PLANNING GUIDE

Fallnet® – for Safety on Flat Roofs

Life on Roofs

Fall protection for working on flat roofs – Standards and Guidelines

Working on rooftops is necessary. Green roofs require maintenance at regular intervals, and gravel roofs and technical equipment also need upkeeping, inspection and servicing from time to time. Accidents while working on roofs, especially falls from height, usually involve serious injuries. Accident prevention can save lives here. Fall protection systems can be carried out as guardrails, scaffolding, safety nets or fixing devices. With our innovative solutions for individual and collective fall protection we provide a maximum of safety for people and buildings.

There is a large number of guidelines and standards for fall protection in the UK. The most important include the following guidelines

The Work at Height Regulations 2005

The Building Regulations Part K, 2013, Protection from falling

HSE Health & Safety in Roofwork 2012

HSE Working at Height 01/14

HSE Working on Roofs 11/08

and the relevant standards such as:

BS 6180 Protective Barriers In and About Buildings 1999

BS 6399 Part 1 Loading for Building 1996

BS 6399 Part 2 Code of Practice for Wind Loading 1997

EN 13374 Temporary Edge Protection Systems – Product Specification, Test Methods 2013.

EN 14122-3 Safety of machinery. Permanent means of access to machinery, stairways, stepladders and guardrails 2010.

All ZinCo Fallnet® systems are tested and of course certified. Our systems for individual fall protection are tested to European Standard EN 795:2012, type D and E. The new ZinCo maintenance guardrail for collective fall prevention while carrying out maintenance work on roofs has been tested and certified to the criteria of European Standard EN 13374, class A.

These systems can be used on virtually all flat roofs (up to 5° pitch), regardless of the sub-structure. It is only the structural requirements that then have to be taken into consideration.

More options with ZinCo

Safety at work

Recreational areas and emergency escape routes

NEW

Fallnet® ASG – the intricate, penetration-free maintenance guardrail

A collective solution for fall protection such as the Fallnet ASG offers the advantage that anyone working on a roof is also protected from falling off the roof.

The maintenance guardrail can be installed vertically or at an inclination of 67.5 degrees. It is even more visually unobtrusive thanks to the inclination.

The Fallnet ASG is impressive due to its very fast assembly, low weight and high level of stability. It was developed and tested in practice by experienced tradesmen.

This is a system that is particularly suitable for long distances and large projects given its small number of components, quick assembly and large width between the rail posts, infinitely adjustable up to 2.6 m. The entire system can be assembled using only one tool, a cordless screwdriver. Small irregularities can be evened out by adjusting the height.

Fallnet® ASG is Dekra-certified.

Fallnet® ASG is visually appealing, particularly in the inclined version.

Features:

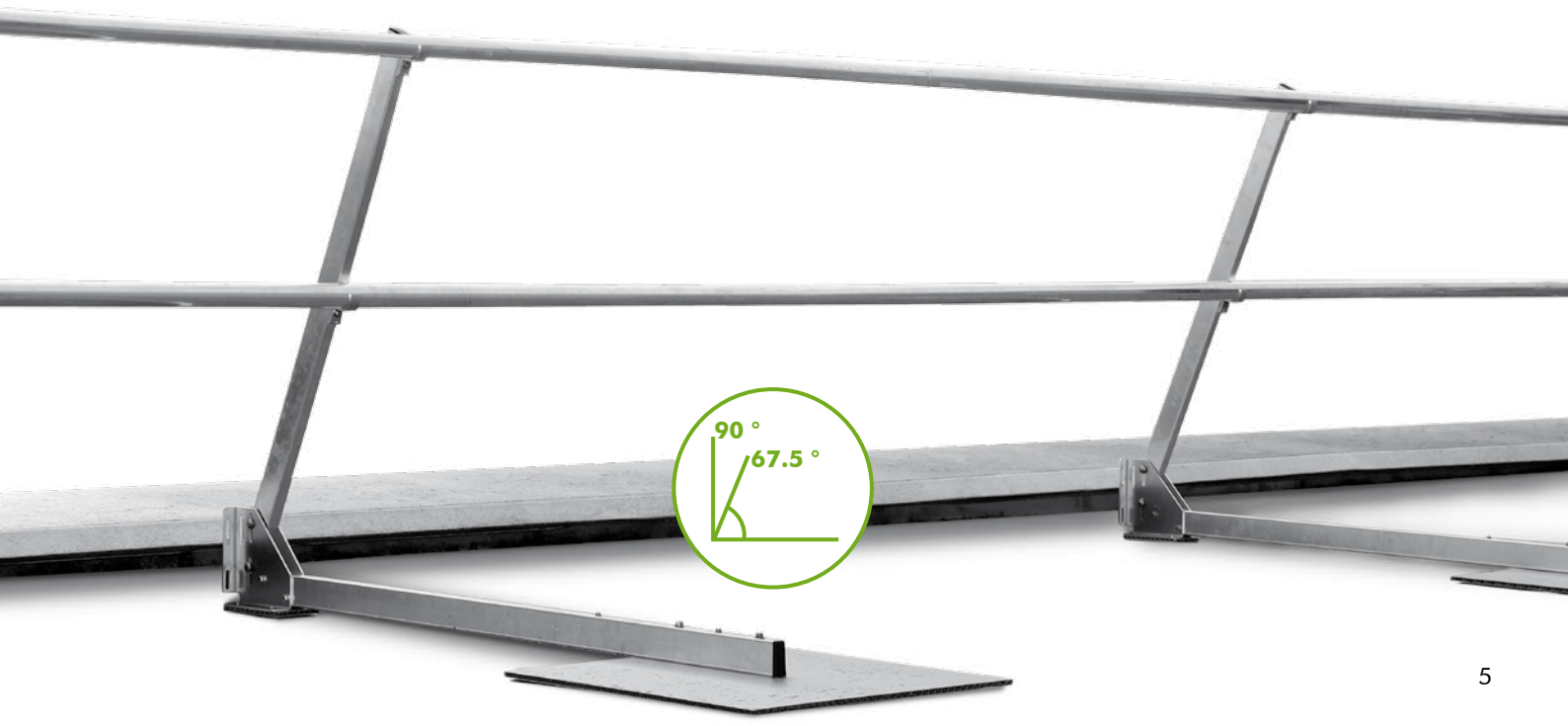
- Quick assembly
- No high point loads
- No roof penetration
- Visually unobtrusive at a 67.5° inclination
- Meets the requirements of EN 13374 Class A
- Suitable for roofs with a pitch of up to 5°
- Green roof build-up used as ballast
- Easy and quick installation, regardless of the sub-structure

The post module is supplied pre-assembled. Only the post itself has to be assembled vertically or at an angle.

The post modules before the green roof system build-up is installed.

The corner joint provides for a stable connection between handrail and midrail.

Fallnet® ASG *Maintenance Guardrail*				
	Item No.	*Dimensions*	*Material*	*Angle*
Post module	3480	approx. 1.6 m × 1.2 m × 0.6 m (L × H × W)	Aluminium/HDPE	–
Hand rail/midrail	9880 9881 9882	approx. 2.0 m × 42 mm (L × D) approx. 3.0 m × 42 mm (L × D) approx. 6.0 m × 42 mm (L × D)	Aluminium	–
Corner joint for hand rail/midrail	9885		Aluminium	approx. 75° – 180°



Fallnet® SR Rail – the user-friendly solution for virtually all roof situations

The rail system offers a maximum of user comfort. With a building-specific plan, the entire danger zone can be reached with a gliding, horizontal fixing device referred to as a "runner".
It removes the need for frequent, time-wasting rehanging and permanent adjusting of the rope length, as is the case when using single fixing devices. Potential incorrect application is also minimised thanks to the rail solution. These features ensure a very high user acceptance.

As is the case with the Fallnet® SR system, as a single fixing device, thanks to the grid elements, the rail version can also be installed without roof penetration, easily, quickly and without special tools. Subsequent installation is possible with little additional effort.

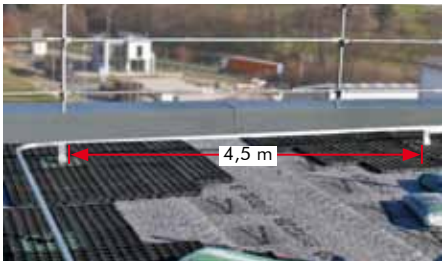
The complete Fallnet® SR Rail solution consists of only a few components.

Building-specific adaptations are, of course, possible, for example, using special rail lengths, corners with varying angles, height adjustment elements, etc.

We would be happy to prepare a plan specifically for your building, providing a quick cost overview based on linear metre and also efficient installation.

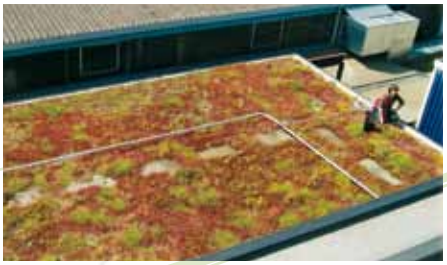
Features:

- Highly user-friendly; once it's clicked into place, the entire danger zone can be reached using the Fallnet® SR Rail
- Rehanging and continuous adjustment of rope length no longer necessary
- High level of safety: incorrect application virtually impossible
- No roof penetration required for installation
- Roof areas secured that would not be possible using a single fixing device
- Easy and quick to install without special tools
- Possible ballast - Zincolit®, ZinCo system substrate, gravel or any other suitable bulk material
- Runner function is not impacted by plant growth, unlike solutions with sagging ropes
- Extensive list of system components, special solutions possible



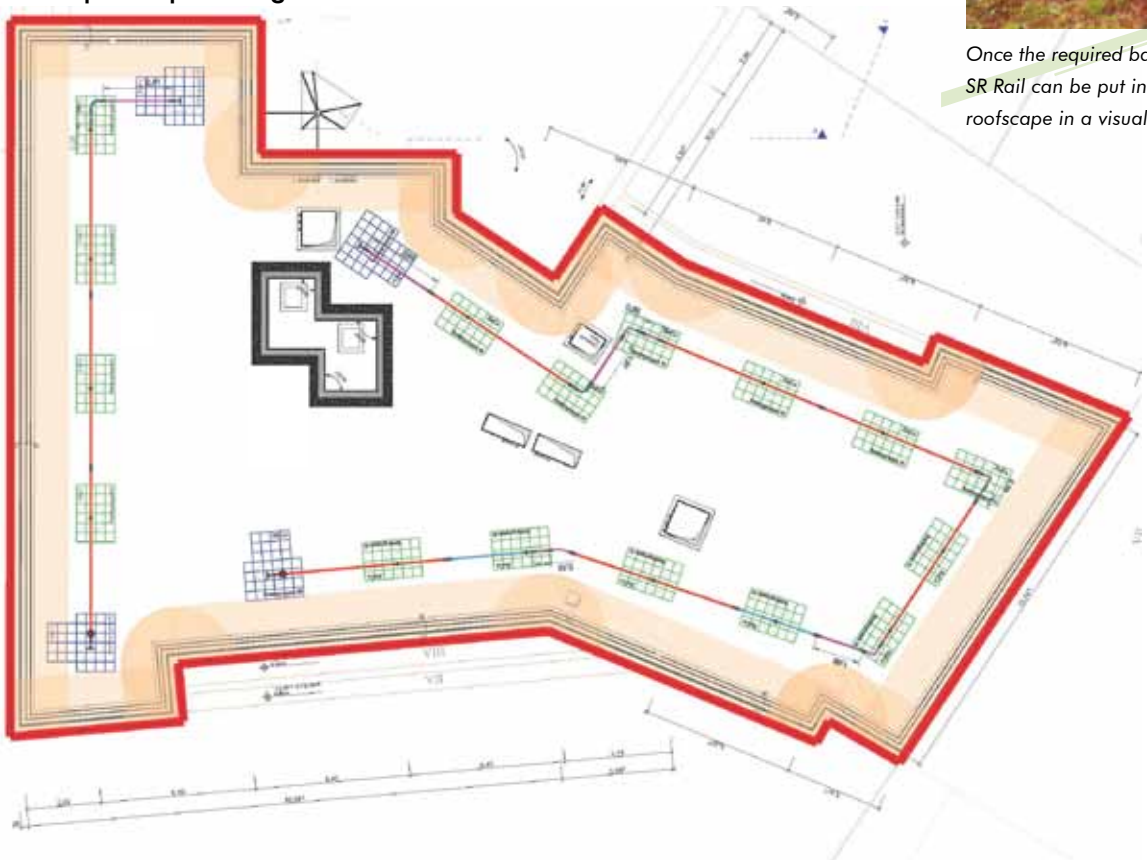
A post clearance of up to 4.5 m and a rail length of up to 6 m allow for a cost-efficient system.

The Fallnet® SR Rail is assembled with a few simple hand movements and without special tools. Large sections are quickly connected to each other with grid elements, rail supports and the rails.



Once the required ballast is in place, the Fallnet® SR Rail can be put into action, blending into the roofscape in a visually appealing way.

Example of planning with Fallnet® SR Rail modules



The perfectly positioned runner ensures smooth gliding. Any obstruction during work is virtually ruled out.

The horizontal rail allows for the entire radius around the runner to be used, providing for perfect, efficient use on narrow roof areas.

According to the test report from the Technical University of Ilmenau, Fallnet® systems, unlike rope solutions, are categorised as lightning proof. We are happy to send you a copy of the test report on request.

Fallnet® SR Rail *Horizontal Rail System*			
	Item No.	***Components / dimensions***	***Unit***
Grid unit AE	49047	Grid unit for start and end of the rail consisting of 3 pre-assembled grid elements of 1.0 × 1.33 m	piece
Grid unit M	49057	Grid unit for the middle of the rail, consisting of 2 pre-assembled grid elements of 1.0 × 1.33 m	piece
Rail support	9057	One rail support per grid unit required	piece
Rail 2 m*	49064	coatless, pre-punched	piece
Rail 3 m*	9065	coatless, pre-punched	piece
Rail 6 m*	9071	coatless, pre-punched	piece
Joint connector	9056	Made of stainless steel, incl. screw set	piece
End piece rail	9068	incl. stopper	piece
90° corner piece rail	9069	coatless, pre-punched	piece
3-way junction unit	49063	For junction with a 90° angle	piece
Runner	9067	Made of stainless steel, with fixing eye	piece
Fallnet® Rail drilling set	9526	In a tool case, consisting of drilling stencil, twist drill Ø 10.5 mm, countersink bits Ø 12.4 mm and Ø 20,5 mm, cutting oil, one-handed clamp	piece
Rail fitting pieces	9599	Made to measure on order	

Fallnet® SB 200-Rail – developed for use in combination with photovoltaic systems

Generally speaking, the entire space will be used up on a roof on which photovoltaic units are installed. Once the system is installed, the users are frequently required to access the individual modules and technical equipment using narrow spaces along the roof edge.

This is no longer a problem thanks to Fallnet® SB 200 Rail. In this case, the ballasted ZinCo solar mounting system is used in the required areas for the fixing device. Only the rail support, the rail with the appropriate components and, if necessary, building-specific accessories have to be added.

This allows for the quick and inexpensive installation of a fall protection system efficiently and perfectly integrated into the roof landscape.

Features:

- As a modular design, it can be combined with the System Base SB 200 (for solar mounting) or the Guardrail Base
- No additional costs required for a sub-structure
- Narrow peripheral areas can be used safely and easily
- User-friendly thanks to the elimination of constant rehanging of the fixing device
- No roof penetration required for installation
- Possible ballast - Zincolit®, ZinCo system substrate, gravel or any other suitable bulk material
- Extensive list of system components, special solutions possible

ZERTIFIKAT

EG-Baumusterbescheinigung

Richtlinie 89/686/EWG Artikel 10

zuletzt geändert durch Richtlinie 93/68/EWG

Persönliche Schutzausrüstungen

Registrier Nr.: BP 60021140 0001

Bericht Nr.: 21135112 001

Inhaber: ZinCo GmbH
Grabenstr. 33
72660 Unterensingen
Deutschland

Produkt:

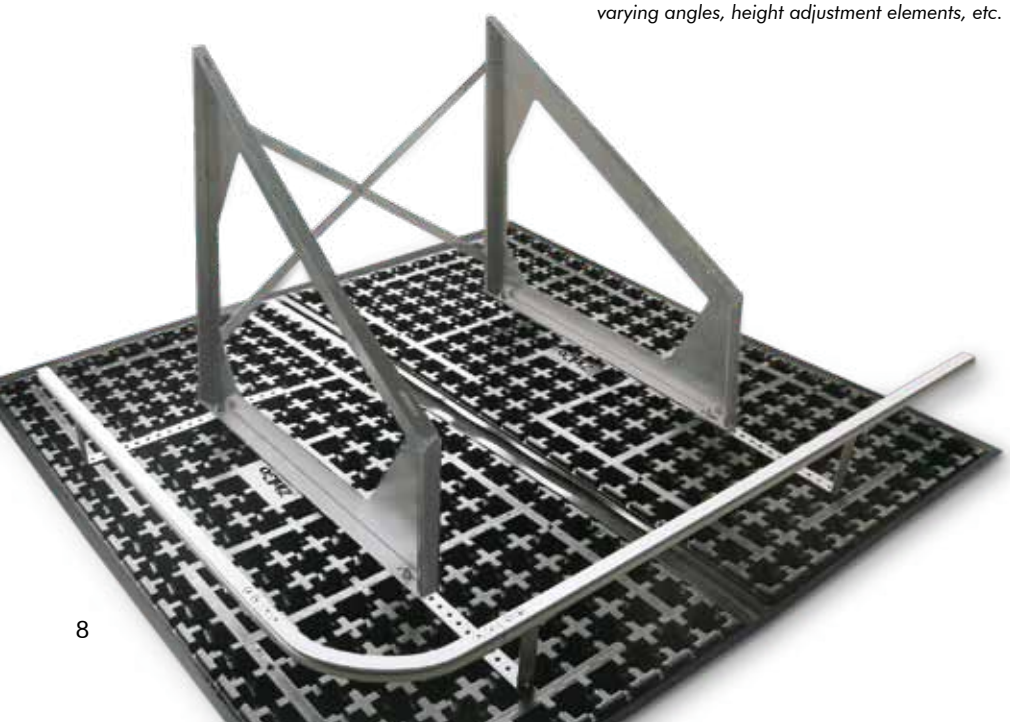
Identifikation:

TÜV Rheinland Product Safety GmbH · Am Grauen Stein · D-51105 Köln

The modular principle enables the fall protection system to be easily combined with the ZinCo solar sub-structure.

Most roof situations can be secured using standard rail components. However, there are even more options available with building-specific, bespoke solutions, e.g. special rail lengths, corners with varying angles, height adjustment elements, etc.

An s-shaped rail element elegantly addresses the changing height, allowing the runner to continue gliding without obstruction.



Fallnet® SB 200-Rail *Horizontal Rail System with gliding fixing point*	
System components such as rail supports, corners, etc.	Building-specific
Required ballast using Zincolit®, ZinCo system substrate or equivalent bulk material	Building-specific
Number of people using the system at the same time	Building-specific

Solar energy systems are often installed right out to the roof edge to fully utilise the roof areas.

The fixing device in operation. The horizontal, gliding runner for personal protective equipment provides for maximum user friendliness.

The classic area where a Fallnet rail system is used: peripheral areas, where work is required repeatedly. Once you've clicked into the runner, the work can be carried out in absolute safety.

ZinCo balustrade railing solutions – for recreational areas and emergency escape routes

Balustrade systems and railings are available in a variety of designs and are all used for safety purposes.

A building is characterised by the type of balustrade used, which therefore permanently influences the overall appearance of the building. As a result, in addition to the safety aspect, the aesthetics of balustrade systems and railings are also taken into account during planning.

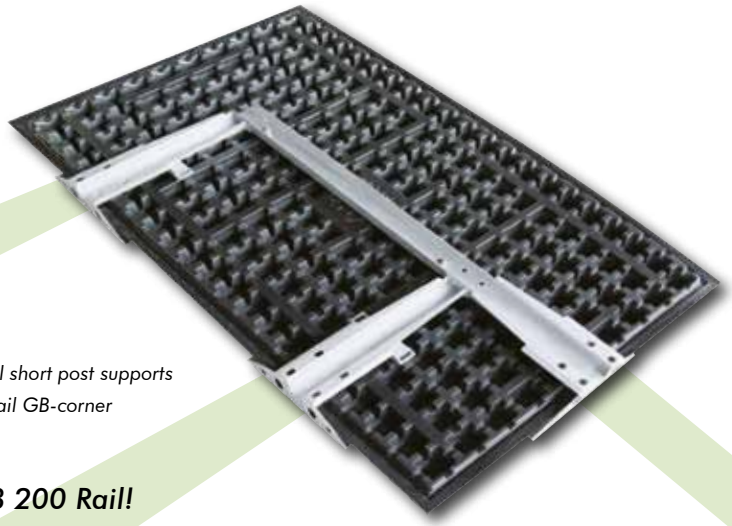
The Guardrail Base GB is at the heart of the ZinCo balustrade railing solution, which in accordance with EN 1991-1-1 (replaces DIN 1055, Part 3) can be used for horizontal forces of up to 1 kN/m and ensures installation without roof penetration. The post support is placed on the specially formed ABS plastic base plate with integrated aluminium profiles on the underside.

ZinCo offers two types of system guardrail that are fitted with the appropriate fixing flanges. It goes without saying that the Guardrail Base can be combined with any other guardrail, provided it has a suitable fixing flange.

Features:

- Can be used with ZinCo Railing Systems or building-specific balustrade systems with a suitable fixing flange
- For balustrade railing solutions or fixings without roof penetration
- Structurally tested in accordance with DIN 1055, Part 3 (replaced by EN 1991-1-1) for horizontal forces of up to 1 kN/m
- Can be used for post clearances of at least 100 cm
- 90° corners possible with standard products
- Can be combined with Fallnet® SB 200 Rail

The Guardrail Base is universally suitable for ZinCo railing systems and all other makes with the right fixing flange!



There are two additional short post supports mounted on the Guardrail GB-corner

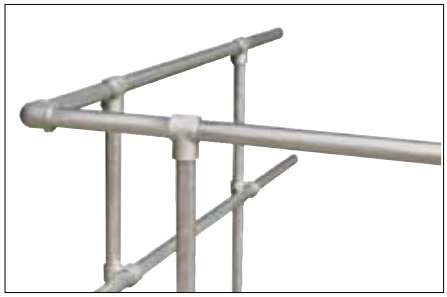
Can be combined with the fixing device Fallnet® SB 200 Rail!

Once the protective layer has been installed onto the roof waterproof membrane, the Guardrail Base GB/GB corner are set up and the posts and, if necessary, the supports for the fixing rail are mounted.

The elements are filled with grit for stabilisation purposes, which also acts as bedding material for the paving slabs which will be laid subsequently.

Once the Fallnet® SB 200 Rail has been mounted as a final step, there is nothing to stop the start of safe work around the peripheral areas of the roof.

Timelessly elegant, stylish and classy. The ZinCo Railing System SG 40-E made of stainless steel is used for aesthetically sophisticated buildings.



If it's all about functionality, the ZinCo Railing System SG40-S made of galvanised steel is available.

Individual balustrade solutions can also be mounted on the Guardrail Base. The connecting element in this case is the fixing flange. Otherwise, there are no limits to your creativity.

Product name	*Item No.*
Guardrail Base GB	3420
Guardrail Base GB-corner left or right	3445 or 3446
Railing System SG 40-E made of stainless steel	On request
Railing System SG 40-S made of galvanised steel	On request

For the two-sided guardrail perimeter of an emergency escape route, the post support of the Guardrail Base GB has an additional, second screw flange, tailored to suit the building in question.

Penetration-free safety systems for flat roofs!

This planning guide aims to provide you with a general overview of the topic "safety on flat roofs".

Our technical experts will be happy to assist you in working out the specific requirements of your construction project: from the planning phase right through to the preparation of the required bill of quantities texts.

Tell us about your project!
We've got the expertise to bring it to life.

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