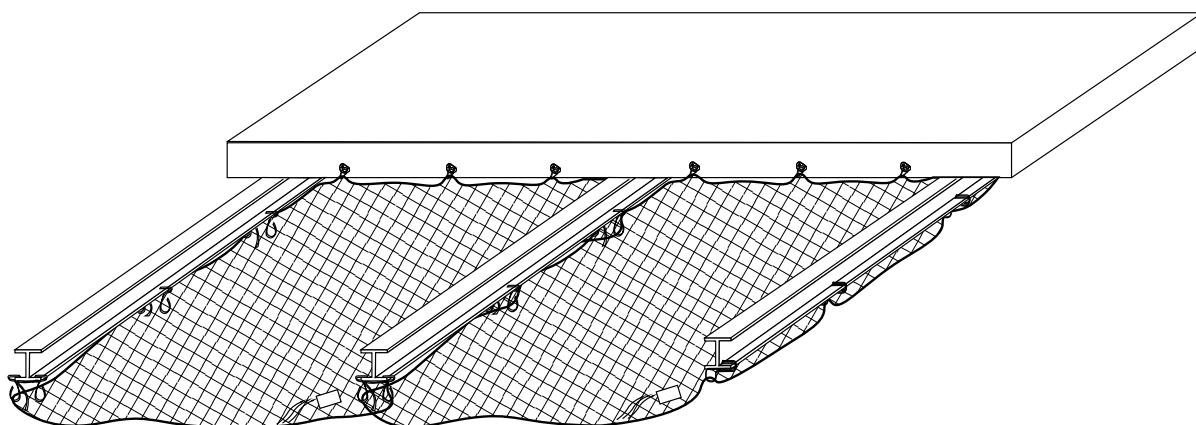


MANUAL

SAFETY NET SYSTEM S



CONTENT

2	SAFETY
2	CHECK MATERIAL
2	GENERAL INFORMATION
3	DESIGNING AND PLANNING
4	INITIAL DETAILS
6	PREPARATION
9	INSTALLATION
11	MAINTENANCE AND REPAIR
12	SAFETYCHECK

GENERAL INFORMATION

Safety nets are used to minimize injury from falls when working at height. Safety nets system S are used in the horizontal plane and installed below the worker operating at height. In the event of a slip, trip or fall, the worker is contained within the Safety net. Safety nets system S meets the requirements according to EN 1263-1 and EN 1263-2. Safety nets can be used with a maximum falling height up to 6 m (3 m within 2 m of the edge). Install the Safety net as close as possible to the working level, preferably within 2 m.

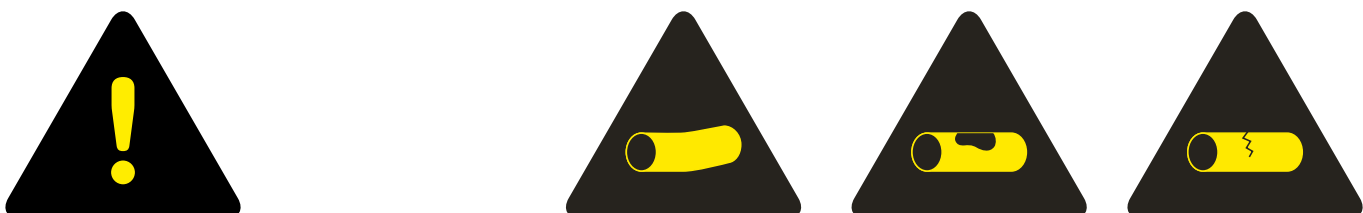
SAFETY

To reduce risks at the work site make a documented risk assessment and action plan. The following risks and measures are always present when installing fall protection:



CHECK MATERIAL

Check all parts for mounting. If in doubt, contact the fall protection adviser, replace or discard damaged material



DESIGNING AND PLANNING

OUR WAY OF CREATING SAFE WORKING SITES

1

EDGE PROTECTION ANALYSIS

A working method has been developed with which we already at the designing stage are present to develop solutions according to an established structure – an Edge Protection Analysis.

We identify situations where a risk of falling may be present, and solutions are then specified already at the design stage. We co-operate with the project management, designers and local managers to create safe working sites.

2

TRAINING

At the start of new projects we carry out training of installers and safety representatives in regard to laws and regulations, and the current edge protection solutions. The installers also get instructions as to individual checks with checklists and work methods. The training and instructions are adapted to the requirements of the projects and are carried out, where possible, at the working site.

3

USAGE

We also train the users in how to use the protections installed by the installers. Many different professional groups handle the edge protection on a daily basis, and therefore good knowledge is essential.

Follow-up tasks are continuously carried out, including measures in order to assure the highest possible degree of safety at the working site.

This SafetyCheck is a safety inspection that focuses on the installed edge protections.

4

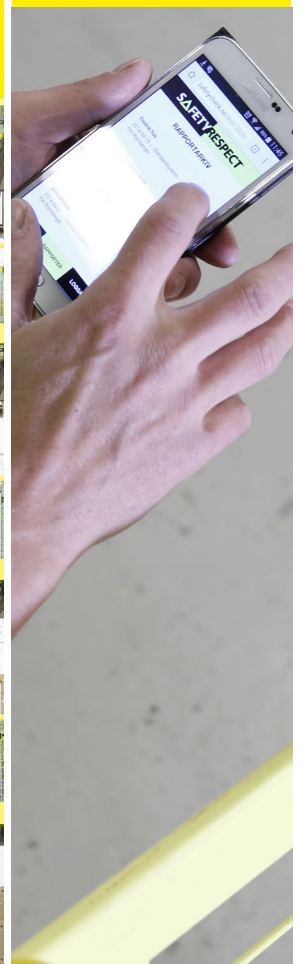
SAFE WORKING SITE

What we create together with our customer is a safe working site with a clear structure, analysis, solutions and documentation. With the correct attitude from the management and personnel in all sectors and available competence, together we create safe, and for all parties, profitable construction sites.

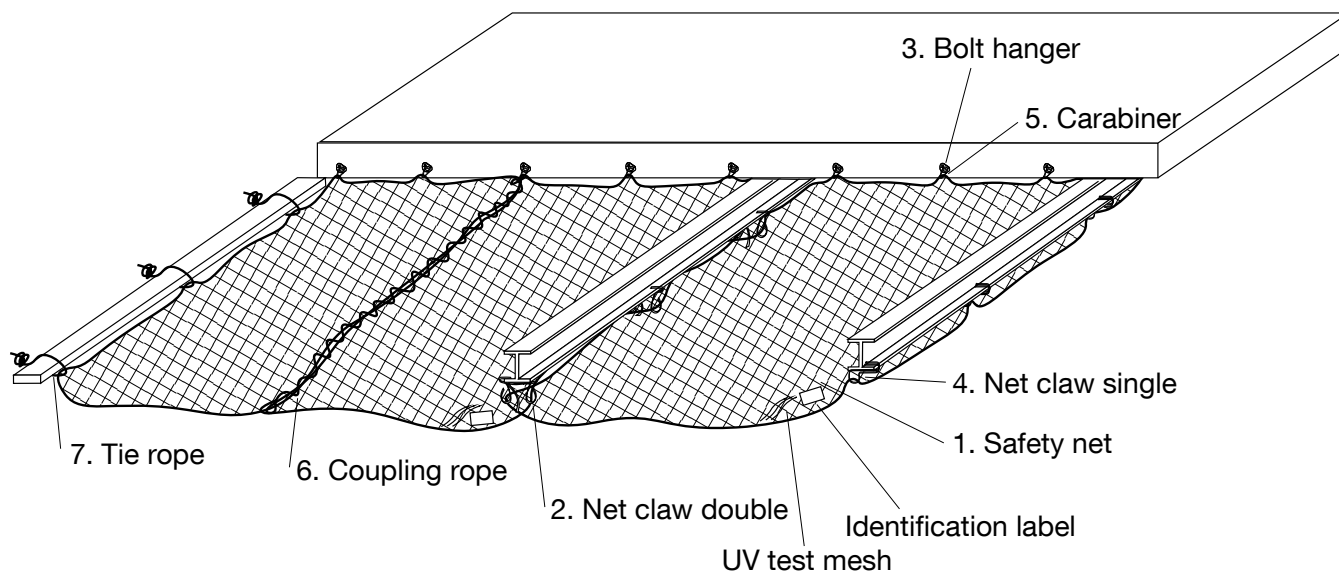
5

ACTIVE SAFETYCHECK

We can service an already installed edge protection based on a SafetyCheck that has been carried out at an earlier stage. We make the necessary corrections of possible defects, make additions to the edge protections, optimize material of delivered and installed edge protection, move and remove materials on slabs, etc. We look forward and solve future edge protection situations.




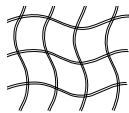
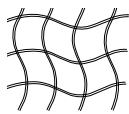
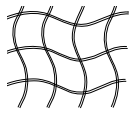
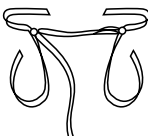
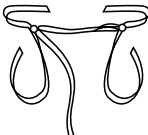

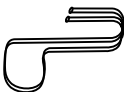


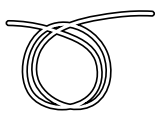
COMPONENTS



IDENTIFICATION LABEL

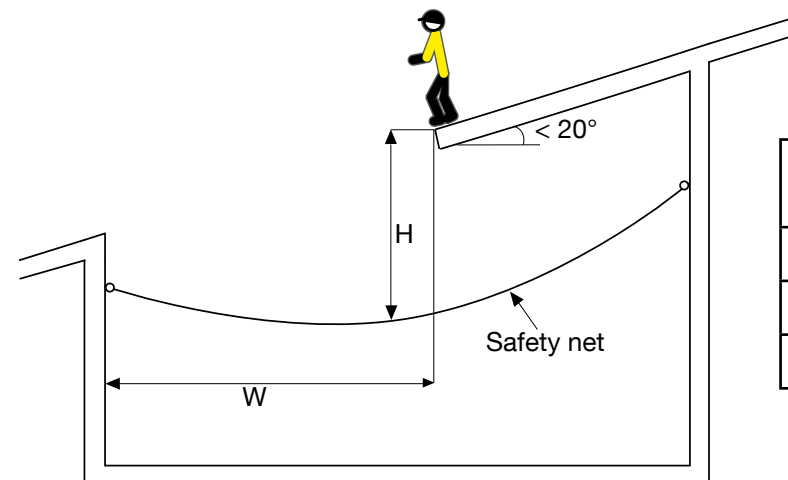
Each Safety net must have test meshes and label fixed to the net containing the following information to meet the standard.

Designation	European standard	System	Mesh size (mm)	Net size (m)
Safety net	1263-1	S	M -XXX	XX-XX
SAFETY NET EN 1263-1 Minimum breaking force of the test mesh 2,2 kN.				
Register no. (Object) XXXXXX				
Date of production XX/XXXX				
Date of test XX/XXXX				
Reference no. (Art. no.): XXXXXX				

ID	ART. NO.	DESCRIPTION	DIMENSIONS	WEIGHT	ILLUSTRATION
1	941010	Fall protection net 100x100 mm with extra mesh 20x20 mm	10x12 m	29 kg	
1	941011	Fall protection net 100x100 mm with extra mesh 20x20 mm	8x12 m	23 kg	
1	941012	Fall protection net 100x100 mm with extra mesh 20x20 mm	8x10 m	19 kg	
2	941013	Net claw double (Grippa)	22 mm	0,9 kg	
2	941014	Net claw double (Grippa)	50 mm	0,9 kg	
3	967062	Bolt hanger		0,1 kg	
4		Net claw single		0,3 kg	
5		Carabiner		0,1 kg	
6		Coupling rope			
7		Tie rope			

CATCHING WIDTH

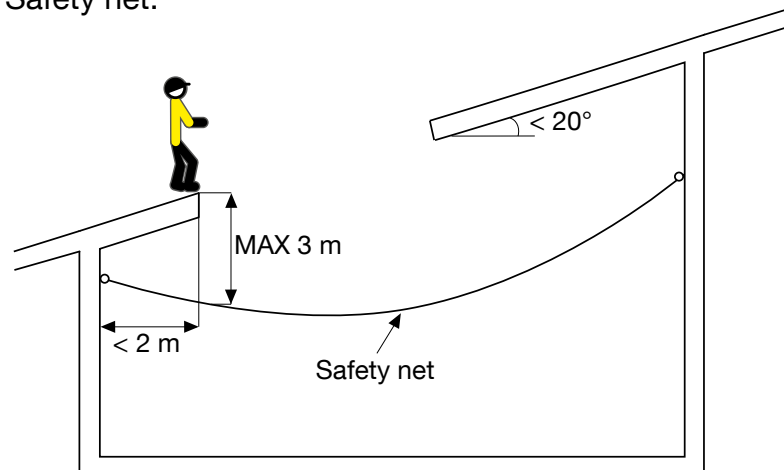
Catching width, W is the horizontal distance from working position to the edge of the Safety net. The distance is affected by the height of the fall and the Safety net must be wide enough to catch the falling persons forward movement. Vertical distance, H between working level and safety net should not exceed 6 m.



Fall height H	Catching width W
$\leq 1,0$ m	$\geq 2,0$ m
$\leq 3,0$ m	$\geq 2,5$ m
$\leq 6,0$ m	$\geq 3,0$ m

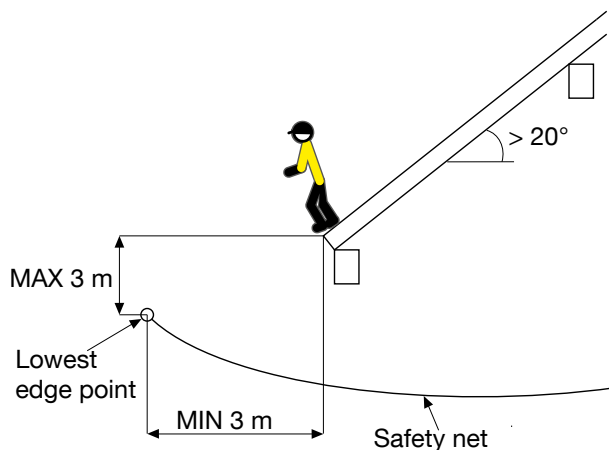
Working position < 2 m from edge

Vertical distance should not exceed 3 m when working position is < 2 m from edge of the Safety net.



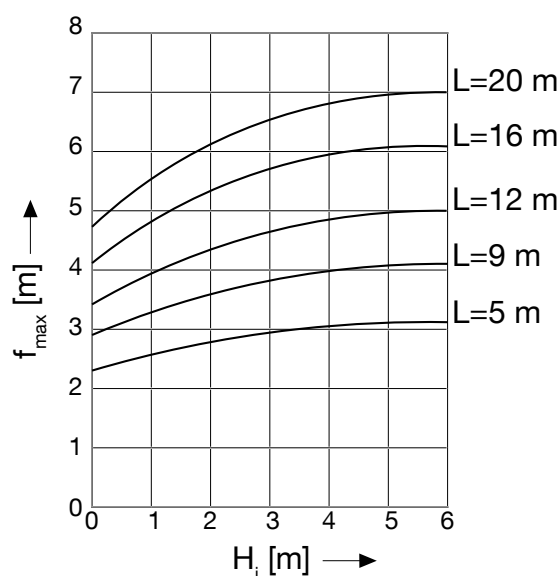
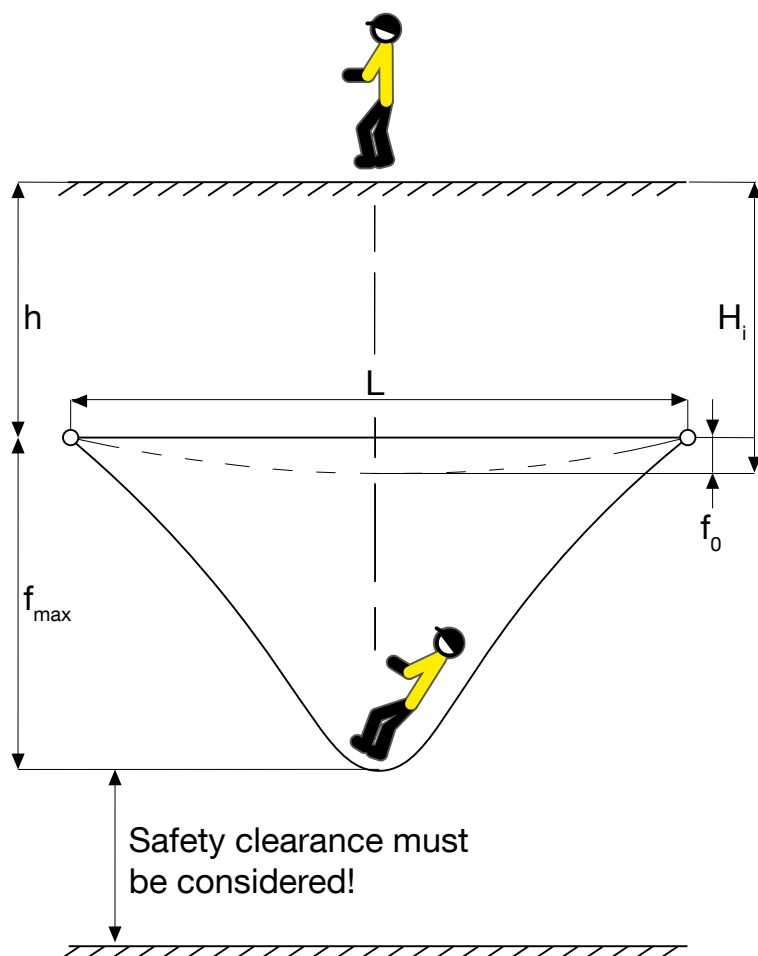
Working surface $\geq 20^\circ$

If working surface is $\geq 20^\circ$ the vertical distance between working level and the lowest edge point



DEFORMATION AND CLEARANCE DISTANCE

There must be enough clearance below the Safety net to allow deformation when a person fall into it.



- h Vertical distance from attachment point of Safety net to working position.
- L Span of Safety net, (shortest side).
- H_i Vertical distance from Safety net to working position.
- f_0 Net sag, maximal deformation from weight of Safety net.
- f_{max} Maximal deformation from weight of Safety net and the dynamic weight.

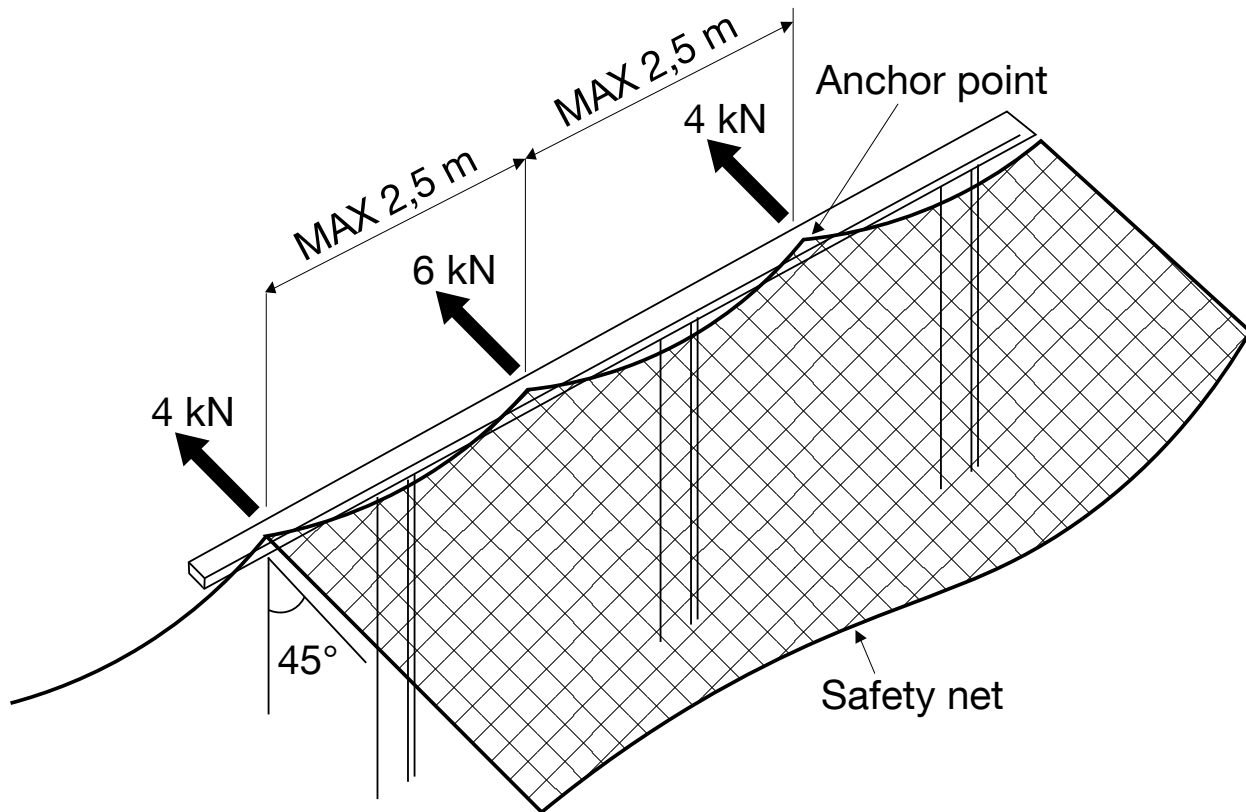
where:

$$H_i = h + f_0 \leq 6 \text{ m}$$

$$f_0 \leq 0,1 \times L$$

SUPPORT STRUCTURE

Safety net must be attached to an anchor point at least every 2,5 m. The characteristic load at each anchor point must be capable to withstand 6 kN at an angle of $\alpha=45^\circ$. For the calculation of the support structure, three characteristic loads of 4 kN, 6 kN and 4 kN should be considered applied in the least favorable way, see figure:

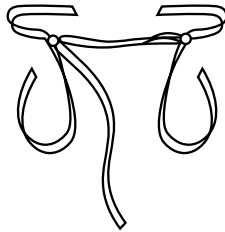


METHODS

Safety net can be attached to the structure with following components:

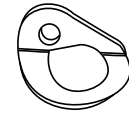
Net claw double (Grippa)

Attached to horizontal steel beams.



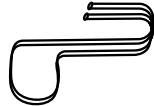
Bolt hanger

Attached with M12 screw.



Net claw single

Attached to horizontal steel beams.



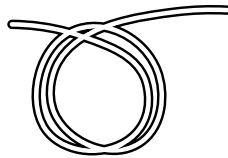
Carabiner

Minimum tensile strength of 6 kN.



Tie rope

Minimum tensile strength of 30 kN and tested according to 1263-1.

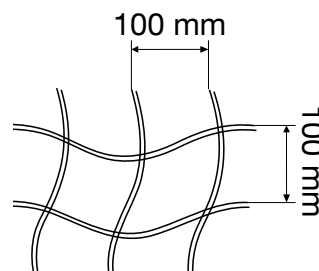


KNOTS

When using Tie ropes, there are various knots that hold for specified loads. The knots must be performed by a person with the appropriate knowledge.

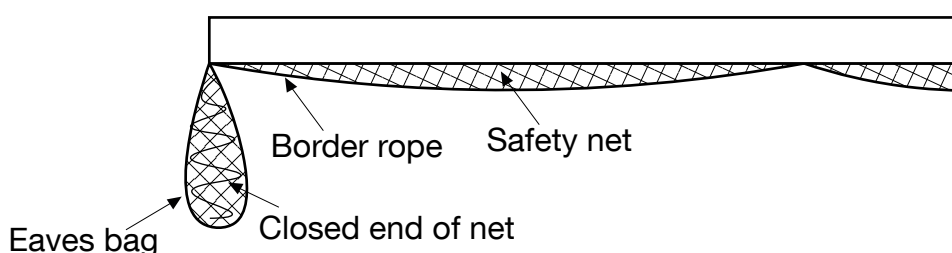
GAPS

No gaps greater than 100x100 mm (one mesh) is allowed.



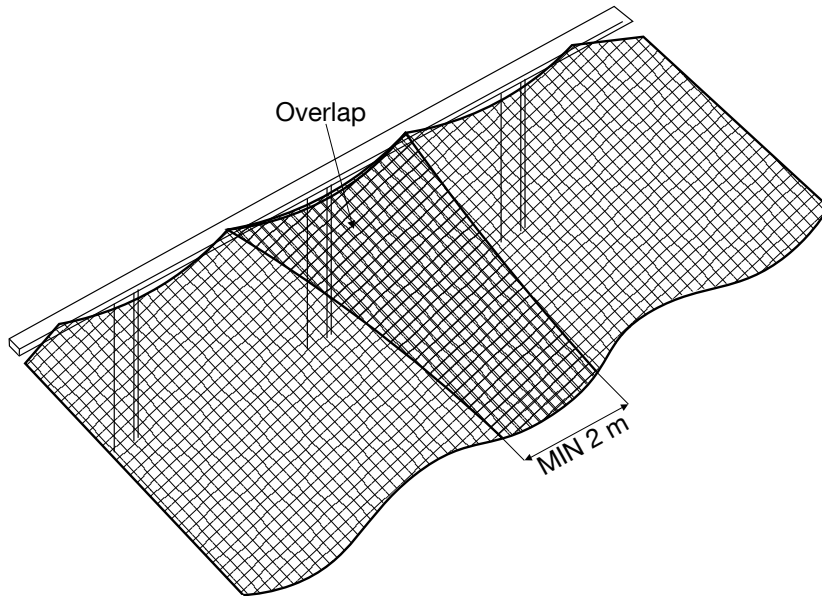
EAVES BAG

Eaves bag can be useful if anchor points are widely spaced and the Safety net is leaving a gap where a person could fall through. Fold approximately 2 m of Safety net back on itself and stitching the sides together to create a bag. Ensure that the border rope along the length of the eaves bag is straight and the drop ends are closed up.



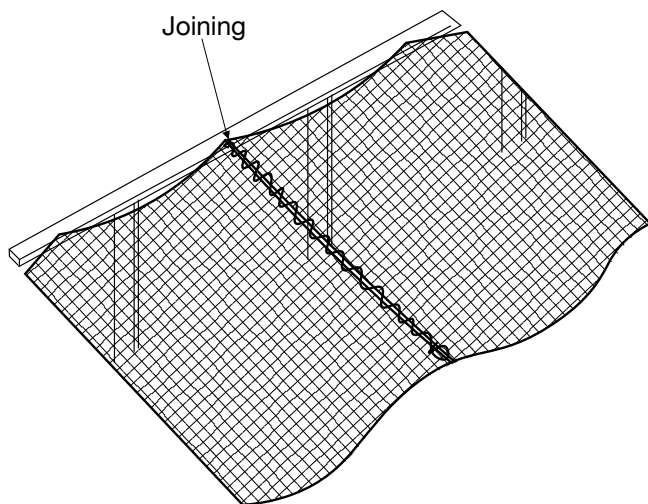
OVERLAP

The overlap must be at least 2 m measured at the narrowest point for the entire length.



JOINING NETS

When joining Safety nets they must be linked with a coupling rope with a minimum 7,5 kN breaking strength type O according to EN 1263-1. The coupling rope must pass around both border ropes and through every mesh. Tie the ends at the corners.



AFTER USE AND REPAIRS

The Safety net shall always be inspected by a person with the appropriate knowledge before it is being put back to service. Any repairs need to be performed by, or under the supervision of a competent person (see below).

ANNUAL INSPECTION

Safety net shall be tested every 12 month to ensure they have not deteriorated through UV exposure and potentially fail when used. Remove one test mesh and return to SafetyRespect. If the test is approved, a certificate together with a pass label will be issued for a further 12 month. The pass label must be attached to the Safety net.



STORAGE, CARE AND INSPECTION

Safety net should be stored in a dry place protected from sunlight. Keep away from heat sources, corrosive materials, acids, solvent oils etc. It is the riggers responsibility to carry out a visual inspection of any Safety net and attachment system. Any damage must be reported and corrected before any work commences.

COMPETENT PERSON

A competent person has been given the appropriate training and been authorized by SafetyRespect to perform inspections and repairs.

SAFETYCHECK SAFETY NET

WORKPLACE		DATE	
Location		Order no.	
Site manager		Check no.	

SITE/PART OF BUILDING			
1		3	
2		4	

CHECK POINTS	YES	NO	REFERENCE	REMARKS
Are the current installation instructions available?			Manual Safety net	
Have the recommended safety measures been followed?			Page 2	
Are the components free of damage?			Page 2	
Is the label of the net current and valid?			Page 4	
Is the catching width wide enough for the falling height?			Page 6	
Is the clearance below the Safety net enough?			Page 7	
Has the initial net sag been considered?			Page 7	
Is the support structure and the anchor points sufficient to withstand the required loads?			Page 8	
Is the maximum distance between anchor points less than 2,5 m?			Page 8	
Have the installation and joining of Safety nets been made according to instructions?			Page 9	

CHECKING THE ABOVE CHECKLIST CONDUCTED BY			
Date		Signature	