# SafeKeeper®

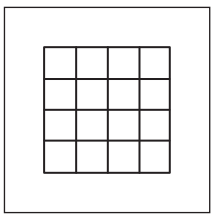
## Fall arrest safety net installation guide
## System S EN 1263-2

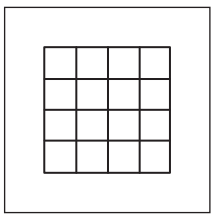
safekeeper.no

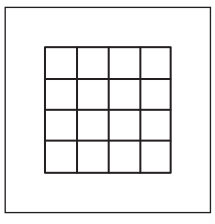
# Important information

> Safety nets are used to minimize injuries from falls when working at heights.
> Safety net system S is 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 net 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.
> Please refer to the manufacturer's recommendations for the use of these attachment accessories.
> Always conduct pre-use inspection on components.
> Ensure anchors and anchor points are as per recommended minimum load rating.
> Implement a regular post installation inspection regime.
> Drawings in this document are not to scale.

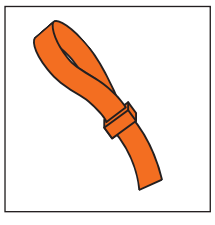
# Component icons

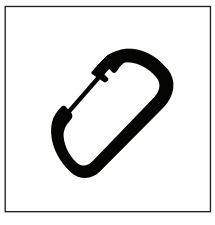

Fall protection net
FAN100

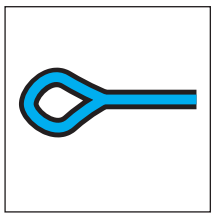

Fall protection net
FAN60

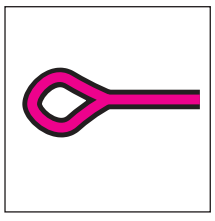

Fall protection net
SN45

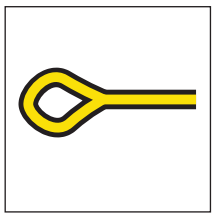

Net anchor
SA001

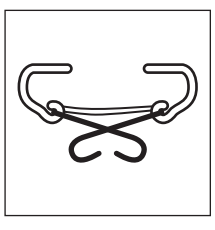

Net strap
SA002, 50cm
SA003, 120cm

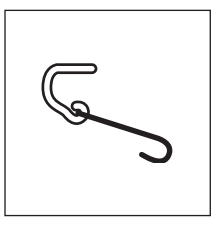

Carabiner
SA005

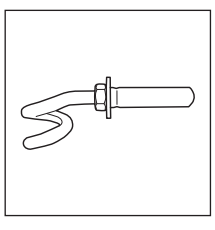

30kN Rope
Type L


15kN Rope
Type R


7.5kN Rope
Type N


Beam flange grip
VS 94 10


Beam flange hook
SA009


Pigtail Concrete
Anchor
SA008

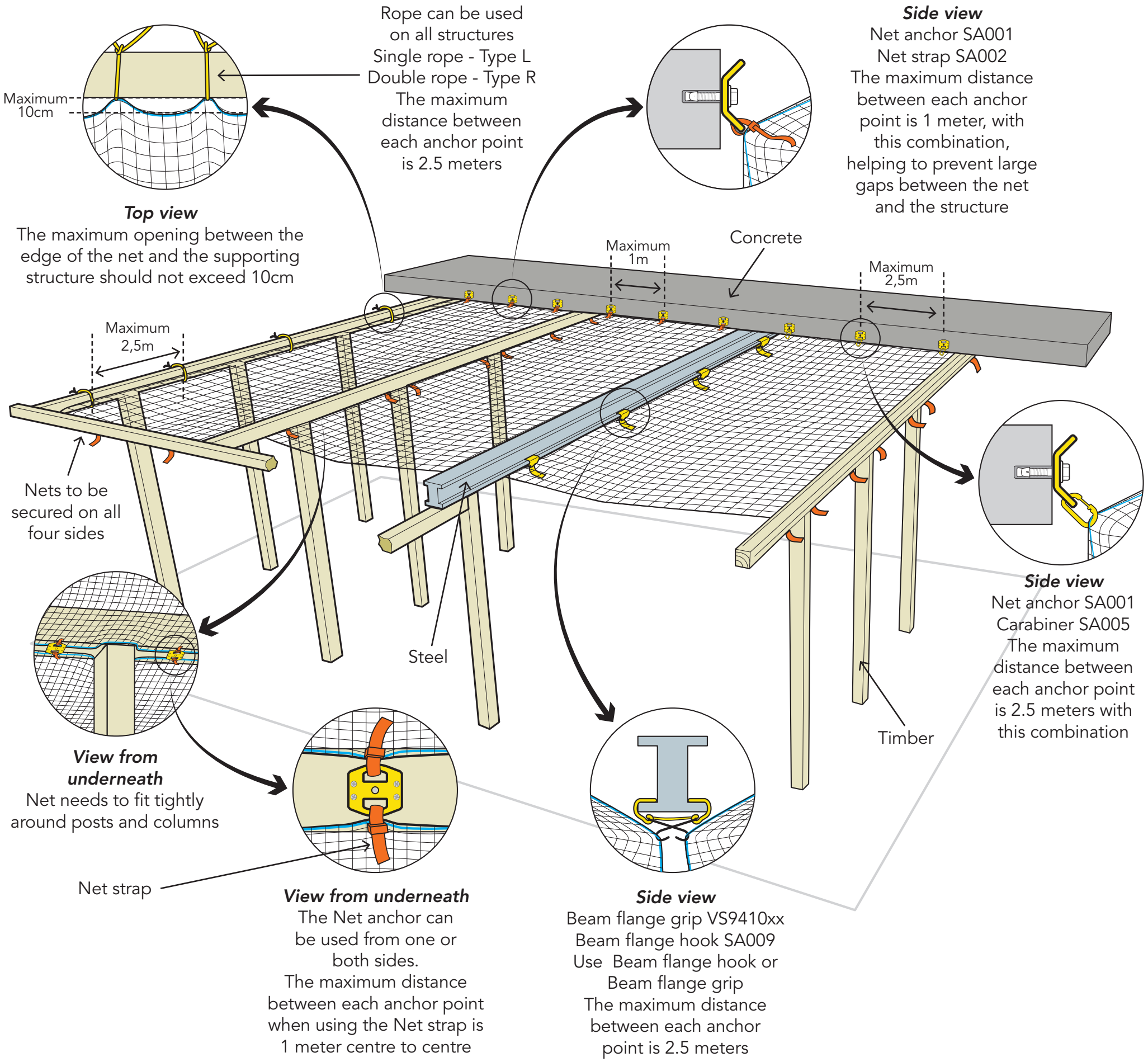
Other relevant products on page 8.

# Installation of Safety net System S EN 1263-2

## Installation guidelines onto various structural materials

> This drawing illustrates the various ways that a safety net can be installed onto the different structural materials found on a typical construction site.

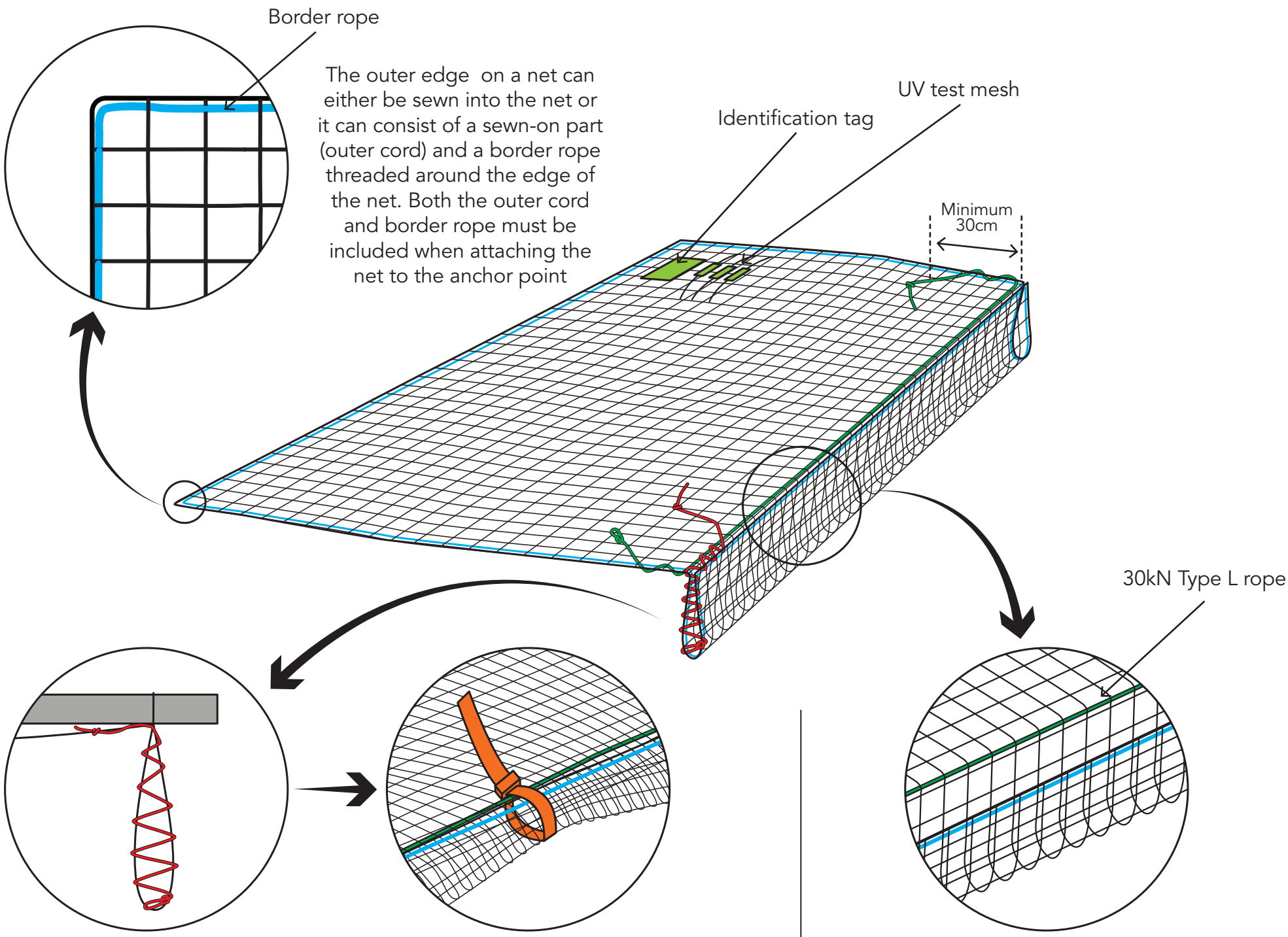
> Figure 1: Installation of net



# Components

## Fall protection net and methods of shortening

> Figure 2: There are primarily two methods to shorten a net that is too large




> ***Method 1: Eaves Bags***
> You can create an Eaves bag at the end of the net.
> The edge rope is attached to the structure in the usual manner, ensuring a tight, straight line along the entire length of the net.
> Tighten the net and let the excess netting hang down.
> The ends of the bag must be sewn closed.
> It is important to secure well at the "new corner".

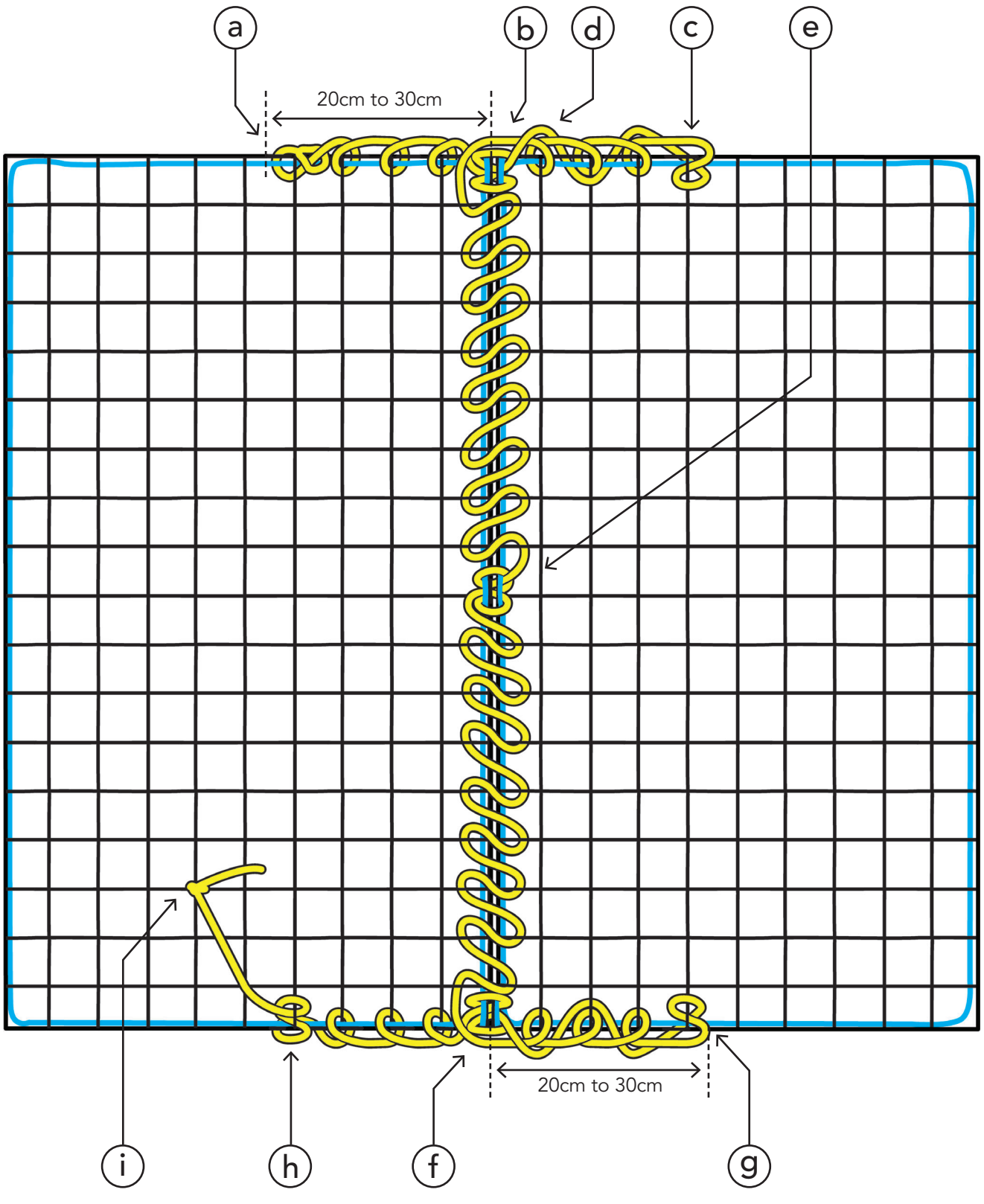
> ***Method 2: New Border Rope***
> Nets can be shortened by inserting a new rope.
> The rope must have a strength of 30kN, Type L.
> Weave the rope between each mesh.
> The ends are secured by tying several half hitches at least 30 cm inward of the existing outer cord.

> FAN 100: Net with 100 x 100mm mesh size 2,3 kJ A2
> FAN 100-B1: Net with 100 x 100mm mesh size 4,4 kJ B1
> FAN 60: Net with 60 x 60mm mesh size 4,4kJ B1
> SN 45: Net with 45 x 45mm mesh size 4,4kJ B1

# Components

## Joining of nets

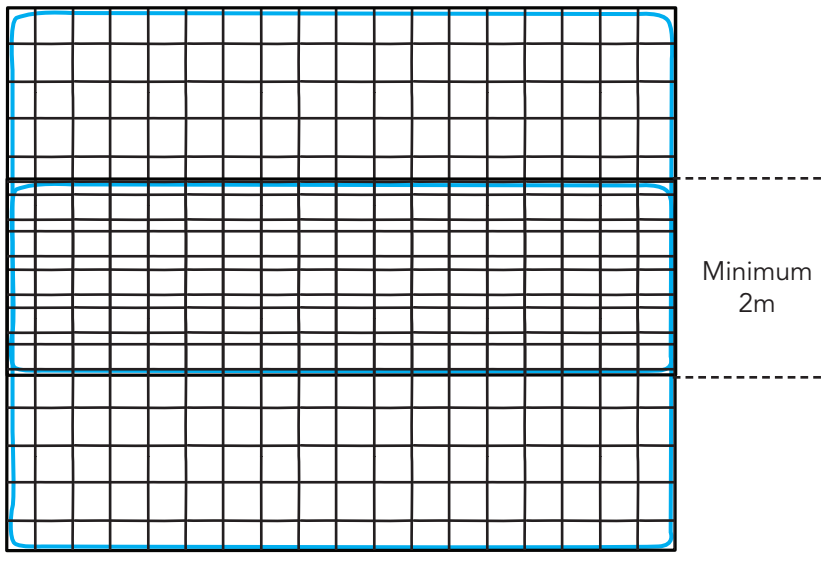
> Figure 3: Stitching of nets




a. Start 20 to 30 cm inside one of the nets and tie the rope to secure the first end.
b. Wind the rope around both the outer cord and border rope towards the joint with some half hitches along the way. Tie a knot where the corners of the nets meet, then continue in the same way 20 to 30 cm past the joint.
c. Tie a knot and then wind the rope back to the joint around the outer cord and border rope.
d. Tie a new double knot. The rope is woven down the joint through each mesh, around the outer cord and border rope on both nets.
e. Tie a knot every 10th mesh.
f. Tie a knot where the corners of the nets meet and wind the rope around the outer cord and border rope 20 to 30 cm to one side.
g. Tie a knot and then go back to where the nets meet and continue 20 to 30 cm past the corners.
h. Tie a knot.
i. Secure with a stop knot.

Gaps between the edges must be no greater than 100mm.

> Figure 4: Overlap of nets




Nets can also be joined by overlapping two nets, with a minimum of 2m overlap.
Overlap is secured with Net strap SA002 or carabiner min every 2,5m.

Requirements for safety nets for fall heights over 2 meters:
> The net must be larger than 35 m².
> The shortest side must be at least 5 meters.
> For nets smaller than 35 m², it is recommended to increase the net's strength.
> Use class B nets with an energy absorption capacity of 4.4 kJ, or reduce fall height.

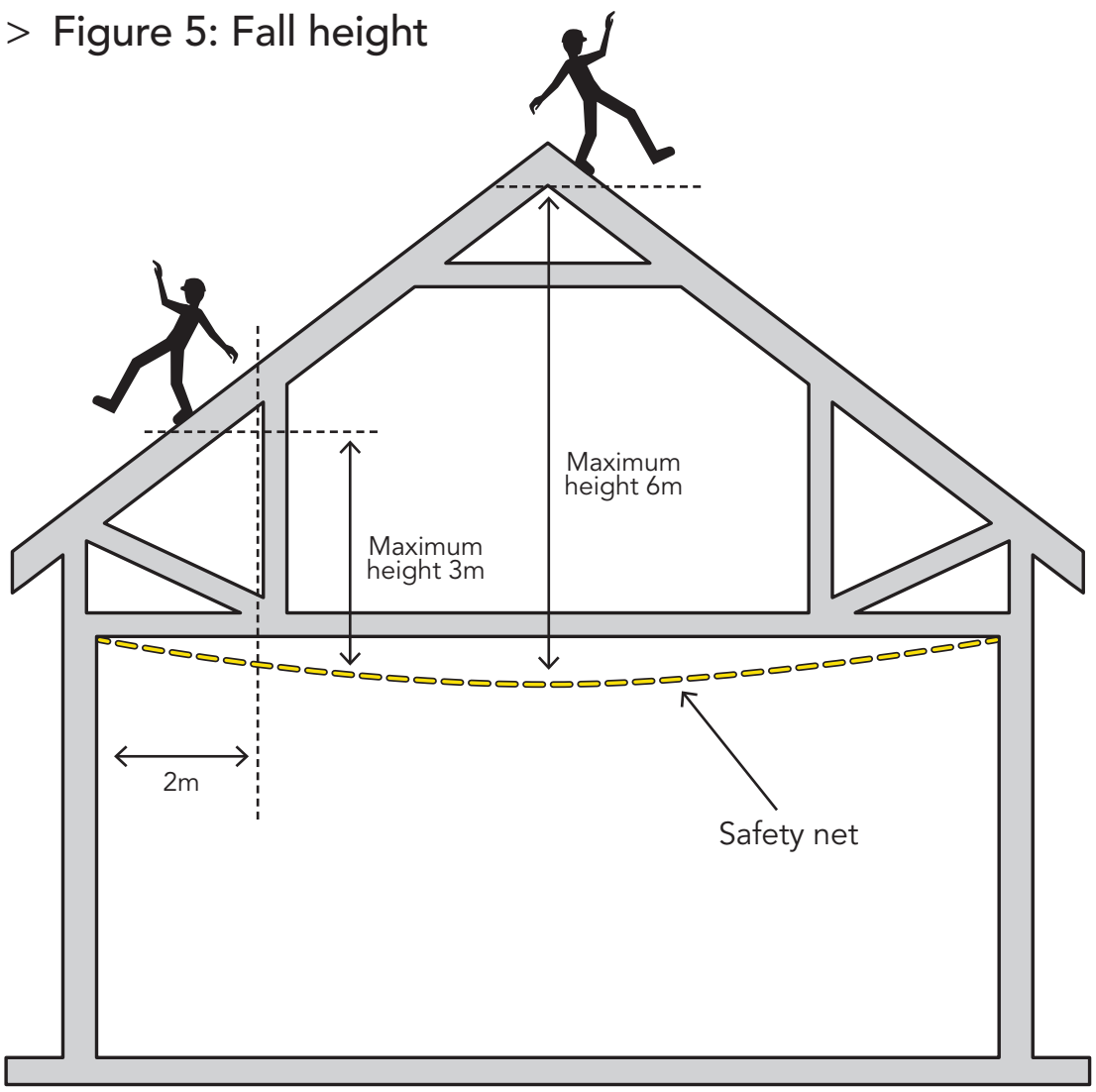
> Standard EN 1263-2 only applies to nets that meet these requirements.

# Height and clearance

## Fall height

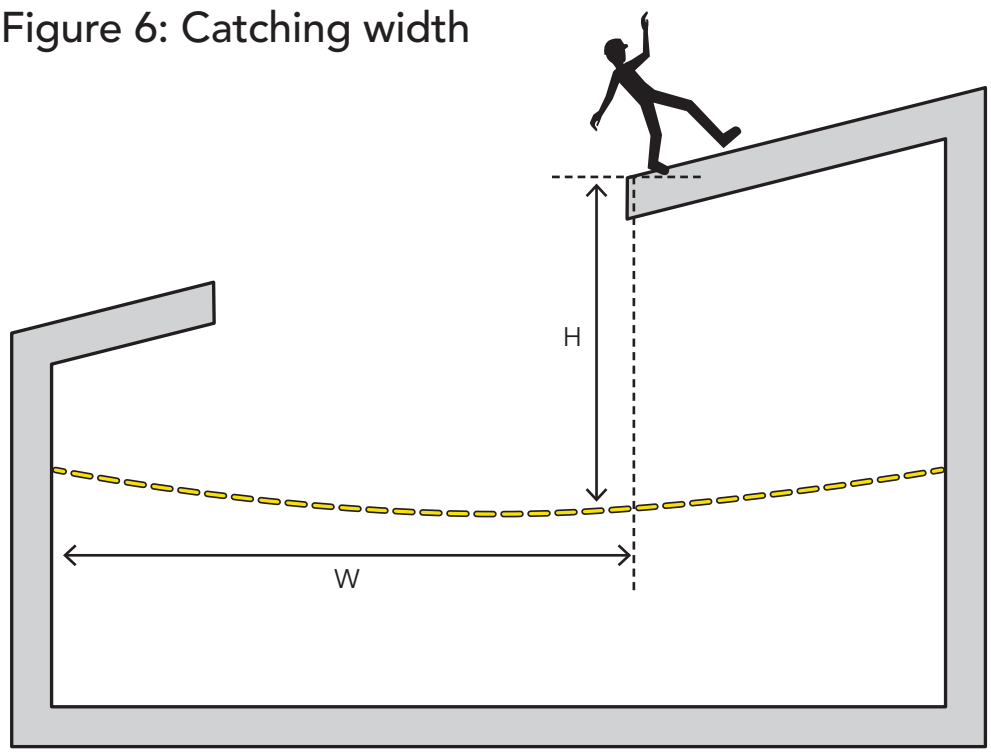
> The fall height is the distance a person would fall from the work position onto the safety net.
> Minimize the fall height by installing safety nets as close as practicable below the workposition.
> Note that EN 1263-2 permits a maximum fall height of 6.0 meters, but this is only applicable to nets larger than 35 m².

> Figure 5: Fall height




> Within 2.0 meters of the net's outer edges, the fall height between the work platform and the net must not exceed 3.0 meters.
> This is due to the reduced deformation capacity of safety nets at corners and edges.

> Figure 6: Catching width



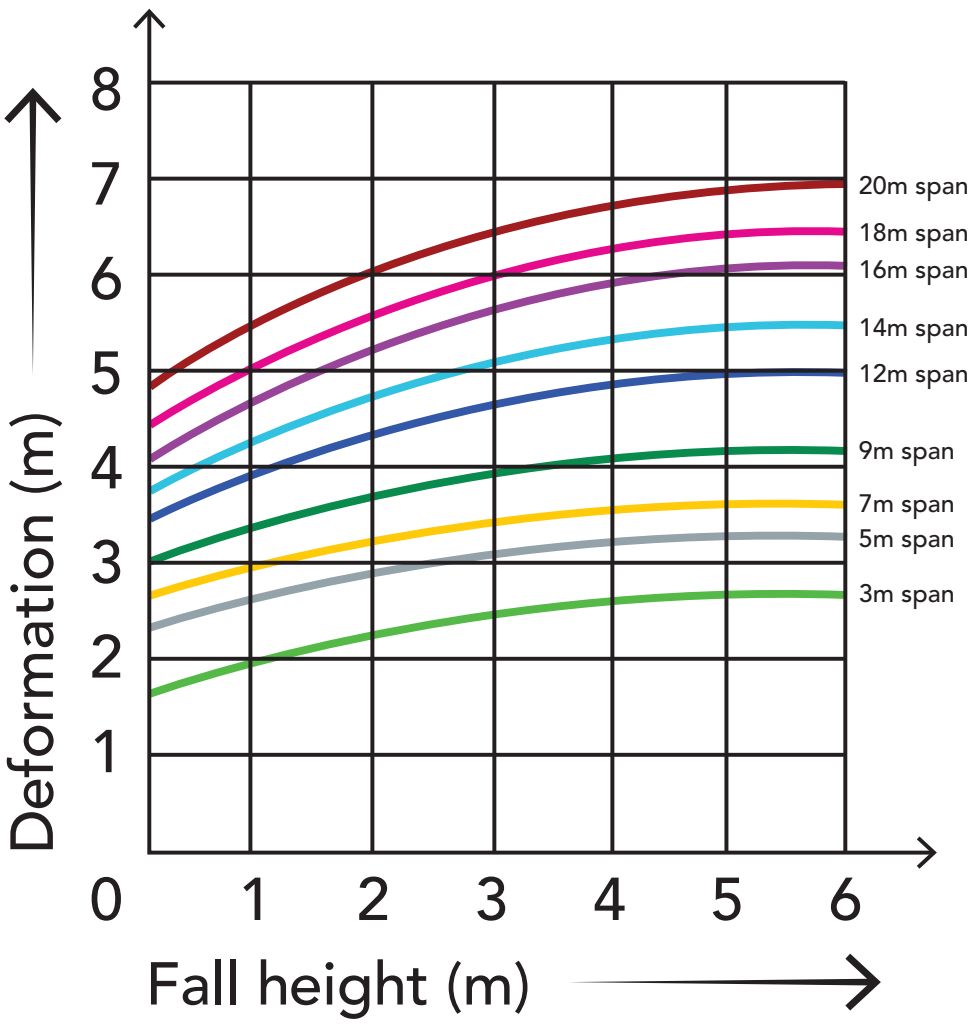

> The catching width (W) is the horizontal distance from the work position to the edge of the safety net.
> This width depends on the fall height and must be sufficient to catch forward movement.
> The vertical distance (H) from the work level to the safety net should not exceed 6 meters.

| Fall height (H) | Catching width (W) |
|---|---|
| ≤1.0m | ≥2.0m |
| ≤3.0m | ≥2.5m |
| ≤6.0m | ≥3.0m |

# Height and clearance

## Deformation chart

> Figure 7: Deformation chart



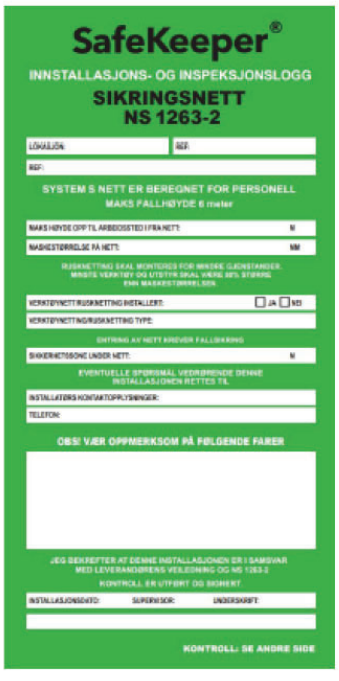

> Safety nets are designed to stretch when someone falls into them, so it's crucial to have enough clearance below to avoid hitting any objects or structures underneath.
> The required clearance depends on the free fall height and net span, as shown in chart below.
> Nets should be installed close to the working level to minimize fall height.
> Ensure the clearance is maintained to prevent the faller from striking objects.
> If immovable objects are present, a risk assessment should be conducted to minimize this risk.
> In case of potential insufficient clearance to the floor/ ground, ratchet straps can be used to reduce deflection.
> The straps are threaded in and out between the mesh of the net.
> Suitable products are SN9004 and SN9005.

> Note: The span of the net is its shortest side.

## Protection against dropped objects

> Nets can also be used to secure against dropped tools and equipment.
> Refer to our relevant products on page 8 for our selection of overlay sheets and debris netting which are used in combination with safety nets.

## Installation and inspection tags



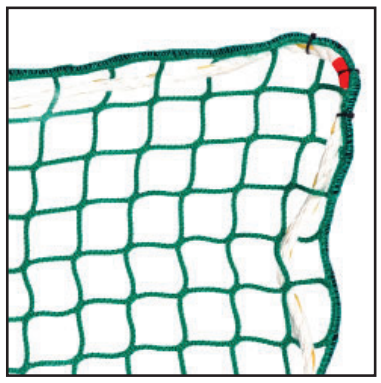
> **Installation:**
> The installation and inspection card holders should be placed in an easily accessible and visible location.
> On completion of the installation: The responsible person should place the signed green tag in the card holder.
> If the installation is not approved, the green inspection tag must be removed and the Danger sign remains visible.

> **Inspection:**
> The responsible person must establish a frequent inspection schedule of the installation.
> Inspections must be carried out regularly.
> During inspection, the yellow side of the tag should be completed and signed upon approval.
> The green side of the tag should be visible in the cardholder upon inspection approval.

# Relevant products



**FAN100**
Fall protection net for personnel A2, num. sizes



**FAN60**
Fall protection net for personnel B1, num. sizes

**FAND100**
Fall protection net w/debris net, num. sizes

**FAN100-20**
Safety net w/tool net inlay, num. sizes

**SN45**
Work positioning and fall protection net, flame retardant, num. sizes

**SN5000 series**
Net for tools and equipment 15 mm mesh flame retardent

**SN7000 series**
Net for tools/equipment documented for offshore

**VS9410xx**
Beam flange grip

**SA001**
Net anchor for installation of nets


**SA002**
Documented net strap for fixing to SA001

**SA005**
Carabiner

**SA009**
Single beam hook

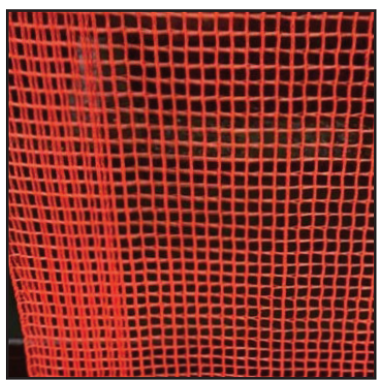
**SN9001 / 9002 Type L**
12 mm Tie rope w/eye, 3m and 13.5m flame and non-flame retardant

**SN910135 Type R**
10mm rope with eye, 13.5m flame retardant

**SN96065 / 96165 Type N**
6 mm coupling rope with eye 6.5/16.5m flame retardant


**SN9003 / 9004 / 9005**
Ratchet straps, num. sizes

**SN8010/11 roll**
Barrier sheet, 1.5mm



**SN8012/13 roll**
Barrier net, 6mm

**TW-08**
Cable tie threading tool


**SA021 / SA020**
Inspection tag and holder with checklist