

SpanSet[®]

**SpanSet WalkAbout
Technical Datasheets**

Height Safety
Lifting
Load Control
Safety Management



WALKABOUT™ ACCESS SYSTEMS

SpanSet manufacture, Supply, Inspect, Service and Provide Training for Height Safety, Lifting and Load Restraint Equipment.

WalkAbout Access Systems

UK Patent PM338970™

WalkAbout is an innovative lightweight platform for working at height. This proven system is a tensioned decking designed to enable workers to access awkward or remote areas at height, and due to its low deflection, to work with the ease normally associated with ground-level tasks.





WALKABOUT™ ACCESS SYSTEMS

WalkAbout offers a collective work at height solution only surpassed in terms of safety by avoidance and once in place it provides workers with a similar working environment to that if they were working at ground level with no fall hazards.

Workers can walk about freely without the restrictions or need to be attached to an anchor by a harness and lanyard.

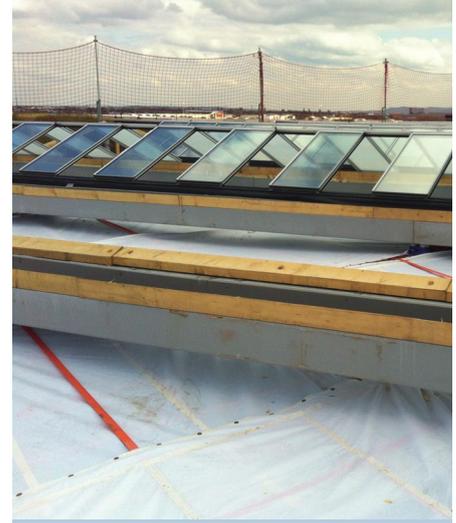


WALKABOUT™ ACCESS SYSTEMS

Case Studies

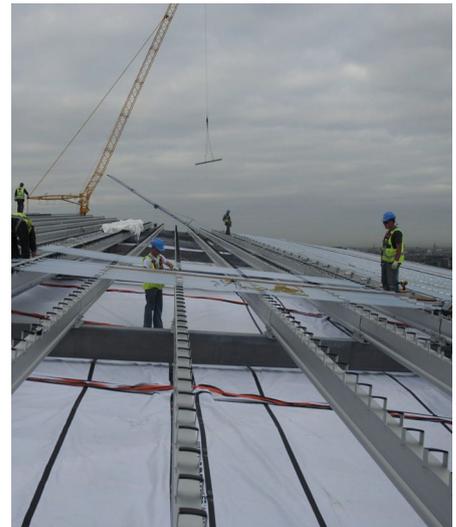
Enterprise South, Liverpool Academy, UK

WalkAbout was used on the installation of the glazed roof of the 40 meter diameter triangular shaped atrium.



Landsdowne Road, Sports Stadium, Dublin, Ireland

WalkAbout system was adopted as the access method for all the roof construction.



St Barts Hospital, London, UK

WalkAbout system was used for the ETFE roof installation.





View from below the WalkAbout system.

The WalkAbout may be utilised in many industrial applications, including:

- **Property Maintenance** – Provides quick access to locations at height without the need to take up valuable floor space with MEWPS, PASMA Towers or scaffolding. Suitable for Cleaning repairs and maintenance activities.
- **Construction** – WalkAbout can cover large areas quickly and safely giving un-restricted access. Can allow other trades to continue working un-restricted by scaffolding. Ideal for Atriums roofs skylights
- **Bridges & Infrastructure** – WalkAbout provides a stable platform for workers to gain access to inspect paint and repair structures. Can be installed by powered access, rope access or from the structure itself using safe access techniques. WalkAbout can reduce installation times compared to traditional Scaffolding.
- **Leisure & Entertainment** – WalkAbout provides a light weight access system which can be installed above public areas while allowing the area beneath to be utilised such as Swimming Pools & Sports Halls. Can be installed by Rope access or powered access.
- **Transporting** – WalkAbout can span large areas making it ideal for large buildings and structures such as aircraft hangers and stations. WalkAbout will give a stable work area for trades to carry out the work task at height.
- **Oil/Gas Offshore, Production** - Process plants have a vast selection of structures and buildings which require constant maintenance and repair. Organisations are always looking for improvements in safety and techniques to improve safety and efficiency. WalkAbout can deliver both improvements in safety with reduced man hours worked at height installing the system along with cost and efficiency savings over other traditional access systems.
- **Power Stations** – With unique situations and problems such as the huge turbine halls Power stations have a wide variety of access problems that WalkAbout can help solve. The ability to install an access system at height without the restrictions of a traditional Bird Cage Scaffold can bring real benefits both in safety, time and cost.



View from above the WalkAbout system.

For further information on WalkAbout or details of an Approved Installer in your area contact SpanSet on +44 (0) 1606 737494 or visit our website www.spanset.co.uk

WALKABOUT™ ACCESS SYSTEMS INTRODUCTION

Overview of the System

Background

WalkAbout™ is an innovative new system from SpanSet the UK's and Global Manufacturer of Height Safety, Lifting and Load restraint equipment to the highest standards.

The WalkAbout™ System is designed to be quicker, safer and cheaper than traditional access methods for many applications.

Description Of The System

The WalkAbout™ system is a tensioned Walk-On deck which, when installed on a structure, will give a stable base for workers to carry out a wide range of construction and maintenance tasks. WalkAbout™ has been used to great success to complete roofing installations, glazing work and remedial joinery to glue laminated beams.

Tension is applied through a ratchet tensioning device which includes SpanSet's Patented Tension Force Indicator (TFI). The TFI ensures that correct pre-tension is applied during the Installation process, resulting in quantifiable and calculable structural loading characteristics.

Applying The System To Your Project

The WalkAbout™ system is designed to be suitable for a wide variety of applications.

The application will vary in terms of the following;

- Structure to which the WalkAbout™ system will be attached
- The area to be covered by the WalkAbout™ system
- The configuration selected to cover the area
- The type of work to be carried out using the WalkAbout™ system

The attachment to the structure will require suitable anchor points. The section on anchor points provides a range of suitable anchors for most common structures.

Having identified the area to be covered there are many different methods that can be used to identify a configuration for the panels. The main aims of the configuration are as follows;

- To cover the required area as effectively as possible
- To include a viable installation method that keeps the risk to installers as low as reasonably practicable.
- To minimise any overlaps or resizing of panels.

Incorporating Additional Features Into The System

The specific tasks being carried out on the WalkAbout™ system may require certain additional precautions. It may be possible to incorporate these within the WalkAbout™ system at the installation stage or to add them subsequent to the installation. Typically these may include;

- A system to retain dust / debris preventing tasks contaminating areas underneath the WalkAbout™ system
- This can be in the form of netting or sheeting.
- A Solid sheet of material such as wooden boarding to create a more rigid section within the WalkAbout™ system.
- A heatproof membrane that can be added on top of the WalkAbout™ system to allow some hot works to be completed.

If any further information is required then please contact SpanSet.



Scan the QR code above to take you to the Walkabout animation

WALKABOUT™ ACCESS SYSTEMS INTRODUCTION

Overview of the System

The WalkAbout™ Access & Safety System has been designed to provide a stable, temporary working platform for working at height.

Correct Installation is required to maximise the performance of the product.

The system primarily uses the following components:

WalkAbout™ 4M Panel

The Panel comprises a membrane upper walking surface with supporting welded webbing, and a sub-structure of webbing arranged in a grid configuration which provides the main strength bearing elements. The sub-structure webbing grid has interconnection rings between its 4 longitudinal (ORANGE) and 4 LATITUDINAL (YELLOW) webbing straps to distribute the loading to the supporting structure. The grid also includes 2 auxiliary Multi-Panel straps (1 BLUE longitudinal and 1 BLUE latitudinal) which are only attached to the structure or to other Panels as required by the nature of the Installation.

The walking surface includes a 'bias key' which indicates the Panel orientation to the Installer during the installation operation.

WalkAbout™ Infill ADD Panel

To provide a continuous working platform the joint

gaps between Panels and structures require 'filling'. The Infill Panel has been designed to bridge gaps between 4M Panels and is easy to fit and secure. The Infill Panel features webbing loops which fit through the eyelets on the 4M Panels and are then fixed into place with high strength cord. The Infill Panels are also designed to overlap where long sequences of the Infill Panel are required.

Panel Tensioning Ratchet

Available in a variety of lengths and configurations, the Web Tensioning Ratchets are the primary means of applying and maintaining pre-tension to the sub-structure web grid. Using the SpanSet Patented TFI, Installers are able to verify correct 250daN application of pre-tension at the Installation phase as well as during use.

Panel Connectors

An oval screw-gate connector is used to connect the various elements of the system together. The connector features a two action gate mechanism to ensure there is no accidental disengagement.

WALKABOUT™ ACCESS SYSTEMS FREQUENTLY ASKED QUESTIONS

General Questions

What is WalkAbout™?

WalkAbout™ is a temporary decking system that can be installed to provide a working platform for workers at height or in areas where conventional access is limited.

WalkAbout™ consists of panels that can be anchored to a suitable structure, interlinked to create shapes and tensioned to provide a stable platform.

Is WalkAbout™ a Fall Arrest Net?

WalkAbout™ is a temporary decking system and is designed for users to work on. It can be used as a barrier to prevent a fall occurring for example where a roof sheet has been removed, but should not be used in situations where the user is allowed to fall onto the system from a distance above.

What standards does WalkAbout™ conform to and why?

There are currently no standards that relate specifically to the WalkAbout™ system as it is a new and unique solution. SpanSet have carried out extensive testing of the system to confirm its suitability for its intended purpose. The testing has been carried out externally by Notified bodies and / or at SpanSet.

In addition when creating the WalkAbout™ system SpanSet identified components and materials with proven track records from other applications. Where standards exist for these components / materials the items selected conform and the standards used are stated.

The WalkAbout™ system includes Patented and Patent pending items.

Where does WalkAbout™ fit into the Hierarchy of Measures for Work at Height?

WalkAbout™ is a Collective, Temporary Working Platform and Access system.

WalkAbout™ can be installed from a point of safety behind collective protection therefore requiring no exposure to height or by using a wide variety of different access techniques including Powered Access, Industrial Rope Access and Fall Arrest.

When assessing WalkAbout™ it is recommended that the overall risk of installation is considered.

Who is able to install the system?

SpanSet have appointed a network of approved WalkAbout™ installers. They have been selected for their knowledge of work at height, industry sectors and standing within the industry. The approved installers will be able to assist with the design, planning, installation and upkeep of WalkAbout™ throughout a project.

What is the system made of?

WalkAbout™ comprises four key parts.

- 1. Panels that cover the area required
- 2. Infill panels that cover the joints between the main panels
- 3. Tensioning straps
- 4. Connectors to join panels and attach to anchorages

Each of the components uses materials specific to their function. Items 1 and 2 use a membrane fabric to create the surface. Items 1 and 3 use Polyester webbing for the straps. Item 3 uses galvanised steel tensioning devices. Item 4 is a passivated steel connector.

All the components have detailed data sheets providing the care, use and maintenance requirements.

How long will WalkAbout™ last when installed?

When WalkAbout™ is installed the installer will inspect the system prior to handover. This will confirm the installation has been carried out correctly and the system plus its components are in suitable condition.

The WalkAbout™ Installer will then inspect the system periodically throughout the installation ensuring that it is maintained in a suitable condition throughout. Should any components require replacing these can often be carried out with minimal effect on the overall installation.



WALKABOUT™ ACCESS SYSTEMS INTRODUCTION

Responsibilities of the Installer

The WalkAbout™ System comprises 4 main components that can be installed in different configurations to create bespoke solutions. The location the system is to be used on, the application it is to be used for and the configuration are all aspects that are controlled by the installer and the end user that will vary on each and every installation. WalkAbout™ can only be installed by installers authorised and approved by SpanSet Limited. SpanSet Limited cannot guarantee that non approved installers have been trained correctly or have access to all of the up to date information required.

For each and every installation it is the responsibility of the Approved Installer to;

Assess the overall application - Identify all aspects of the application and their potential effects upon the system.

Demonstrate the Suitability of WalkAbout™ for the Application - Using the information gained from the assessment the installer should be able to show clearly why WalkAbout™ is suitable for the application. Where concerns have been raised due to specific issues the installer should clearly set out how these have been overcome to provide an acceptable solution.

Prepare a Design - Having assessed that WalkAbout™ is suitable for the application it is the installers responsibility to prepare a design for the system layout. This should demonstrate where the system is to be anchored and what to, how the panels will be configured and any special detailing required. The system layout must utilise the WalkAbout™ components as set out in the Technical Manual or where variations are required in line with SpanSet's recommendations.

Calculate the installation loadings - The design layout must be compatible with the anchorages and or structure intended. It is recommended that the installer uses a suitably qualified engineer to calculate the forces exerted onto the Anchorages and or structure to ensure the system layout is compatible.

Plan The Installation - The safety and effectiveness of WalkAbout™ as a solution is dependent upon the access methods with which it is installed and the proficiency of the installers putting the system together in the required layout. The plan should set out the access methods to be used and why, the detailed installation layout to guide the team and any details that are critical to the effectiveness of the end solution such as edge details or access / egress points to avoid trip hazards for example.

Manage The Installation - The installation must be carried out in accordance with the plan and once complete formally handed over to the client. The handover shall include a sign off confirming the installation has been completed correctly and in accordance with the plan, plus the system has been inspected and is in suitable condition.

Maintaining the System in Use - All users of the system will need to have a basic awareness of the system before they use it for access or as a working platform. SpanSet have prepared a handover course and the installer must make delivery of this available to those who require it. The system will require periodic inspection throughout its installation which should be carried out by the installer or a competent WalkAbout™ inspector.

SpanSet Disclaimer

SpanSet will manufacture and supply the WalkAbout™ components to the specification set unless otherwise notified.

It is the Approved Installers responsibility for the design / layout of all installations, the calculation of the effects on the intended structure, the use of approved components, the correct use of the components, maintaining the components in a serviceable condition and managing the installation projects.

WALKABOUT™ ACCESS SYSTEMS FREQUENTLY ASKED QUESTIONS

Installer Questions

What training do Installers require to install WalkAbout™?

All WalkAbout™ Installation companies must be approved by SpanSet prior to them providing designs or quotations for the system. Approved installers must use staff who have received installation training from SpanSet. SpanSet will maintain records for all staff trained.

What training do Installers require to inspect WalkAbout™?

WalkAbout™ systems can only be inspected by approved installation companies. Approved Installers must use staff who have received installation training from SpanSet. The inspection and handover requirements for the WalkAbout™ system are covered within the installer training.

What is the lifespan for the components?

In use it is likely that the lifespan of most of the components of the WalkAbout™ system will be limited by wear and tear. The panels use Polyester webbing that is relatively stable and provides a long life span – in excess of 10 years depending upon storage and degradation in use. The membrane has an additional coating to protect from UV and general degradation in use. The tensioning devices and connectors are passivated to protect from corrosion. All components can therefore have a lifespan in excess of 10 years depending upon storage and application.

What is the maximum load that can be applied to the system?

The maximum load is set out in more detail in the test data section of the installation manual. The maximum recommended load is 450kg which can comprise either staff or materials or a combination thereof. Should staff and materials be combined it is up to the installer and end user to ensure the materials load the system in such a way that they do not cause damage or endanger the staff.

What is the maximum span or area that can be covered?

When using WalkAbout™ spans of up to 20 metres have been carried out effectively. There becomes a point however at which the weight of the panels to install begins to prevent adequate tension being applied to remove all the deflection required. An effective installation would be considered one where the deflection in the system should at no point become problematic to the user carrying out their task across the whole span of the installation. It is also possible to install WalkAbout™ on shapes that incorporate a large span in one direction and a short one in the opposite. In these cases the longer span has little influence on the overall deflection. For larger areas it is recommended that the weight of the system becomes a larger configuration in the planning of the installation.

Do I need to include a secondary Back Up system in addition to WalkAbout™?

WalkAbout™ can work as a fully independent working platform, but as it is a light weight solution certain applications may either be unsuitable or require the addition of a secondary back up system. By completing a risk assessment of the situation including the location / local environmental conditions, the size and nature of the installation, the work to be carried out, the team size and materials either on the system or adjacent to the system it should be possible to determine if a secondary system is required and if so what sort. If a secondary system is required then they can be split into different categories each with different attributes;

- Fall Arrest Netting – a Collective measure that does not detract from the works being carried out of the way underneath, but if the Walkabout system fails due to catastrophic damage from above then it is likely the fall arrest net will also suffer a similar fate.
- Personal Fall Protection – Personal measure, so requires training and managing, but there is a wide range of solutions available to meet a wide variety of needs. Whilst they may infringe

on the works due to their location above they are less likely to suffer damage in the same way as the WalkAbout™ system so failure of both primary and secondary systems simultaneously should be unlikely.

What shapes will WalkAbout™ work on?

WalkAbout™ panels can be linked together to cover larger areas and different shapes. The current panels are 4m x 4m. Where irregular shapes are required they can be created by overlapping panels. This is worked out at the planning stage where the panel layout is designed to fill the majority of the area from a straight edge or corner leaving as small an area to infill as possible which is achieved by overlaying panel in a different orientation. A future development is a clutch assembly / technique which allows panels to be either shortened or reshaped.

WALKABOUT™ ACCESS SYSTEMS FREQUENTLY ASKED QUESTIONS

User Questions

Who is able to work on the WalkAbout™ system?

Any worker who has attended the WalkAbout™ user course delivered by an approved WalkAbout™ installer and who is carrying out an activity on the installation that was included in the design and planning for the specific installation.

What training do users need to work on the WalkAbout™ system?

The Approved WalkAbout™ Installer who carried out the installation will be able to provide all users with a short awareness course to enable them to use the system safely.

The course helps users understand the WalkAbout™ system and the common do's and don't's.

How many people can work on the system at any time or in any location?

The WalkAbout™ system is designed around a maximum working load of 450kg.

The load can be split between workers and tools/materials.

Depending upon the area of the installation and its shape it may be possible for groups of workers to load different parts of the system simultaneously without affecting each other. This will need clarifying with the approved installer and if possible then a system will need to be put in place to ensure the groups of workers / loads are kept suitably apart.

What tasks can WalkAbout™ be used for?

WalkAbout™ is a lightweight temporary decking system that can be installed with minimal impact on the surrounding area. The result is a system that is unlikely to infringe upon other activities in the area, is quick to install and provides workers a stable working area.

As such some tasks lend themselves to the system such as Lightweight installations eg Glazing works whereas others involving aggressive environments or hot works may not.

If in doubt consult an approved WalkAbout™ installer for a site visit or consultation.

Can WalkAbout™ be used on a slope or incline?

When tensioned between structural elements the angle of the WalkAbout™ system will reflect any difference in their levels. Where the angle is less than 15 degrees then due to the grip supplied by the membrane the system can be classed and used with the same way as a horizontal installation.

Where the slope exceeds 15 degrees or where inclement weather or environmental conditions affect the system it may be necessary to use additional personal protective equipment such as restraint lines.

To identify when additional measures may be required consult with an approved WalkAbout™ installer.

WALKABOUT™ ACCESS SYSTEMS TECHNICAL INFORMATION

4M Panels

WalkAbout™ 4M Panel

The WalkAbout™ 4m panel is designed to be fitted to rated structural members which are capable of withstanding the forces subjected to it when correctly installed. The following test data refers to the maximum values achieved in the fully loaded scenario of 450kg AUM (typically 4 x 100kg mass Users + 50kg equipment) for a single, fully connected panel. The number of users is not prescriptive and may be reconfigured to suit the nature of any works, however it is the responsibility of the Installer to ensure that the maximum permitted load of 450kg is not exceeded.

The 'Bias Key' located in one Panel corner helping define the Panel orientation and therefore the Longitudinal and Latitudinal load directions for the purposes of this document. The 'Bias Key' is also represented on the physical product, as the WalkAbout™ logo, and should be used to orientate panel installations.

- Panel Dimensions: 3960mm x 3960mm
- Panel Mass: 15kg (0.96kg/m²)
- Connection Points: 4+1* Latitudinal, 4+1* Longitudinal
- Connection Point Spacing: 1000mm* (830mm*)
- Pre-Tension Per Connection: 250 daN
- Surface Membrane Material: Valmex Membrane Plus FR
- Surface Web Material: PVC Coated 45mm Polyester Webbing (1'600kg MBS)
- Sub-structure Web: 50mm Polyester (7'500kg MBS)
- Maximum Permitted Panel Loading: 450kg
- Eyelets: 20 per Panel side
- Eyelet Spacing: 200mm

NOTE(S):

* The connections, connection spacing and number of connection points of the panels will vary depending on the layout of the installation.

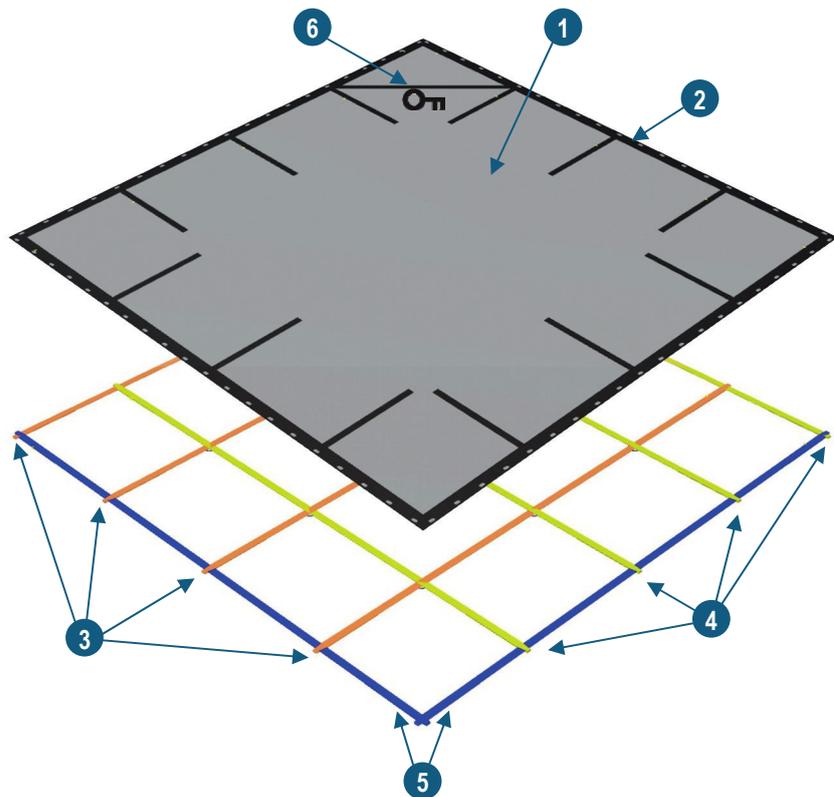


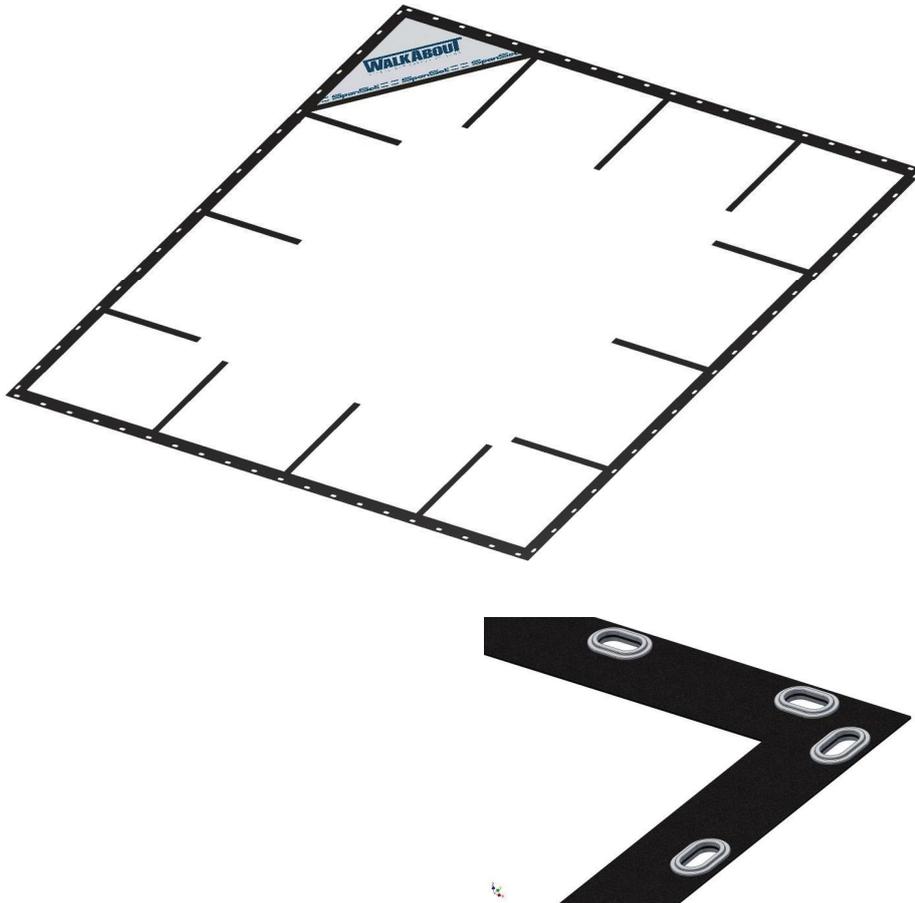
Fig.1 Partially Exploded View: WalkAbout™ 4M Panel

FIG 1. KEY

1. Surface Membrane
2. Surface Web
3. Sub-structure Web Latitudinal (Orange)
4. Sub-structure Web Longitudinal (Yellow)
5. Sub-structure Web Multi-Panel (Blue)
6. Bias Key

WALKABOUT™ ACCESS SYSTEMS TECHNICAL INFORMATION

4M Panels



WalkAbout™ 4M Panel

Pre-Tensile Loading Characteristics:

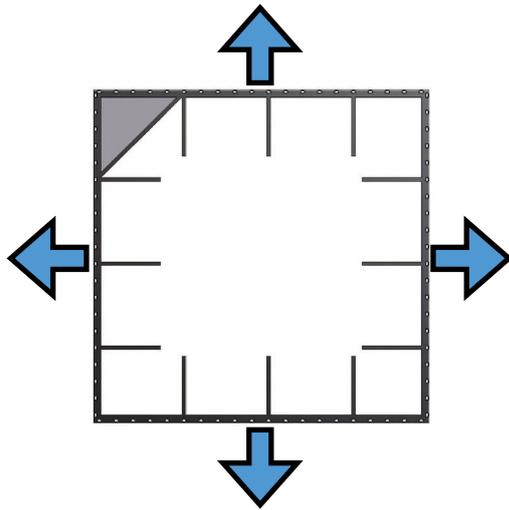
- Per connection point: 250daN
- Distributed load: 326.4 daN/m

Fully Loaded Characteristics (@ 450kg):

- Per connection point: 600 daN
- Distributed load: 783.3 daN/m

**WALKABOUT™
ACCESS SYSTEMS
INSTRUCTIONS FOR USE**

4M Panels

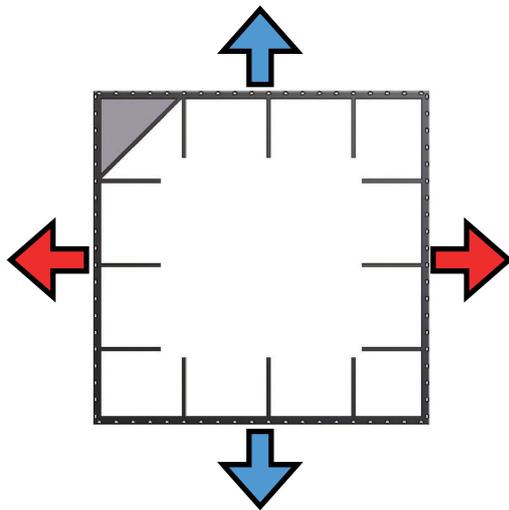


DIRECTION OF TENSION →

Tension & Loading Configurations

Configuration shows panel fully connected with tension applied in both axis. This configuration will provide the most stable working surface for Users once fully installed.

Note: Tensioning Ratchets will only be required on two adjacent sides of the panel to provide tension in both axis. The remaining adjacent sides can be static connections.



DIRECTION OF TENSION →

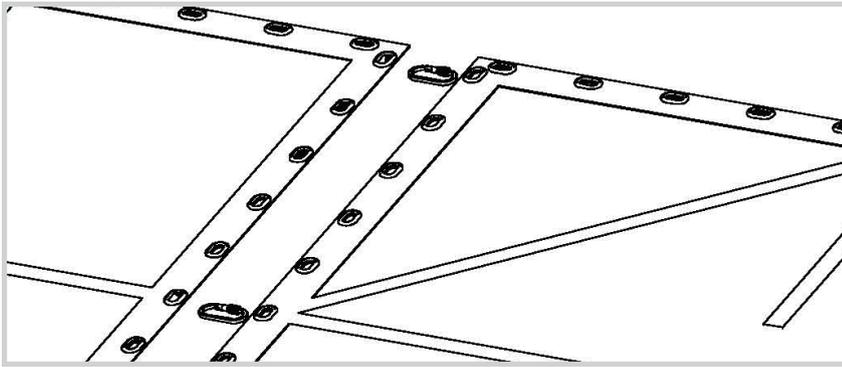
STATIC ANCHOR →

Configuration shows panel fully connected with tension applied in ONE axis. This configuration will provide a suitably stable working surface for Users once fully installed.

Note: Tensioning Ratchets will only be required on one side of the panel to provide tension. The remaining sides can be static connections.

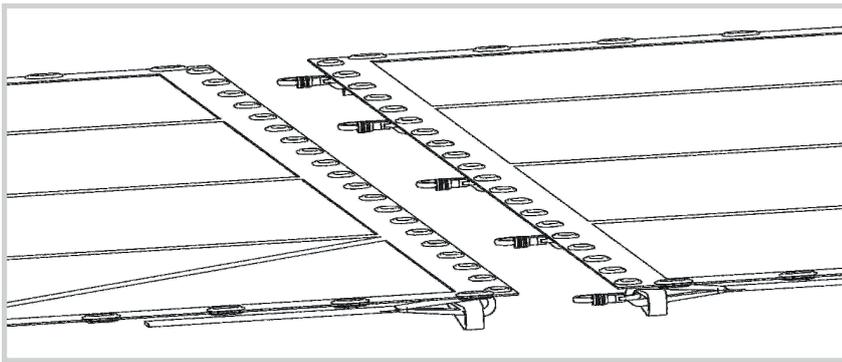
WALKABOUT™ ACCESS SYSTEMS INSTRUCTIONS FOR USE

4M Panels

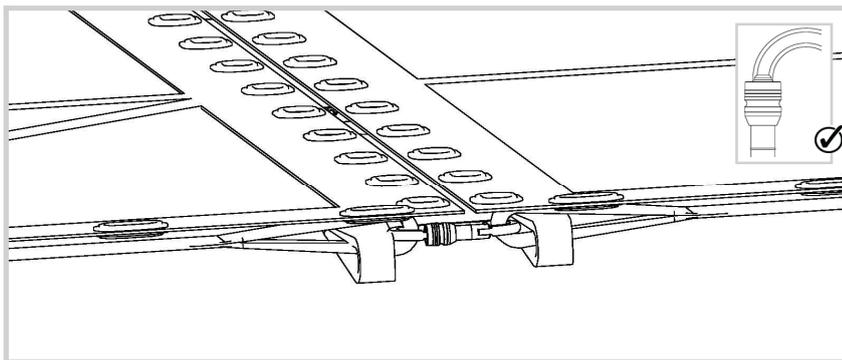


Inter-Panel Loop Connection

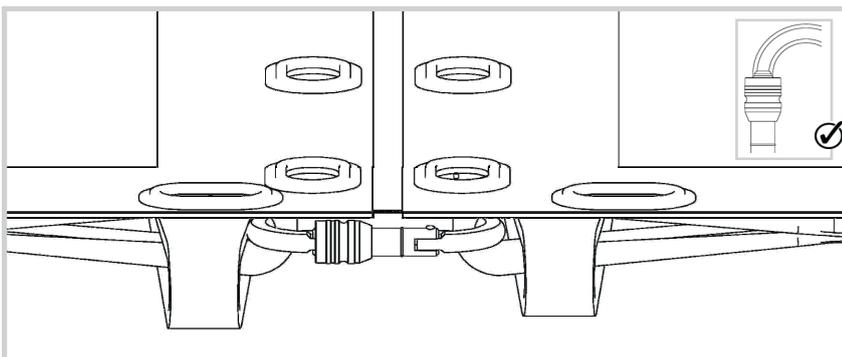
Connection of two or more panels are made from the web loops. Use the Bias Key to ensure Panel orientation is correct prior to completing any connections between panels.



Connector to first Panel. The illustration shows the five web loops with the connectors in place to complete one edge join.

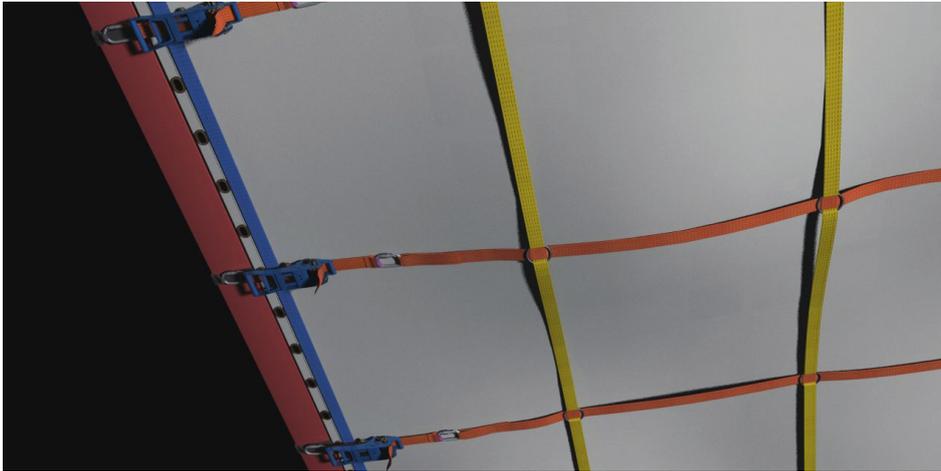


Close the Connector once fitted to Panel Loops. Ensure gate mechanism is closed correctly and secured with gate screw.



WARNING! Each Panel Loop is designed to accept one Connector only. Ensure the Connector is inserted into the correct loop.

Tensioners



Panel Tensioning Ratchet

The correct application of pre-tension is critical to the performance characteristics of the completed panel installation. Correct pre-tension will ensure that the system is a stable working surface and that loading of the structure is appropriate for the installation.

The Panel Tensioning Ratchet comprises of three main elements; the ratchet body incorporating the Tension Force Indicator (TFI), fixed web end, and adjustable web end. Connections are made from the structural attachment point, through the Panel

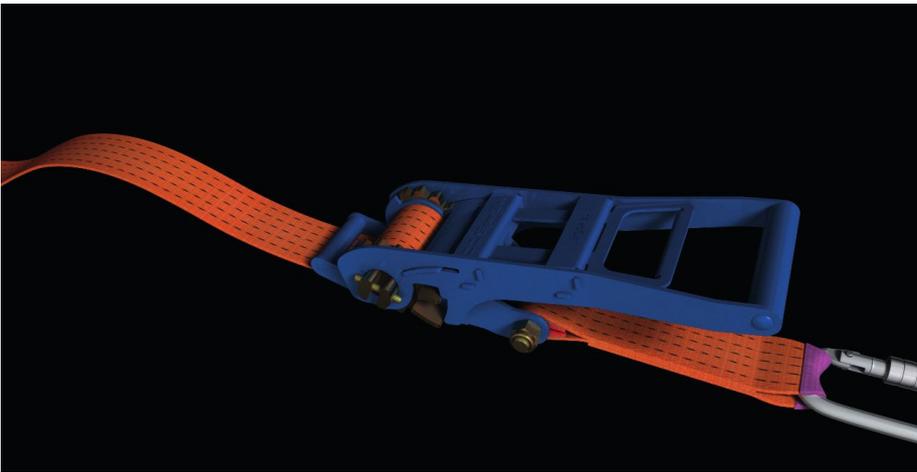
Tensioning Ratchet to the WalkAbout™ 4M Panel via the appropriate connector.

- Material: carbon steel passivated and epoxy coated
- Fixed Length: 0.4m
- Adjustable Length: 3.5m, 8.5m
- Standard Tension Force: 250daN
- Tensile Strength: 2500daN
- EN12195-2
- Webbing: 50mm Polyester (7'500kg MBS)



WALKABOUT™ ACCESS SYSTEMS INSTRUCTIONS FOR USE

Tension Force Indicator (TFI)



ErgoABS ratchet with TFI at adjustable end and ratchet end

Be certain of the right tension

When using WalkAbout™ having the correct tension in the system and being able to identify it is important for the following;

- It ensures the deflection in the system is kept to a minimum
- It ensures the installation reflects the calculations
- It indicates to an inspector that the system is still correctly tensioned
- It indicates to an inspector that tension in the system has been lost

The use of the patented TFI which is incorporated into the tensioners is a simple and easy way for installers to set the system plus users and inspectors to check the system.

The TFI states the pre tensioning force actually achieved directly at the ratchet with the pre tension required for WalkAbout™ being 250daN. If the tension force is set lower than this then potentially the forces applied to the anchor points may be reduced due to the increased deflection, however this will be difficult to quantify and the installer will need to prepare calculations to verify this.

If the tension force is exceeded then the loads on the anchors and the system will be increased. This should be avoided by tensioning until the TFI is set to the 250daN loading.

When handing over a system the installer should ensure the the TFI's are set to the correct level (250daN). When pre use checks are completed and when the system is periodically inspected the inspector should monitor the TFI's to ensure the tension has not been lost.

If the tension has been lost, then the inspector should identify the cause.

General bedding in of the installation may result in a small amount of tension being required across the whole system.

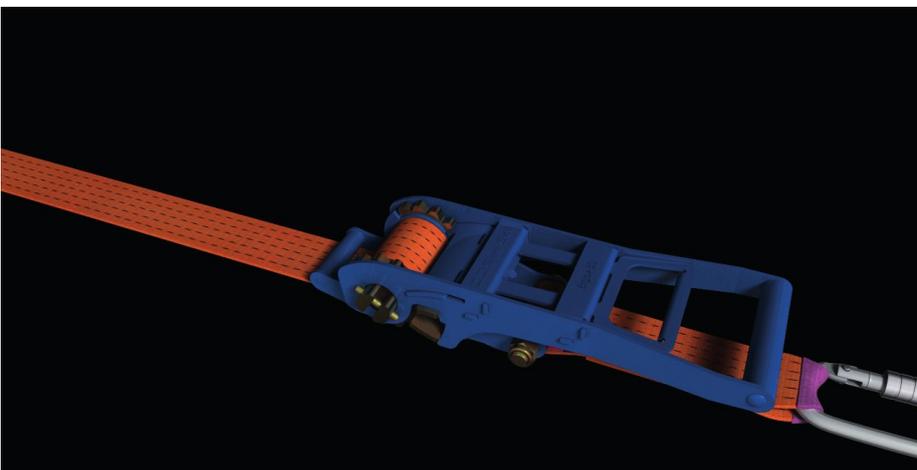
Localised overloading of the system is likely to result in a more significant loss of tension, but only affecting tensioners close to the area loaded. If there is a suspicion that this has occurred then the installer / inspector must inspect the components in the vicinity closely and question the users to identify the extent of the issues.

Likely issues can include;

- Damage to stitching, or damage to the membrane next to the stitching
- Deformation of the membrane such that it no longer lays flat
- Damage to the membrane such as cuts or tears

The system must be quarantined until the situation has been resolved and then either recertified or replaced

- TFI supplied on all WalkAbout™ tensioners
- Indicates actual pre-tension
- Enables installer/designer to control loads applied to the structures
- Provides clear indication that system is currently tensioned for pre use checks.



WALKABOUT™ ACCESS SYSTEMS TECHNICAL INFORMATION

Test-Data – Installation/Layout Load Single Panel Layouts

WalkAbout™ Access System is also designed to cater for Single or Multi-Panel Installations. The precise loading characteristics are dependent upon the configuration of the Multi-Panel Installation as some of the Multi-Panel straps (BLUE) may now become redundant. The Multi-Panel straps are an optional connection when used in Multi-Panel installations as this ensures that the majority of structural anchorages will be regularly spaced.

The following examples of Installation Layouts show the cumulative loadings of the Installed Panels, in-use loading characteristics as well as details on the correct preplacement of structurally mounted anchorages when mounted square of or angled steelwork.

Anchor Load Requirements

Any structural attachment point must have a minimum breaking strength of 15kN. This value is cumulative if the structural attachment point is intended to accept more than one WalkAbout attachment points e.g. a bracket with two holes to accept two separate panel installations, or from the same panel, would require a MBS of (2 x 15kN) 30kN.

The following sections demonstrate the actual load the system applies. When using the anchor it loads as stated above. This provides a safety factor of 2.5.

Installation Layout

To derive typical loading characteristics which represents a worst case scenario, a WalkAbout™ 4m x 4m single panel was subjected to a 0.5m² static loading of 450kg when fully connected and pre-tensioned to 250daN. This represents a typical Installed Panel Layout. The resulting forces experienced at the structural anchor points A-C are shown in Figure 1.

Loading Characteristics

The test results show that the applied load results in a peak loading of 550daN along the centre line structural web supports in the latitudinal and longitudinal axis.

To allow for an uncertainty of measurements during testing and irregular application of loads during use, the peak loading must be assumed to 600daN (550daN +9%) at all structural web support attachment points (A-C) when considering suitability for WalkAbout™ Installations. The presumption of the peak loading at each and every structural web support attachment point caters for the irregular distribution of loads when fully installed and in use.

Forces

- Point 'A': 550daN (560.84kgf)
- Point 'B': 390daN (397.69 kgf)
- Point 'C': 270daN (275.32 kgf)

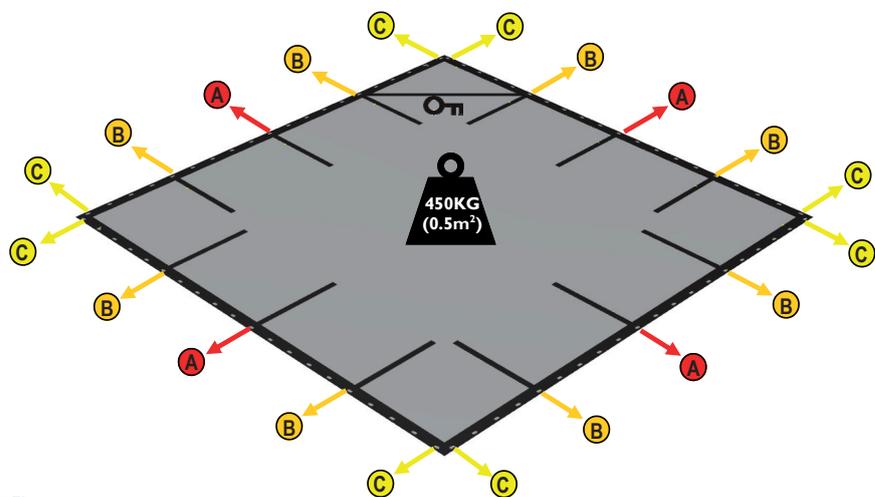


Fig.1

WALKABOUT™ ACCESS SYSTEMS TECHNICAL INFORMATION

Installation/Layout Load
Single Panel Layouts
Multi Panel Layouts

WalkAbout™ 4M Panel

Loading Characteristics Summary

Maximum Allowed User Load: 450kg
Panel Attachment Points Pre-Tension: 250daN

Panel Attachment Points
Loaded Peak Tension: 600daN
Panel Dimension C-C: 3.83m
Panel Attachment Points (each side): 5⁽¹⁾
Panel Attachment Point Distributed Load: $600\text{daN} \times (5 / 3.83) = 783.3\text{daN/m}$

Two Panel Installation

Example 1

Arrangement: Two 4M Panels connected together in the Longitudinal axis.

Note: The Multi-Panel Strap in the latitudinal axis on Panel '1' is now redundant.

Load Specification

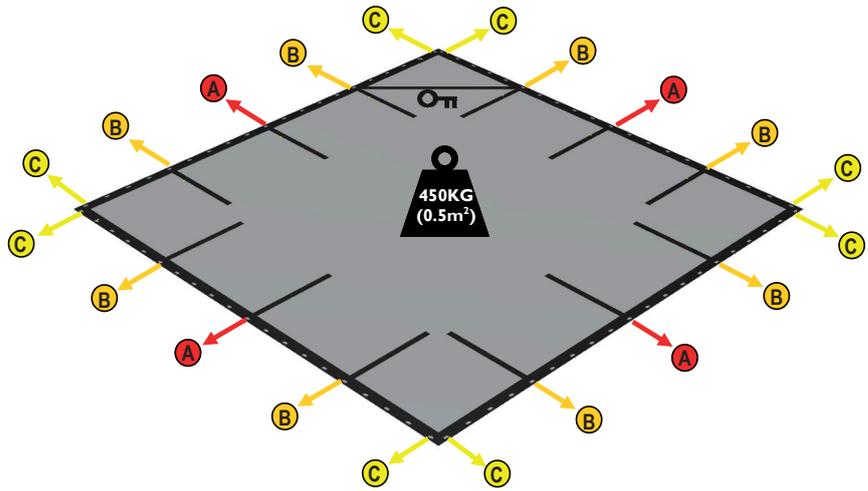
Longitudinal Spacing (ORANGE-ORANGE): 1000mm
Latitudinal Spacing (YELLOW-YELLOW): 1000mm
Latitudinal Spacing (YELLOW-BLUE): 830mm
Longitudinal Spacing (ORANGE-BLUE): 830mm

Latitudinal Connections: 9 per side
Longitudinal Connections: 5 per side
Inter-Panel Connections: 5 connectors

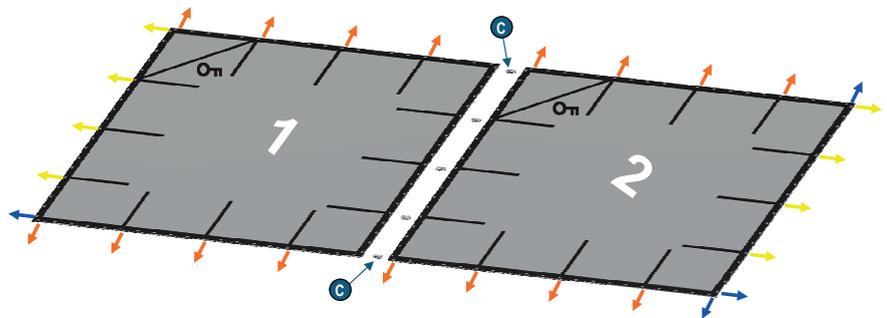
Pre-Tension: 250 daN per connection
Self Mass: $2 * 15\text{kg} = 30\text{kg}$
Latitudinal Pre-Tensile Force: $(9 * 250 \text{ daN}) / 7.83\text{m} = 287.4 \text{ daN/m}$
Longitudinal Pre-Tensile Force: $(5 * 250 \text{ daN}) / 3.83\text{m} = 326.4 \text{ daN/m}$

Peak Tension (@ 450kg) : 600 daN per connection

Latitudinal Peak Tension Force: $(9 * 600 \text{ daN}) / 7.83\text{m} = 689.7 \text{ daN/m}$
Longitudinal Peak Tension Force: $(5 * 600 \text{ daN}) / 3.83\text{m} = 783.3 \text{ daN/m}$



Single panel configuration



Two panel configuration



WALKABOUT™ ACCESS SYSTEMS TECHNICAL INFORMATION

Installation/Layout Load Multi Panel Layouts

Four Panel Installation

Example 2

Arrangement: Two 4M Panels connected together in the Longitudinal axis, two 4M Panels connected in the Latitudinal axis. It should be noted that the Installed Panel mass has now become significant, adding 60kg to the structural capacity requirements.

Note: The Multi-Panel Straps in the Latitudinal axis on Panel '1' and Panel '3' are now redundant as well as the Longitudinal Multi-Panel Straps on Panel '1' and Panel '2'.

Load Calculation

Longitudinal Spacing (ORANGE-ORANGE): 1000mm
 Latitudinal Spacing (YELLOW-YELLOW): 1000mm
 Latitudinal Spacing (YELLOW-BLUE): 830mm
 Longitudinal Spacing (ORANGE-BLUE): 830mm

Latitudinal Connections: 9 per side
 Longitudinal Connections: 9 per side
 Longitudinal Inter-Panel Connections: 9 connectors
 Longitudinal Inter-Panel Connections: 9 connectors

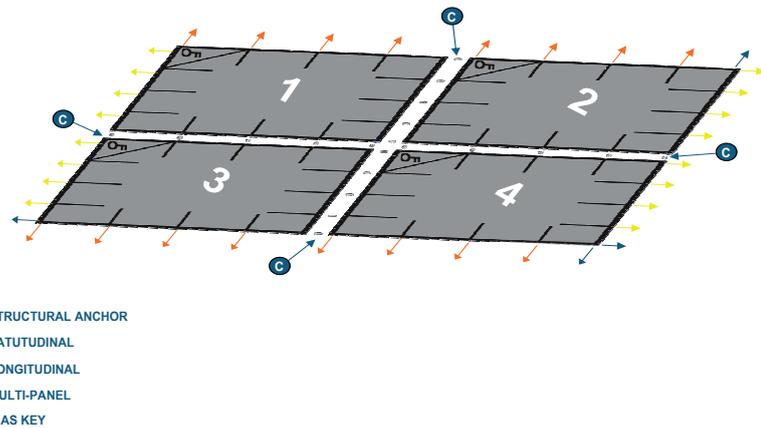
Self Mass: $4 * 15\text{kg} = 60\text{kg}$

Pre-Tension: 250 daN per connection

Latitudinal Pre-Tensile Force: $(9 * 250 \text{ daN}) / 7.83\text{m} = 287.4 \text{ daN/m}$
 Longitudinal Pre-Tensile Force: $(9 * 250 \text{ daN}) / 7.83\text{m} = 287.4 \text{ daN/m}$

Peak Tension (@ 450kg) : 600 daN per connection

Latitudinal Peak Tension Force: $(9 * 600 \text{ daN}) / 7.83\text{m} = 689.7 \text{ daN/m}$
 Longitudinal Peak Tension Force: $(9 * 600 \text{ daN}) / 7.83\text{m} = 689.7 \text{ daN/m}$

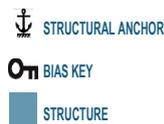
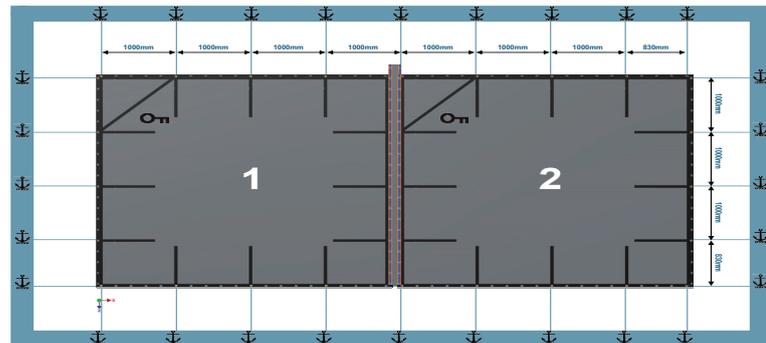


Anchorage Layout: Square Structures

It is important to ensure that all structural anchorages are accurately positioned to install Panels correctly. Incorrect spacing of anchorages will result in less tension in the walking surface, or in extreme cases may be unsafe for use.

Careful attention must be made to the angular geometry of the structure as the regular spacing of 1000mm is only realised on square structures.

The Illustration shows a regular 2 Panel Installation onto a rectangular structure. The shape of this structure would allow for the anchors to be installed at the regular spacing of 1000mm, with the exception of the Multi-Panel Longitudinal Connection Anchor on Panel '2', and the Latitudinal Connection Anchor on Panels '1' and '2' where the spacing is 830mm.



WALKABOUT™ ACCESS SYSTEMS

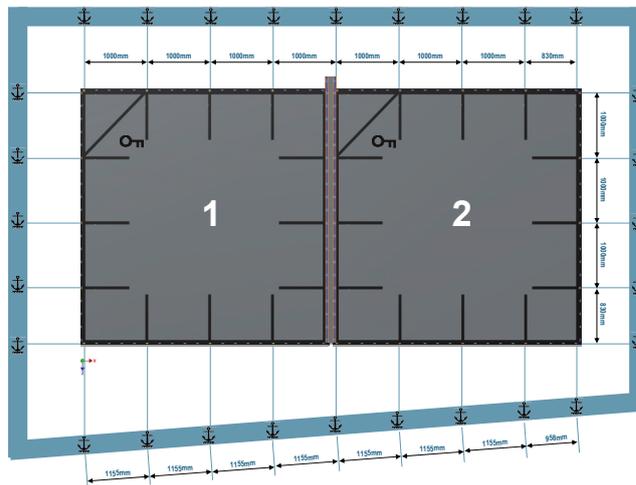
Installation/Layout Load,
Multi Panels Layouts

Anchorage Layout: Triangular Structures

The Illustration bellow shows a triangular shaped structure with anchors fitted. Due to the geometry of the structure, the Panel connection spacings remain the same but the spacing of the anchors on the structure are different.

If the angle of the steelwork is 30Deg, then the Structural Anchor spacing will need to be resolved so that the correct Panel connection spacing is maintained.

The Illustration shows a regular 2 Panel Installation onto a rectangular structure. The shape of this structure would allow for the anchors to be installed at the regular spacing of 1000mm, with the exception of the Multi-Panel Longitudinal Connection Anchor on Panel '2', and the Latitudinal Connection Anchor on Panels '1' and '2' where the spacing is 830mm.



-  STRUCTURAL ANCHOR
-  BIAS KEY
-  STRUCTURE

WALKABOUT™ ACCESS SYSTEMS

Mesh Material Specification

Heavy Duty,
fire resistant mesh material

Manufacturer Ref: MEHL - 001
Manufacturer Art No: 7520 5946

Type of coating and finish	
Type of coating	PVC
Finish	easy print = printable surface enlarged
Flame retardency	CERF Categoria 1, DIN 4102: B1, NFP 92507: M1, NFPA 701 Test 2
For Flame retardency	Always check the validity of fire certificate
Total weight	470 g/m ² EN ISO 2286-2
Openess factor	10% LB 3.27
Tensile Strength (warp/weft)	3600/3700 N/50 mm DIN EN ISO 1421/V1
Tear Srength (1) (warp/weft)	580/600 N DIN 53363
Adhesion (1)	18 N/cm LB 3.04-1
Cold Resistance	-30°C DIN 53363
High Temperature	+70°C LB 3.15
Translucence	20% at 550nm
Air permeability	1400 l/m ² *sec DIN EN ISO 9237
Basic Fabric	
Material	PES DIN ISO 2076
Yarn Count	1100 dtex DIN ISO 2060
Weave	GK

WALKABOUT™ ACCESS SYSTEMS

Repair Kit Contents
Repairs – Installed
Walkabout Decking
Repairs Of >150Mm Tears

Repair Kit Content

- 2 x 1m² Valmex Mesh Material
- 1 x Extreme High Bond Double Sided Adhesive Tape Roll (25mm Width x 33m Length)
- 10 x Sachet of Cleaning Solvent

Items contained in the repair kit contain specific guidance for use. Please ensure that these instructions are read and understood prior to attempting any repairs.

NOTE: The first priority is to prevent any areas of potential wear and damage coming into contact with the product. Use padding, sleeves and any suitable means to prevent decking system from being in permanent contact with structures and avoid use of sharp materials which may damage the surface material.

Repairs - Installed Walkabout Decking. Repairs Of <150Mm Tears

1. Clean

Prepare the area around the damaged material by first identifying the surface area which will require the patch to be adhered to. Allow at least 75mm of un-damaged material as a perimeter. Cut the required area from the supplied Mesh material and use as a template to mark the decking. Use the solvent sachet to clean any contaminants from the surface. If the material has been contaminated by oils, lubricant or any product which may affect the adhesion of the patch, it is recommended that the surface also be lightly abraded using ScotchBrite before cleaning with the solvent.

2. Adhesive

Apply strips of EHB tape to the marked area of the decking surface. Ensure that the entire footprint of the marked area is taped. ONLY remove the tape backing when all preparations are made to apply the repair patch.

3. Patch On Upper Surface Of Decking Material.

Apply the patch to the adhesive tape surface and press firmly all over the patch to ensure a good contact is made.

Please refer to the supplied instructions of the EHB tape for curing times specific to the working environment to ensure good bonding between the repair patch and the damaged decking surface.

Repairs Of <150Mm Tears

On-site evaluation of tears greater than 150mm must be signed off by a competent person prior to attempting any patch repairs. It is highly recommended that tears of greater than 150mm are completed when the decking system is not installed to ensure correct repairs.

1. Clean

Prepare the area around the damaged material by first identifying the surface area which will require the patch to be adhered to. Allow at least 75mm of un-damaged material as a perimeter. Cut two of the required areas from the supplied Mesh material and use as a template to mark the decking. Use the solvent sachet to clean any contaminants from the upper surface. If the material has been contaminated by oils, lubricant or any product which may affect the adhesion of the patch, it is recommended that the surface also be lightly abraded using Scotch Brite before cleaning with the solvent.

2. Adhesive

Apply strips of EHB tape to the marked area of the decking upper surface. Ensure that the entire footprint of the marked area is taped on the upper surface only. ONLY remove the tape backing when all preparations are made to apply the repair patch.

3. Patch On Upper Surface Of Decking Material.

Apply the patch to the adhesive tape upper surface and press firmly all over the patch to ensure a good contact is made.

4. Patch On Under Surface Of Decking Material

Repeat the above process to the under surface of the decking panel.

5. Final Pressure

Once the two sides of the panel have been patched, apply pressure to one side of the repair against a hard surface to ensure all bonding.

Please refer to the supplied instructions of the EHB tape for curing times specific to the working environment to ensure good bonding between the repair patch and the damaged decking surface.

**WALKABOUT™
ACCESS SYSTEMS**

Notes

SpanSet Ltd.
Telford Way, Middlewich
Cheshire CW10 0HX, UK
Tel: +44 (0) 1606 737494
Fax +44 (0) 1606 737502
www.spanset.co.uk