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**Webbing**

Colorfast polyester high tensile webbing treated with Xtreme-guard protective coating  
Heat set for lower friction co-efficient = longer wear  
Light (UV) degradation certified to AS/NZS1891.1  
Minimum tensile strength 30kN  
Lay flat – non-roping

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**Webbing Treatment**

Xtreme guard oil, water and dirt repellent  
Non hazardous according to NOHSC/ASCC (formerly Worksafe Australia) and Annex 1 EU DIR 67/548/EEC  
Is not self igniting and does not present an explosion hazard  
Not defined as a dangerous good by the Australian Code for Transport of Dangerous Goods

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**Tear Webbing Energy Absorber**

Polyester dual action  
Clear heat shrink for ease of inspection  
Stitch patterns conspicuous for verification  
Activates between 2kN & 6kN  
Fitted with back up strap

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**Rope**

Kernmantle construction (inner core contained in an outer sheath)  
Rescue standard to AS4142.3  
Internal marker tape for traceability  
Contrasting core and sheath for ease of inspection  
MBS 30kN  
All terminations sewn with polyester thread, heat shrunk and thimble eye

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**Sewing**

High tensile polyester light fast, UV resistant thread  
Load bearing seams sewn with high density, multi bar tack patterns for extra wear and ease of inspection  
Load bearing seams sewn on computerised lock stitch machines for consistency and security  
Contrasting color for ease of inspection and compliance to AS/NZS1891.1  
Non load bearing patterns – (labels, web end fold backs, decorative etc) - flat manual sews  
All finished with over stitching

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**Labels**

UV resistant PVC underneath heat shrink  
Thermal transfer printing

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**Testing**

5 stage inspection process during manufacture  
100 % visual inspection  
Type tested to dynamic 3.8m @100kg and 140kg drop test,  
Type tested 15kN static tensile strength, held for 3 minutes to AS/NZS 1891.1-2007

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**Fall Clearance Allowances**

Length of lanyard = 1800mm  
Height of operator = 1800mm  
Residual clearance = 1000mm  
**Sub-total = 4600mm**

**Fall Distance Energy Absorber Extension**

|        |       |
|--------|-------|
| 600mm  | 300mm |
| 1000mm | 500mm |
| 1500mm | 600mm |
| 2000mm | 900mm |

**Plus the following values:**

## Fitting Specifications

| Code           | Description                | Gate Type     | Gate Opening (mm) | Strength (kN) | Material  |
|----------------|----------------------------|---------------|-------------------|---------------|-----------|
| <b>H1 Alu</b>  | Safety Snap Hook           | Double Action | 23                | 25            | Aluminium |
| <b>H3 Alu</b>  | Safety Scaffold Hook       | Double Action | 60                | 25            | Aluminium |
| <b>H3 BF</b>   | Safety Jumbo Scaffold Hook | Double Action | 110               | 25            | Aluminium |
| <b>H3 WBF</b>  | Safety Wire Scaffold Hook  | Double Action | 86                | 20            | Aluminium |
| <b>K10 Alu</b> | Fixed Eye Karabiner        | Triple Action | 20                | 25            | Aluminium |

H1 Alu



K10 Alu



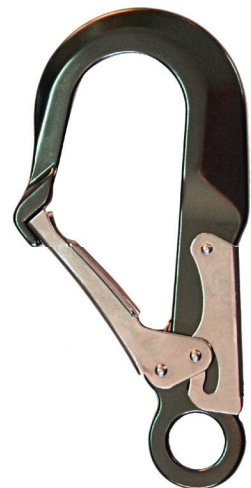
H3BF



H3WBF



H3 Alu



# Assembly Descriptions and Weights

## ERGOplus Webbing Lanyards

| Code                   | Type                  | Material | Length (m) | Fitting at Shock Absorber | Fitting at Free End(s) | Weight (g) | Capacity (kg) | Certification |
|------------------------|-----------------------|----------|------------|---------------------------|------------------------|------------|---------------|---------------|
| <b>3053 ERGOplus</b>   | Single Leg            | Webbing  | 1.80       | H1Alu Snap Hook           | H1Alu Snap Hook        | 785        | 140           | AS/NZS 1891.1 |
| <b>3055 ERGOplus</b>   | Single Leg            | Webbing  | 1.80       | H1Alu Snap Hook           | H1Alu Scaffold Hook    | 1131       | 140           | AS/NZS 1891.1 |
| <b>3058 ERGOplus</b>   | Twin Leg              | Webbing  | 1.80       | H1Alu Snap Hook           | H3Alu Scaffold Hook    | 1800       | 140           | AS/NZS 1891.1 |
| <b>3053 A ERGOplus</b> | Single leg adjustable | Webbing  | 1.80       | H1Alu Snap Hook           | H1Alu Snap Hook        | 910        | 140           | AS/NZS 1891.1 |
| <b>3055 A ERGOplus</b> | Single leg adjustable | Webbing  | 1.80       | H1Alu Snap Hook           | H3Alu Scaffold Hook    | 1256       | 140           | AS/NZS 1891.1 |
| <b>3058 A ERGOplus</b> | Twin leg adjustable   | Webbing  | 1.80       | H1Alu Snap Hook           | H3Alu Scaffold Hook    | 2050       | 100           | AS/NZS 1891.1 |

## ERGOplus Elastic Lanyards

| Code                      | Type       | Material | Length (m) | Fitting at Shock Absorber | Fitting at Free End(s) | Weight (g) | Capacity (kg) | Certification |
|---------------------------|------------|----------|------------|---------------------------|------------------------|------------|---------------|---------------|
| <b>3053E ERGOplus</b>     | Single Leg | Webbing  | 1.4–1.8    | H1Alu Snap Hook           | H1Alu Snap Hook        | 785        | 140           | AS/NZS 1891.1 |
| <b>3055E ERGOplus</b>     | Single Leg | Webbing  | 1.4–1.8    | H1Alu Snap Hook           | H3Alu Scaffold Hook    | 1131       | 140           | AS/NZS 1891.1 |
| <b>3058E ERGOplus</b>     | Twin Leg   | Webbing  | 1.4–1.8    | H1Alu Snap Hook           | H3Alu Scaffold Hook    | 1800       | 100           | AS/NZS 1891.1 |
| <b>3053H K10 ERGOplus</b> | Single leg | Webbing  | 1.4–1.8    | K10Alu Karabiner          | K10Alu Snap Hook       | 613        | 100           | AS/NZS 1891.1 |
| <b>3058 BF ERGOplus</b>   | Twin leg   | Webbing  | 1.4–1.8    | H1Alu Snap Hook           | H3BF Scaffold Hook     | 2712       | 100           | AS/NZS 1891.1 |
| <b>3058 WBF ERGOplus</b>  | Twin leg   | Webbing  | 1.4–1.8    | H1Alu Snap Hook           | H3WBF Scaffold Hook    | 1858       | 140           | AS/NZS 1891.1 |

## ERGOplus Rope Lanyards

| Code                       | Type                  | Material | Length (m) | Fitting at Shock Absorber | Fitting at Free End(s) | Weight (g) | Capacity (kg) | Certification |
|----------------------------|-----------------------|----------|------------|---------------------------|------------------------|------------|---------------|---------------|
| <b>3061 ERGOplus</b>       | Single Leg            | Rope     | 1.8        | H1Alu Snap Hook           | H1Alu Snap Hook        | 900        | 140           | AS/NZS 1891.1 |
| <b>3063 ERGOplus</b>       | Single Leg            | Rope     | 1.8        | H1Alu Snap Hook           | H3Alu Scaffold Hook    | 1246       | 140           | AS/NZS 1891.1 |
| <b>3068 ERGOplus</b>       | Twin Leg              | Rope     | 1.8        | H1Alu Snap Hook           | H3Alu Scaffold Hook    | 2030       | 140           | AS/NZS 1891.1 |
| <b>3061 A K10 ERGOplus</b> | Single Leg Adjustable | Rope     | 1.8        | K10Alu Karabiner          | K10 Karabiner          | 1015       | 140           | AS/NZS 1891.1 |
| <b>3063 A ERGOplus</b>     | Single Leg Adjustable | Rope     | 1.8        | H1Alu Snap Hook           | H3Alu Scaffold Hook    | 1661       | 140           | AS/NZS 1891.1 |
| <b>3068 A ERGOplus</b>     | Twin Leg              | Rope     | 1.8        | H1Alu Snap Hook           | H3Alu Scaffold Hook    | 2260       | 140           | AS/NZS 1891.1 |

## ERGOplus User Weight Limits (kg) – when used with SpanSet Lanyards and Lifelines below

| Harness                     | 305* series ERGO Lanyards | 306* series ERGO Lanyards | TITAN series ERGO Lanyards | 305* series ERGOplus Lanyards | 306* series ERGOplus Lanyards | UB033 Inertia Reels | FAB* Inertia Reels | LW* Latchways Inertia Reels | 3201 Retracting Lanyard |
|-----------------------------|---------------------------|---------------------------|----------------------------|-------------------------------|-------------------------------|---------------------|--------------------|-----------------------------|-------------------------|
| <b>1100 ERGOplus</b>        | 100                       | 100                       | 140                        | 140                           | 140                           | 136                 | 136                | 140                         | 100                     |
| <b>1104 ERGOplus</b>        | 100                       | 100                       | 140                        | 140                           | 140                           | 136                 | 136                | 140                         | 100                     |
| <b>1107 ERGOplus</b>        | 100                       | 100                       | 140                        | 140                           | 140                           | 136                 | 136                | 140                         | 100                     |
| <b>1600 ERGOplus</b>        | 100                       | 100                       | 140                        | 140                           | 140                           | 136                 | 136                | 140                         | 100                     |
| <b>1600 NC ERGOplus</b>     | 100                       | 100                       | 140                        | 140                           | 140                           | 136                 | 136                | 140                         | 100                     |
| <b>1800 ERGOplus</b>        | 100                       | 100                       | 140                        | 140                           | 140                           | 136                 | 136                | 140                         | 100                     |
| <b>1100 ERGOplus Miners</b> | 100                       | 100                       | 140                        | 140                           | 140                           | 136                 | 136                | 140                         | 100                     |

# Types of Lanyards

## **Webbing Lanyards (ERGO)**

These are the most cost effective and feature lightweight polyester 29kN webbing integrated with a tear web energy absorber with steel hardware

## **Webbing Lanyards (ERGOplus)**

Feature iWeb inspectable webbing including aluminium hooks and karabiners with ANSI high strength gates.

## **Adjustable Lanyards**

These are commonly used in EWPs and in areas where limiting the free fall distance is desirable. Less fall distance = less force on the body.

## **Elastic Lanyards**

These are ideal for preventing snagging and tripping as the slack remains taught. Commonly used in EWPs and climbing applications.

## **HotWorks Lanyards**

For use around welding and grinding applications where the sparks generated would normally melt polyester webbing

## **StageWorks Lanyards**

These are for use in stage productions and theatre where the operator or rigger needs to remain inconspicuous and blend in to the darkness during performances.

## **Rope Lanyards**

Serve the same function as a webbing lanyard. Using rescue standard rope means the outer sheath is a contrasting colour to the inner load bearing core, making inspection easier.

## **Energy Absorbers**

All fall arrest lanyards have integrated energy absorbers. Stand alone energy absorbers are available for use with adjustable rope grabs and on fall arrest anchorages lines of extended length

## **Twin Webbing and Rope Lanyards**

These are used to maintain a continuous connection when passing from one structure or anchorage to another. Commonly used in climbing and transversing applications

## **Wire Rope Lanyards**

PVC coated wire leg used to prevent contamination from paint and chemicals or offer resistance to heat. Note: the energy absorber component is not protected from heat

## **Back Hooking Lanyards**

Allows back hooking or “choking” around beams and structures. Fitted with a wear sleeve for abrasion resistance, and a reinforced hook to resist side loading. Do not back hook with a lanyard unless it is specifically designed to do so.

## **Maximum User Weights**

SpanSet energy absorbing lanyards are rated to 140kg.

**All energy absorbing lanyards must reduce the forces experienced in an arrested fall to under 6kN (approximately 600kg).**

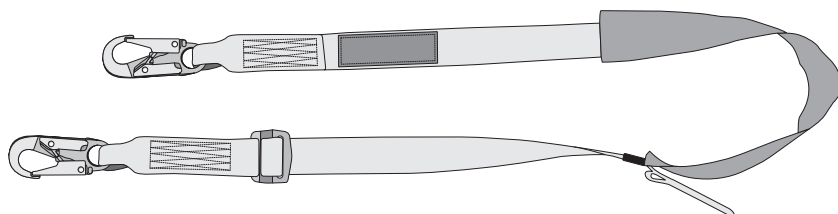
## Energy Absorbing Lanyard Warnings

- Connection between the harness and anchor system is usually made via a fall arrest lanyard or device
- Maximum allowable free fall is 2m
- These are fixed or adjustable length lanyards (maximum slack length of 2m) normally manufactured from rope or polyester webbing, and include an in-line personal energy absorber, which limits the force on the body to less than 6kN
- The shock absorbing end of the lanyard should always be attached to the harness. Never choke (back-hook) the lanyard end around the anchor **unless the lanyard is specifically design to do so**; this will weaken the lanyard and in the event of a fall could cause it to fail, or result in the snap hook bending over an edge and/or accidentally rolling open
- It is critical that the worker checks for adequate ground/nearest level clearance prior to using an energy absorbing lanyard
- Energy absorber tear out stitching should not release below 2kN (200kg) so that the lanyard can be used for work positioning support at the worksite
- Do not use the lanyard as a pole strap
- The lanyard must be destroyed if a fall has occurred, where the shock absorber has been deployed
- The lanyard must be destroyed if the 10 year life has expired
- Lanyards should be inspected before use and externally by a competent person every 6 months
- When using a shock absorber in conjunction with a twin tail lanyard, the tail end not in use should either be attached to the stowage point supplied on the lanyard or be clipped alongside its partner on the anchor point so as not to inhibit the tear out function of the energy absorber. Only the shock absorbing end should be connected to the harness - **the free or tail end must not be attached to the harness!** Failure to observe this may isolate the energy absorber and cause excessive forces on the body of the user
- Never substitute a twin tail lanyard with two single lanyards; two single shock absorbers will not tear out sufficiently in the event of a fall and may result in excessive shock loading to the user
- Avoid wrapping or looping the lanyard around or over sharp edges

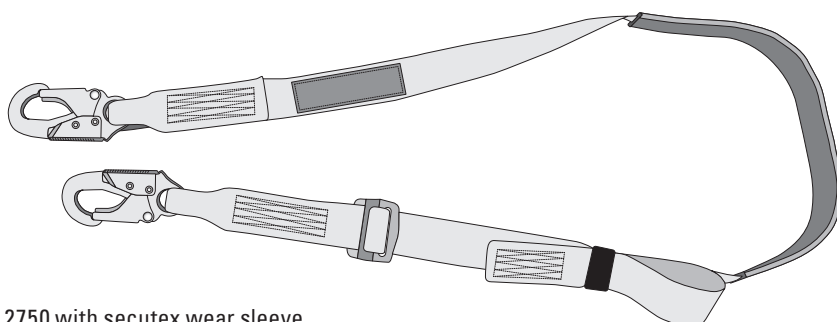
For further guidance consult with AS/NZ 1891.4.



## 2700 Series Pole Straps



2700 with webbing wear sleeve



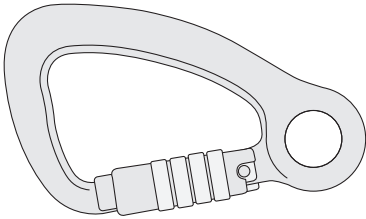
2750 with secutex wear sleeve

A pole strap is suitable for work positioning when attached to the side Ds of a full body harness

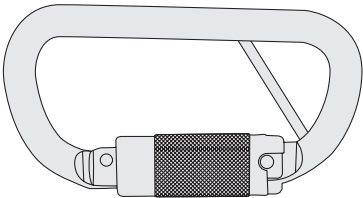
- Connect the pole strap via the safety hooks to the side D rings with the locking gates furthest from the body
- Ensure both sides are securely connected before applying load to the strap
- Use the tensioner buckle to adjust the length of the strap
- Always ensure the strap is in tension and not slack
- Beware of sharp edges and pinch points to avoid damage to the main strap
- Ensure the protective wear sleeve is in place on the strap
- For steel and abrasive contact always use a pole strap with secutex wear sleeve
- Ensure that the pole strap is always above the position of the D rings
- Do not connect more than 1 pole strap to each D ring
- An energy absorbing lanyard attached to the rear or front D is recommended as a backup provision.



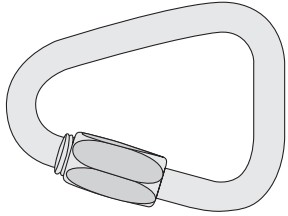
# Types of Connectors



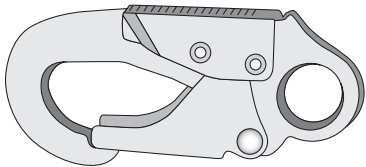
Triple lock karabiner with captive eye



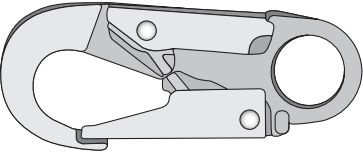
Triple lock karabiner with captive bar



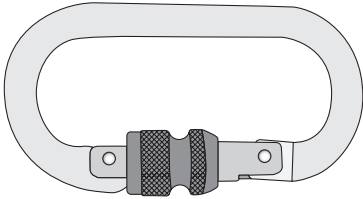
Delta quick link



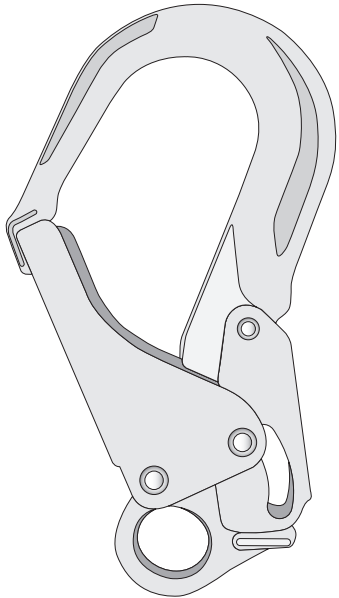
Double action safety hook - heavy duty



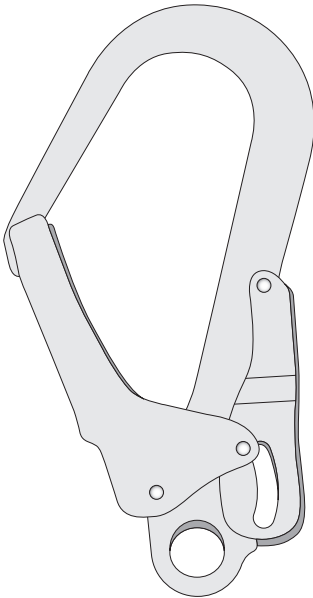
Double action safety hook



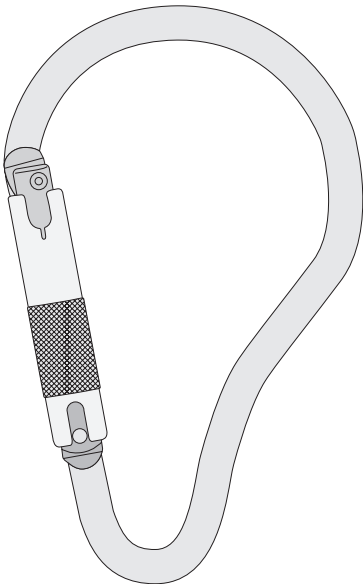
Screwgate karabiner



Double action scaffold hook - heavy duty

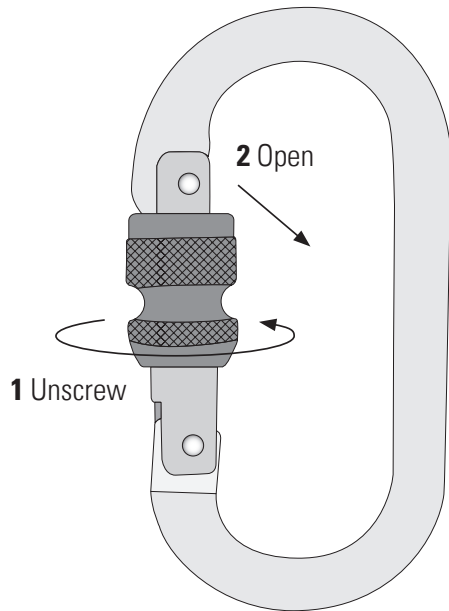


Double action scaffold hook

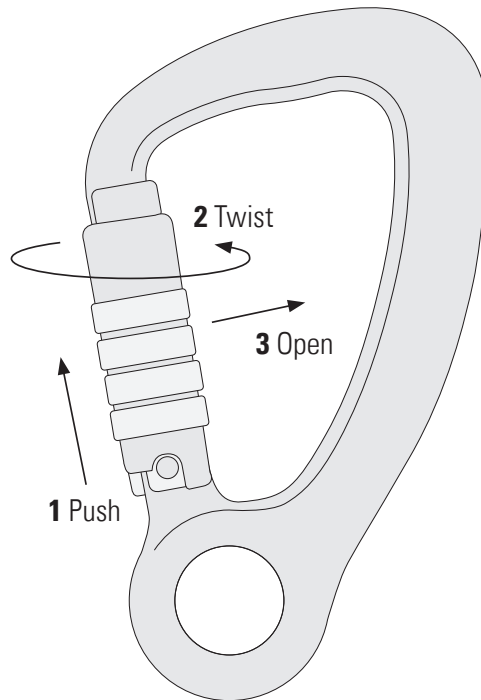


Triple action scaffold karabiner

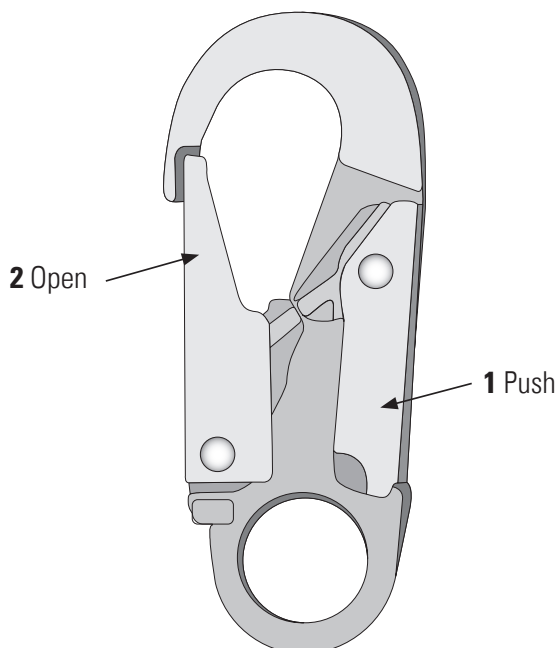
## Connector Instructions



Screwgate karabiner



Triple lock karabiner



Double action safety hook

### **WARNING:**

- Always ensure that all gates are closed and locked tight prior to use
- Check for smooth spring and gate function prior to use
- Check for corrosion, distortion or damage prior to use
- Ensure all springs and gates are free of dirt and dust
- Never connect two snap hooks together
- Ensure any locking latch is furthest from the body when making a connection
- Do not use snap hooks or karabiners for lifting or towing
- Do not apply a load to the gate
- Avoid overcrowding.

## Checklist for Inspection of Lanyards

### Polyester Components

- Label present with date of manufacture - shelf life shall not exceed 10 years
- Cuts and abrasion to rope or webbing
- Cuts and abrasion to stitching
- Glazing or crispiness - due to friction, heat damage or possible chemical contamination
- Damage due to contact with heat, corrosives, chemicals and solvents
- Discolouration - due to chemical contamination or prolonged UV exposure
- Excessive stiffness - due to overloading, possibly as the result of a fall.

### Energy Absorbers

- ID label present with date of manufacture – check expiry date
- Visual check of attachment points
- Visual check of tear out element, checking for any signs of deployment or length extension

Adjustment and attachment devices should be function tested according to type and visually checked as per page 19 of this manual.

If any of these points are not satisfactory then the lanyard should be destroyed.

### Inspecting iWeb Enabled Products

Webbing with iWeb is woven with a contrasting (red) core of load bearing webbing which runs the full width and length of the webbing. To inspect, simply look for signs of red in any abrasion point, scuff, or cut on the surfaces or edges. This gives an objective inspection and discard criteria for both the user and the competent inspection person to apply.

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### Washing Instructions

SpanSet Australia discourages the washing of fall arrest harnesses and associated equipment in industrial laundry facilities due to the severity and unknown nature of the solvents and cleaning agents used.

The preferred method is to use a mild, domestic soap, rinsed, then hung to dry naturally out of sunlight.

If a washing machine is used then the product should be placed in a mesh bag in order to avoid damage to the fittings and entanglement.

Do not use pressure sprays to clean harnesses, lanyards or webbing products.

## Training Courses

### Height Safety

Working Safely at Height  
Working Safely at Heights Refresher  
Height Safety Supervisor\*  
Height Safety Manager\*

### Rescue

Rescue Systems Operator\*  
Vertical Rescue\*  
Tower and Pole Rescue\*  
Wind Access Rescue Technician\*  
EWP Emergency Escape  
Gotcha Rescue

### Confined Space

Confined Space\*  
Confined Space - Refresher\*  
Breathing Apparatus\*  
Confined Space Non-Entry Rescue\*

### Inspection

Competent Person Practical  
Inspection and Record Keeping\*



## SpanSet Accreditations

ISO 9001:2008 Certified Quality Management System

ISO 14001:2004 Certified Environment Management System

OHSAS 18001:2007 Certified Occupational Health and Safety Management Systems

Australian/New Zealand Standard 4801:2001 certified Occupational Health and Safety Management Systems

5 Tick Certified Product

Accredited Laboratory Tested by NATA to ISO/IEC 17025

ASQA Registered Training Organisation certified to ISO 9001:2008

Certified manufacturer to AS/NZS 1891.1  
"Industrial Fall Arrest Systems and Devices"

Certified manufacturer to AS/NZS 1353.1  
"Flat Synthetic Webbing Slings"

Certified manufacturer to AS/NZS 4497.1  
"Round Slings—Synthetic Fibre"

[www.spanset.com.au](http://www.spanset.com.au)

