sample)



DiaSafe® Line installation plan (sample)





DIADEM® Online reg.diadem.com

Create DIADEM® Fall Protection System Installation Documentation on Your Phone or Computer - Easy & Fast!

DIADEM® Online generates a signature-validated document (photos, blueprints, system information etc.) in PDF format that can be digitally stored, instantly emailed and printed.

Registration and system information is available at any time, from anywhere, and relevant information is available for annual inspections.

The QR code at the anchor points provides information on usability.

DOWNLOAD

DIADEM® provides free online resource with up-to-date DiaSafe® technical manuals and all handouts, documents and templates required for the professional planning, construction, use and maintenance of the system. To install the system efficiently it is highly recommended that installers read and thoroughly understand the technical manual.

SYSTEM INSPECTION

Standards EN795:2012 and EN365:2004, in addition to work safety regulations, require inspections to be carried out on fall arrest systems and personal protective equipment every 12 months, in order to guarantee the continued safety of these devices. Annual technical inspections can only be carried out by an approved expert or professional service technician.

SPECIFICATION

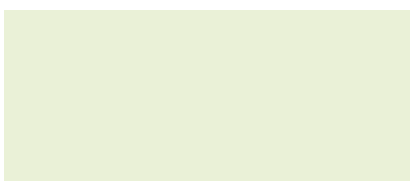
DiaSafe® Single

Permanent anchor device fixed by roof layers installed without penetrating the waterproofing membrane, for securing simultaneously two users as a fall restraint system or also as a fall arrest system in accordance with the criteria described in the Technical Manual, according to the standards EN 795:2012 class A and CEN/TS 16415:2013 certified, for flat roofs with a slope up to 5°, incl. all accessories made of stainless steel resistant to acidic environments and salt air in coastal regions, with DS amoeba-damping plate with laminated ballasting mat in signal green colour, and a fibreglass reinforced support cone, with marking lines for the min. ballasting height, supplied as fully functional system ready for immediate professional installation according to manufacturer's instructions, to the technical building regulations and to the approved implementation plan, assembled according to guidelines provided by the manufacturer with ballast material in dry conditions at 80 kg/m² distributed over the whole ballasting surface.

DiaSafe® Line

Permanent anchor device fixed by roof layers, enables unhindered and continuous movement for the DiaGlider without the need to detach and reattach, installed without penetrating the waterproofing membrane, with a stainless steel anchoring wire (8mm) parallel with the roof edge and with DiaGlider-Fix permanent traveller device (separately available), for securing simultaneously two users as a fall restraint system or also as a fall arrest system in accordance with the criteria described in the Technical Manual, according to the standards EN 795:2012 class C and CEN/TS 16415:2013 certified, for flat roofs with a slope up to 5°, incl. all accessories made of stainless steel resistant to acidic environments and salt air in coastal regions, with DS amoeba-damping plate with laminated ballasting mat in signal green colour, and a fibreglass reinforced support cone, with marking lines for the min. ballasting height, supplied as fully functional system ready for immediate professional installation according to manufacturer's instructions, to the technical building regulations and to the approved implementation plan, assembled according to guidelines provided by the manufacturer with ballast material in dry conditions at 80 kg/m² distributed over the whole ballasting surface.

DISTRIBUTOR



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DIADEM® offers training for candidates to take the manufacturer's exam and achieve certification which authorises them to install and maintain and/or inspect DiaSafe® Safety Systems. Installation, approval and inspection must be carried out by technicians authorised by the relevant Standardisation Committee, Notified Bodies or the manufacturer of DiaSafe® systems.

OUR EXPERTS ARE HAPPY TO ANSWER ANY QUESTIONS



Further Information:
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