

Installation Guide for
Walk-on Nets

Protective Nets for horizontal use
as tensioned access platform.

Visor Fall Arrest Nets



Visonets

INSTALLATION OF WALK-ON NETS

(PROTECTIVE NETS FOR HORIZONTAL USE AS A TENSIONED ACCESS PLATFORM)

A.- INTRODUCTION

Tensioned Access Platforms (TAP), formerly known as Working Platform Nets, Work Positioning Nets or Walk-on-Nets, have become as a safe and useful alternative access mode over traditional solutions such as scaffolding or even Mobile Elevating Work Platforms (MEWP) especially to hard-access areas.

In combination with an adequate system of edge protection, it is a safe system for workers that can be combined with debris meshes and makes it possible to carry out work independently of the activities carried out at lower levels, being all this is the main reason for the rapid growth of the use of this system internationally.

Currently there is no EN Standard yet for the specification or use of these systems so this user's guide is primarily intended for installers who assemble or use working platform nets and provides information on the provisions of relevant standards that must be taken into account when dealing with working platform nets.

It is important to note that whereas the net manufacturing is the sole responsibility of the manufacturer, the installer who assembles working platform nets is the sole responsible for the safe handling of working platform nets. The handling of working platform nets includes the assembly, conversion and dismantling as well as their safe storage, transport and use.

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VISOR FALL ARREST NETS S.L.

Polígono Industrial Los Barrios
C/Los Álamos, 9
03179 Las Heredades
(Rojales) Alicante. Spain

(+34) 966 792 018

(+34) 966 792 874

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international@visornets.com

B.- SYSTEM COMPONENTS

TAP system is designed to reduce the deflection (sag) of the nets when in use with the aim of creating a stable working area, being its main components the following:

- protection nets manufactured according to the standard EN 1263.1, class B1, square mesh size no larger than 45 mm,
- tension straps with ratchet to be used as a sort of transversal beams forming net grids,
- tie ropes or additional clamping belts to reduce the sag of the net and the gap with the supporting structure, stabilising it.

C.- INSTALLATION

Installation will be always carried out by competent installers to a method statement and installation drawings prepared from the design for the particular project. Suitable management controls shall be in place, including:

- Staff trained in the installation
- Personal safety requirements, for example MEWP License, Industrial Access Qualification, Fall Protection Qualification.
- Risk Assessments and Method Statements
- Emergency planning

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Assembly system steps:



- spread the platform net panes on the ground underneath the area to be protected after verifying that there are no elements on the floor that may damage them.
- check that net material used corresponds to class B1 according to the standard EN 1263-1, not having a mesh size bigger than 45 mm



- net can only be used within the first 12 months of manufacture, or
- the aging, damage and abrasion tests will be carried out regularly and the test certificate will be documented

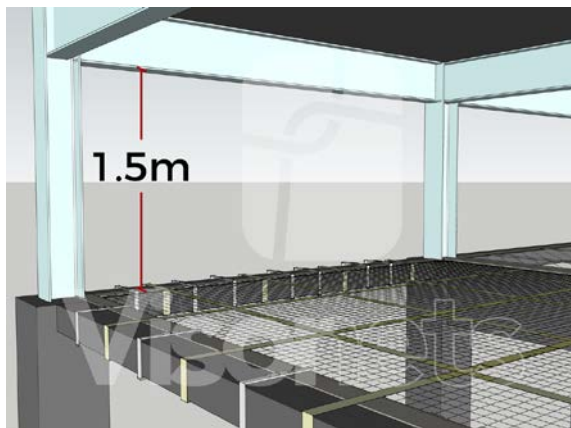
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- it must be equal to or less than 1.5 m underneath the lower edge of the construction
- join the corresponding panes when several nets are required to complete the area to be covered; these joins must be made every 10 cm, mesh by mesh and creating a reinforced knot every 10 squares with a 15 kN coupling rope



- the inclination of the installed net will not be more than 20° (or maximum slope of 36.4%).

Note: point to be considered in advance even within the hazard assessment as "constructive prerequisites"

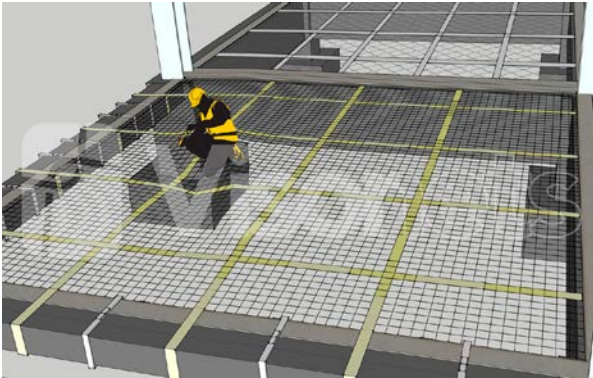
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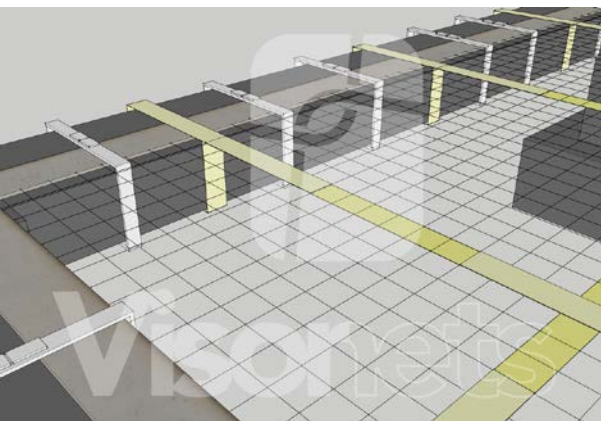
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· the working platform nets will be fastened by their border rope by means of tie ropes or straps every 50 cm, whereby ropes or straps will have a minimum breaking strength of 30 kN. It is necessary to attach a minimum of 2 consecutive sides of the net to the supporting structure. The other/s side/s could be attached to the structure by means of clamping belts.



· the tension straps used as trusses will be threaded into the net surface, puncturing each time after a maximum of 10 meshes (10 meshes below and 10 meshes above).

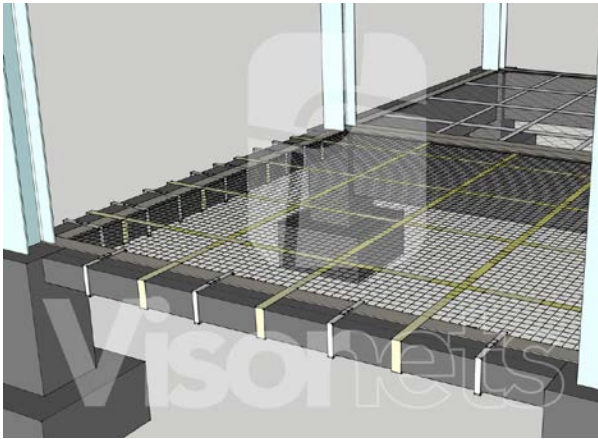
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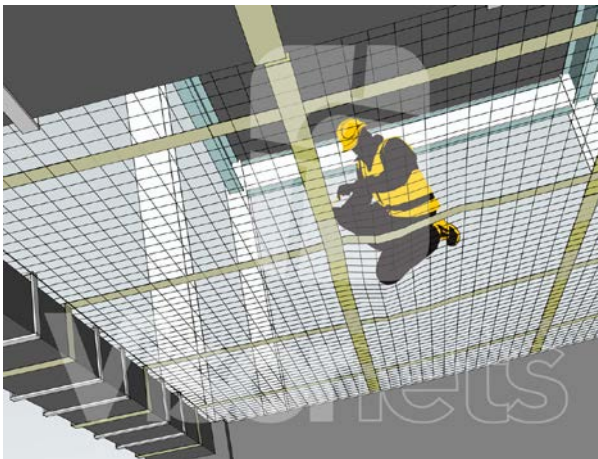
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· the tension straps will conform a grid spacing of a maximum of 2 x 2 m and a maximum distance to the edge of the platform net of 2 m. Straps 35 mm wide, supplied in 2 parts, with pointed hooks in both ends and an intermediate pressure ratchet. Lashing force LC between 1500 and 3000 daN according to the abovementioned EN 12195-2,



· the pretensioning force in the crossbelt will be applied by hand, whereby it can be assumed that horizontal loads of at least 2200 N can occur per anchor point.

Note: belts according to DIN EN 12195-2, - Lashing means made of chemical fibers - Information on the corresponding clamping force will be available and

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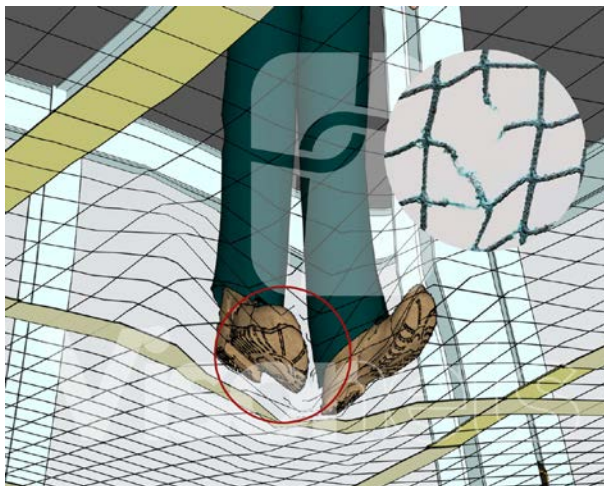
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- the maximum sag of the net when loaded with a person in the least favourable place will be not more than 50 cm.

Note: after tensioning the straps on the second day, the sag must be reduced to only 30 cm.

If the net is loaded with static strength, the horizontal loads of the attachment ropes or belts are stressed to max 0,5 kN and the horizontal loads of the additional clamping belts are stressed to max 3,5 kN.



If the net is loaded with dynamic strength, the horizontal loads of the additional clamping belts are stressed to max 6 kN.

- Visual inspection for damage to the nets.

Note: left small picture shows destroyed mesh, right small picture the abrasion at the mesh

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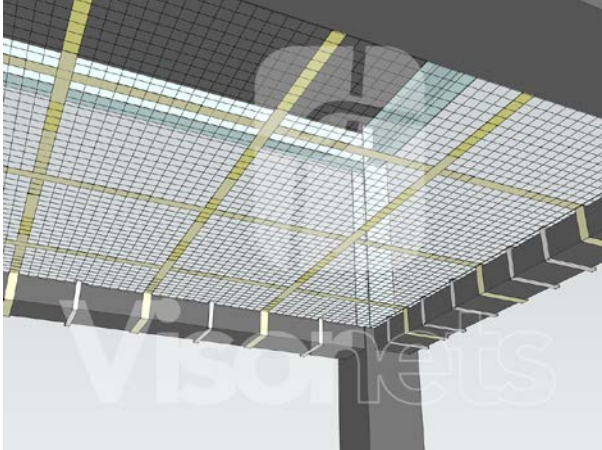


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D.- HANDOVER



All systems must undergo a pre-use inspection prior to formal handover to the user. This should be based upon:

- A checklist of the major components
- That the installation meets the design requirements and the details of the installation drawings

The pre-use inspection and handover should be formally recorded. The installer must provide information in writing to the user on the safe use of the system.

E.- ACCESS TO THE WORKING PLATFORM

It should be controlled by designated access and egress points and people authorised to access the platform controlled by a Permit to Work system and aware of the platform's loading capability before its use.

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F.- OPERATIONS

Consideration should be given to the primary and secondary tasks to be undertaken around the system (for example cutting and welding, movement of glazing panels etc), as well as other unrelated operations around the system controlled to ensure they cannot adversely affect the system (for example craneage, storage of materials etc). The transportation height for any object is limited to max 3 m above the net.

Every employee working on the working platform net should be instructed on how to use it, as he also has a duty to cooperate in occupational safety and health.

Important contents of a training are e.g.:

- Unauthorized changes must not be made on the working platform system, for example: removal of fasteners, straps and edge protections. They only can be carried out by the installer
- It should be avoided people working below workplaces. There is an increased risk of accidents due to falling objects!
- For your own safety, it is important that the employees use the appropriate ascents and descents.
- Do not jump on and in working platform nets

G.- USE OF PERSONAL PROTECTIVE EQUIPMENT

Both the erecting and dismantling of the safety nets have to be executed with the corresponding PPE's.

H.- RESCUE AND EVACUATION

A rescue and evacuation plan must be placed on site by the installer before the installation and use of the platform nets.

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I.- INSPECTIONS

Inspections should be carried out by a competent person who can demonstrate suitable knowledge to identify obvious defects and who is able to take an objective view on the system being inspected.

- **Pre Use Inspection** → The user should visually inspect the system prior to each use for obvious defects or interference.
- **Periodic Inspections** → Periodic inspections should be carried out weekly.
- **Interim Inspections** → More frequent inspections may be required where conditions are particularly harsh or hostile to the system. They will be carried out where an exceptional event has occurred which could jeopardise the integrity of the system.
- **Annual Inspections of the test meshes** → The platform net is provided with 3 test mesh patches for re-inspection annually. The user has to send to VISOR FALL ARREST NETS S.L. or qualified distributor the test patches at the end of every year expiration of the net; Then our laboratory will do the test of the mesh, and if the result of the main test is satisfactory we will proceed to re-certificate the usage of the net as safety net by one year more, giving to the customer an individual certificate.

J.- DISMANTLING OF THE PLATFORM NETS

This has to be done by cutting the tying ropes and/or loosening the tension straps of the net to the structure, either from above with the help of a platform or from below with a cherry picker.

K.- MAINTENANCE, STORAGE AND CARE OF THE SYSTEM COMPONENTS

Maintenance should be carried out in line with the Visor Nets recommendations.

Repairs should be carried out by Visor Nets or in line with its recommendations.

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- The nets must not be removed from their bag until their installation.
- In case you detect a visual defect or a tear of any of the elements that compose the net, it is recommended to remove and not install.
- The nets that have already been used and may only be erected again after revision by a competent person or authority.
- In the case that a net has been subjected to the impact of a person or object, this net may only remain in place after revision by a competent person or authority.

The nets will be kept away from UV rays and free of oils and solvents.

Note:

In the case that a site requires an installation which cannot be executed according to the here contained indications, it is recommended to apply for a special procedure; otherwise we do not commit to the guarantee of the safety of the installation.

The use of other anchoring elements from other manufacturers entails the non guarantee of the safety of the installation and of the net in particular.

In addition to the information provided by the present instructions for use, country-specific health and safety regulations must be taken always into account.

This Guide is in revision 1.

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CHECKLIST FOR THE WORKING PLATFORM NETS SYSTEM

	YES	NO
General details:		
Data: ___ / ___ / _____		
Customer: _____		
Working platform net manufacturer: _____		
Date of manufacture of the nets: ___ / ___ / _____		
Working platform net installer: _____		
Project: _____		
Works location: _____		
	YES	NO
Materials:		
Full reception of all the working platform nets and accessories		
Nets manufactured and labeled according to EN 1263.1		
Nets apparently undamaged		
Maximum mesh size of the net 45 mm		
Tension straps of 35 mm width (min.) + pressure ratchet. Lashing force from 1500 to 3000 daN (or from 15 to 30 kN)		
Installation:		
Net area not deeper than 1.5 m below the construction		
Net level not inclined more than 20°		
Net attached at least every 50 cm (ropes of 30 kN minimum tensile breaking force)		
Maximum wall clearance or distance to the structure 30 cm		
Net attached to the structure at least by 2 of its consecutive sides and the other/others to a tension straps		
Tension straps spaced forming a square grid of maximum distance of 2 x 2 m		
Threading the tension strap through the net at least every 10 meshes		
50 cm maximum sag observed of the net when loaded with 1 person in the most unfavorable place		
30 cm maximum sag after retightening the tension straps on the second day		
Rescue and evacuation plan issued by the installer		
Use, maintenance and dismantling:		
Pre use inspection carried out for damage and abrasion before using the platform net		
Periodic inspections carried out weekly		
Interim daily inspections after extraordinary events (e.g. longer periods of non-use, accidents, natural phenomena, modifications at the net, etc) or where conditions are particularly harsh or hostile to the system		
Controlled access to the working platform		
Aging test carried out and documented		
Hand over plan for use to client		
Stability and safety at the time of commissioning confirmed by the client		
Nets stored away from UV rays and free of oils and solvents		

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