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## ERGO iPlus Premium Harness Range

### Technical Data Sheet

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**SpanSet**  
Certified  
Safety

## ERGO iPlus Harness Range

ERGO iPlus harnesses are our premium range of products and showcase some of our latest technology. Starting with the revolutionary, patented iWeb™, inspection-ready webbing which gives, for the first time, an objective inspection criteria for cuts and abrasion.

Additionally, after many years of research we have arrived at our premium padding offer which, in the case of our ergonomically supportive waist belts, delivers on the ventilation performance so many have promised but failed to deliver.

Comfortable enough to wear all day long these reliable harnesses are certified to AS/NZS 1891.1 and supported by a NATA accredited compliance and batch testing regime.

- Optimised positioning of front connection, lower position keeps connectors out of your face in front attachment applications.
- Tighter, smaller diameter confined space loops, lighter than shoulder Ds but small enough for efficient and safe connection of snap hooks for spreader bar insertion to confined space
- UV resistant, iWeb inspectable webbing
- Documents pouch; keeps compliance labels and inspection record clean and intact
- Optimised stitch patterns shaped and designed for optimum strength and security.
- Manufactured, designed, tested and fully certified in Australia to AS/NZS1891.1 local BSI accreditation for trust & peace of mind.
- Maximised adjustment of chest strap additional adjustment options for small and large chests alike.
- Ergonomic pull-up shoulder strap adjustment allows one handed and additional adjustment.



- Adjustable chest D ring to centralise ability to centralise chest D ring ensures even and comfortable front loading.
- Front fall arrest D ring precise connection for front fall arrest applications such as climbing and ladder systems.
- Quick connect aluminium buckles lightweight, fast, convenient and reliable connection lead to greater worker acceptance and compliance.
- Fitted with suspension trauma relief straps allows a suspended conscious operative to minimise the effects of suspension trauma.
- “Green light” safe connection indicator on quick connect buckle gives a visual cue that the quick connect buckle is locked correctly.
- Rubber end grips comfortable pull tabs for easy adjustment.
- Large cranked (bent) rear fall arrest D ring easy to make a positive connection.
- Small D ring slider pad stops D ring digging into the back while minimising plastic to body contact.



## ERGO iPlus Harness Range

1100 ERGO iPlus Ultra Full Body Fall Arrest Harness



1100 ERGO iPlus Miners Harness



1104 ERGO iPlus Full Body Fall Arrest Harness



1107 ERGO iPlus Full Body Fall Arrest Harness



1600 ERGO iPlus Tower Harness



1800 ERGO iPlus Full Body Fall Arrest Harness



## iWeb™

SpanSet’s revolutionary, patented iWeb™ inspection-ready webbing which gives, for the first time, an objective inspection criteria for cuts and abrasion.

“I” is for inspectable, and this patented webbing has been woven with a load bearing indicator core, encased by a further load bearing outer case. When inspecting for cuts or abrasion, simply look for any signs of red yarns showing through the outer silver casing and you have the discard criteria.

This removes the subjective, often mood and opinion based inspection criteria which regularly leads to the condemnation of otherwise good harnesses, another demonstration of SpanSet’s commitment to offering our end user customers value, without compromising safety.



SpanSet Patented iWeb™ is a unitary construction as opposed to a tubular configuration. This construction method allows more consistency and, importantly, a tougher weave with low friction characteristics leading to longer lasting harnesses and lanyards.

Excessive abrasion or edge cuts are now easily identified by the red core marker giving an absolute objective discard criteria.

Currently available on all Ergo iPlus Harnesses.

### User Weight Limits

All harnesses = 160kg.

Refer to specific lanyard and inertia reel data for force calculations.

## Attachment Hardware

### Rear D

Forged aluminium  
 Cranked (bent) for ease of attachment  
 Polished for smoother edges  
 Clear anodised for corrosion resistance  
 Minimum tensile strength 22kN (5M–5000lb)  
 Proof loaded to 16kN  
 Ring internal diameter 54mm  
 Webbing slot size 16 x 54mm  
 Compatible with Gotcha™ Rescue Kit  
 Laser etched with batch number and rating

### Webbing

Colourfast polyester high tensile  
 iWeb inspectable webbing with damage indicator  
 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

### Front D

Forged aluminium  
 Polished for smoother edges  
 Clear anodised for corrosion resistance  
 Minimum tensile strength 22kN (5M–5000lb)  
 Proof loaded to 16kN  
 Ring internal diameter 46mm  
 Webbing slot size 11mm x 46mm  
 Compatible with Gotcha™ Rescue Kit  
 Laser etched with batch number and rating

### 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 colour for ease of inspection  
 Non load-bearing patterns (labels, web end fold backs, decorative etc) flat manual sews  
 All finished with over-stitching

### Buckles

2 bar buckles for easy adjustment  
 17.8kN/4000lb  
 Clear anodised for increased corrosion resistance  
 Webbing slot size 46mm  
 Stamped with batch number and rating  
 Exceed AS/NZSS 1891.1

### Labels

Compliance labels protected in openable pouch  
 UV resistant PVC  
 Thermal transfer printing

### Quick Connect Buckles

Double action pawls  
 “Green light” safe connection indicator  
 Lightweight aluminium  
 Anodised for corrosion resistance  
 Intergrated roll buckle adjuster  
 Extruded and machined

### Webbing Keepers

Nylon high density elastic for easy stowage of excess webbing  
 Contrasting black for quick identification  
 Rubber pull tabs on all end straps

<p><b>Suspension Trauma Relief Straps</b></p> <p>20mm nylon webbing</p> <p>2-part hook and loop design</p> <p>Housed in individual zippered soft pouches</p> <p>Attached to harness via reevable loop and positioning press studs</p> <p>Length adjusting increments 185mm</p>	<p><b>Leg Padding</b></p> <p>Composite foam and mesh</p> <p>Removable and sliding for adjustment</p> <p>Nylon abrasion resistant outer shell</p> <p>Nylon mesh, breathable inner lining</p>
<p><b>Shoulder Padding</b></p> <p>Composites foam and mesh</p> <p>Comform foam padding around neck</p> <p>Nylon abrasion resistant outer shell</p> <p>Nylon mesh, breathable inner lining</p> <p>Shaped to give the harness structure and form, to aid donning and minimise tangling</p> <p>Fixed to avoid tampering and ensure compatibility</p>	<p><b>Confined Space Attachment Loops</b></p> <p>(except ERGO iPlus 1800)</p> <p>UV resistant polyester tubing</p> <p>Tight and small enough to fit snap hooks</p> <p>Colour contrasted for ease of identification</p> <p>Must be used together</p> <p>Clearly labelled</p>
<p><b>Waist and Buttock Padding</b></p> <p>Motion activated ventilation bellows effect</p> <p>Composite foam and mesh</p> <p>Moulded and formed for greater ergonomics</p> <p>Nylon abrasion resistant outer shell</p> <p>Nylon mesh, breathable inner lining</p> <p>Stiffened and reinforced for additional support</p>	<p><b>Fall Arrest Attachment Loops</b></p> <p>UV resistant polyester tubing</p> <p>Colour contrasted for ease of identification</p> <p>Must be used together</p> <p>Clearly labelled</p>
<p><b>Construction</b></p> <p>Original ERGO Euro-style geometry</p> <p>3 layer pocket webbing supporting load bearing</p> <p>Chest strap for front D</p> <p>ERGOnomic, pull up adjustment at front shoulder straps</p> <p>Sub-pelvic strap to minimise peel out</p> <p>Fully adjustable shoulder, leg and chest straps</p> <p>Leg straps fixed at hips – no excessive tightening around thighs in the event of an arrested fall</p> <p>Front D allows for easier attachment with remote rescue kits</p> <p>Centralised front D gives even loading</p>	<p><b>Testing</b></p> <p>5-stage inspection process during manufacture:</p> <ul style="list-style-type: none"> <li>– 100% visual inspection</li> <li>– Rear D and front D’s tested to dynamic 3.8m head up and head down</li> <li>– Rear D and front D’s tested static 15kN head up and 10kN head down to AS/NZS 1891.1 standard</li> <li>– Side Ds – 1.8m drop test on pole 12kN static test at side Ds and rings</li> <li>– Confined space loops – 12kN static test through spreader bar</li> </ul>
<p><b>Common Features</b></p> <p>Lightweight and comfortable AS/NZS 1891.1 certified</p> <p>Easy to fit and adjust</p> <p>Individually serial numbered</p> <p>Easy to inspect i Web</p>	

## ERGO iPlus Features & Suitable Use

Features	1100 ERGOiPlus	1100 ERGOiPlus Miners	1104 ERGOiPlus	1107 ERGOiPlus	1600 ERGOiPlus Tower	1800 ERGOiPlus
Harness Weight	1.418kg	1.500kg	1.487kg	2.300kg	2.320kg	2.115kg
Confined space attachment loops	•	•	•	•	•	
Elasticated rear leg droppers						•
Front fall arrest and abseil widemouth Ds					•	•
Front fall arrest D ring	•	•	•	•	•	•
Padded shoulders and legs	•	•	•	•	•	•
Document pouch	•	•	•	•	•	•
Padded waist band and side pole strap widemouth Ds				•	•	•
Plastic reinforced gear loops					•	•
Quick release shoulder buckle					•	•
Rear fall arrest D ring	•	•	•	•	•	•
Rear fall arrest extension strap			•	•		
Suspension trauma relief straps	•	•	•	•	•	
iWeb inspectable webbing	•	•	•	•	•	•
<b>Suitable for</b>						
Confined space entry	•	•	•	•	•	
Construction	•	•	•	•	•	•
Elevated work platforms	•	•	•	•		
Fall arrest	•	•	•	•	•	•
Ladder safety systems	•	•	•	•	•	•
Maintenance	•	•	•	•	•	•
Pole work				•	•	•
Rescue					•	•
Roof work	•	•	•	•	•	•
Rope access					•	•
Tower work					•	•



## Types of Attachment Points

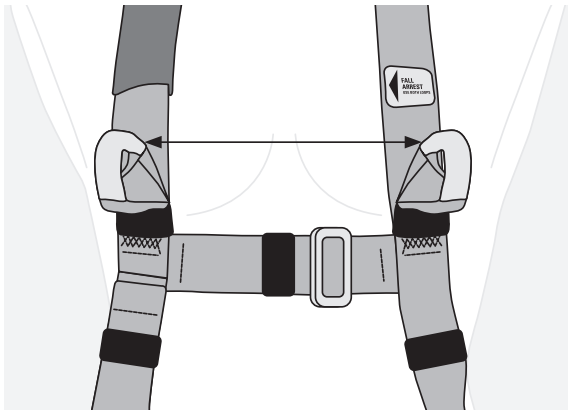


- 1 Confined space attachment loops**  
Reverse folded loops to eliminate snagging and minimise metal components in contact with the body. Both loops must be used together.

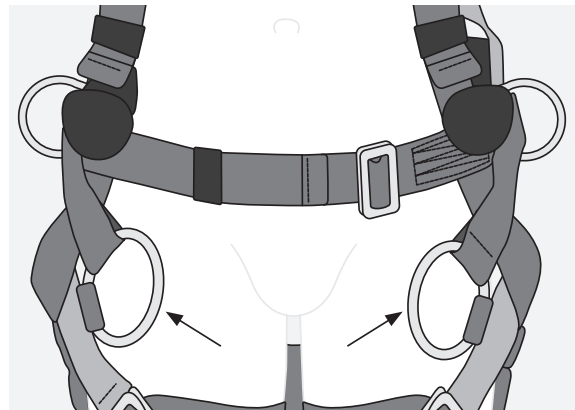
- 2 Front fall arrest D ring**  
For versatility and ease of rescue.

- 3 Pole strap attachment D rings**  
Easy to locate and connect to.

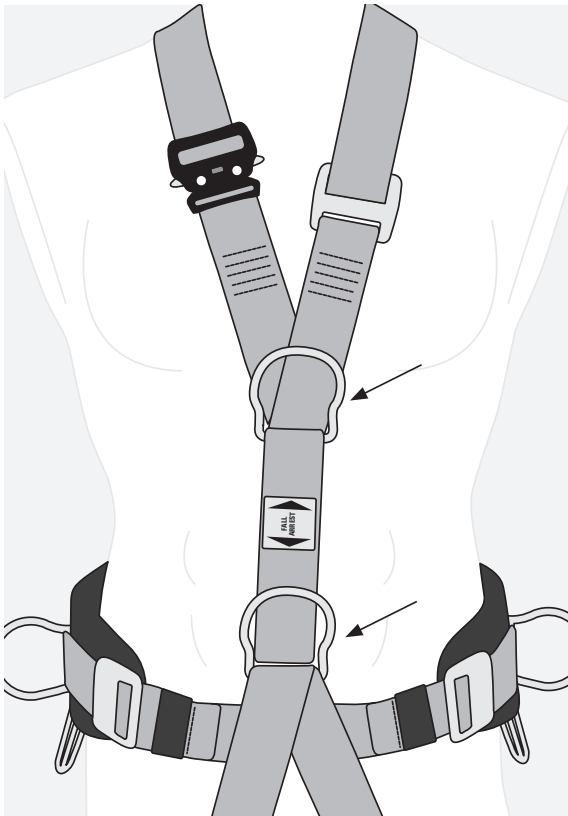
- 4 Rear fall arrest D ring**  
Easy to locate and connect.



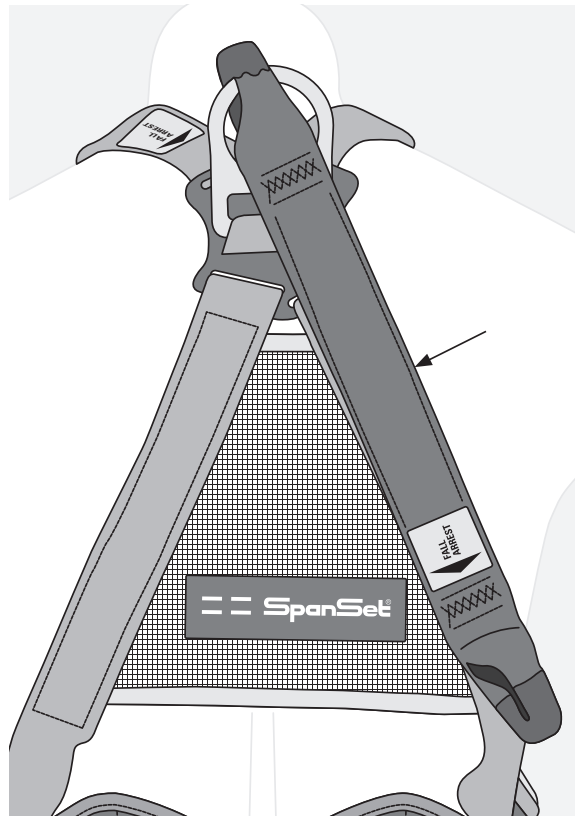
**Front Fall Arrest Loops**  
(Both loops must be used together)



**Auxiliary Pole Strap Rings**  
(Both Ds must be used)



**Front Fall Arrest**  
Attachments (can also be used for abseiling, work positioning or belay work)



**Dorsal/Rear (Fall Arrest) Extension Strap**

**WARNING: ONLY USE ATTACHMENTS THAT ARE SPECIFICALLY LABELLED FOR THE APPLICATION**

## Fitting Instructions

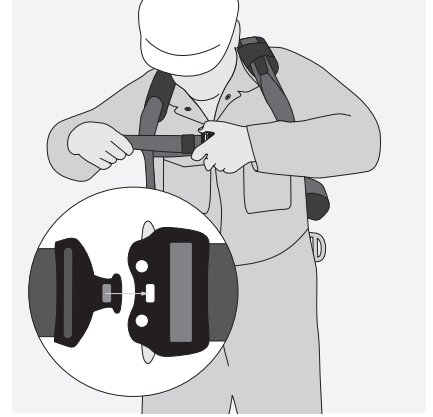
### Vest Style Harnesses



Hold harness by the Rear D with all straps undone



Place both shoulder straps over the shoulder as in donning a vest



Connect chest buckle, ensuring that green spot is seen in the receiver window. Tighten strap.



If a waist belt is fitted, connect and tighten



Connect leg buckle



Tighten leg strap



Connect opposite leg strap



Tighten straps and retain free webbing within the elastic webbing tidy



Fitted harness should be snug and firmly fitted, particularly the leg straps

## Step-in Style Harnesses



Hold harness by the shoulder straps and disconnect the chest fast release buckle



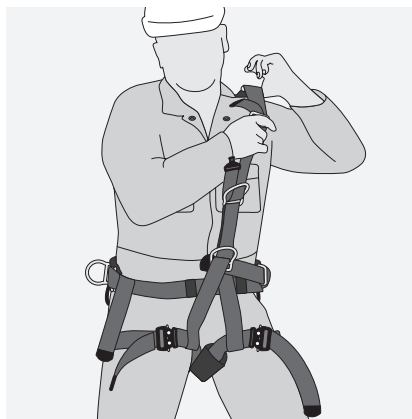
Place left leg through the left leg strap



Place the right leg through the right leg strap



Pull the harness upwards to waist level



Place the left shoulder strap over the shoulder



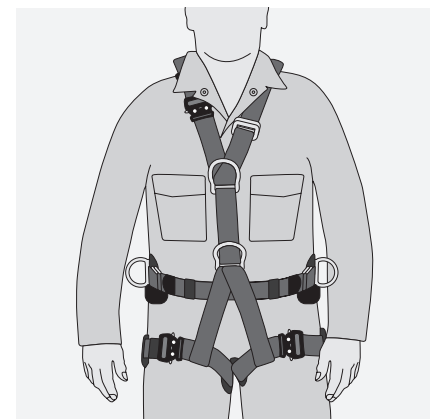
Repeat for right shoulder strap and connect the buckle. Ensure green spot can be seen in the receiver window



Tighten waist strap by pulling both sides



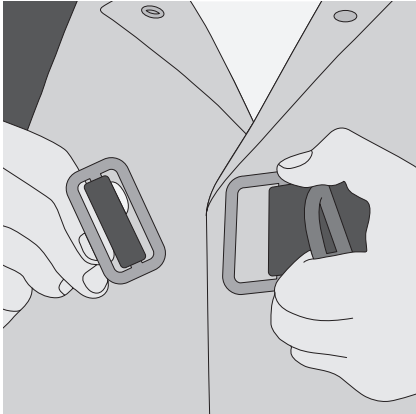
Tighten leg straps



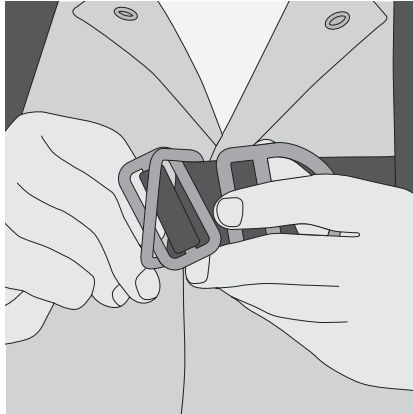
Fitted harness should be snug and firmly fitted, particularly the leg straps

## **Buckle Connection Instructions**

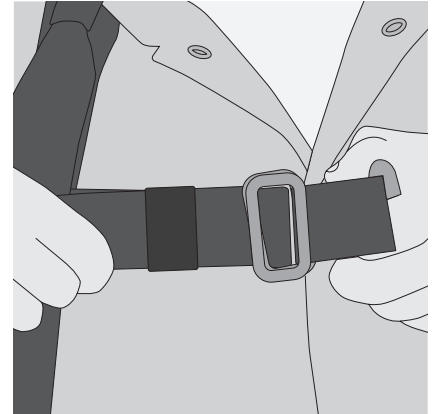
### **2-3 Bar Buckles**



Bring the 2 buckles together, ensuring there are no twists in the webbing

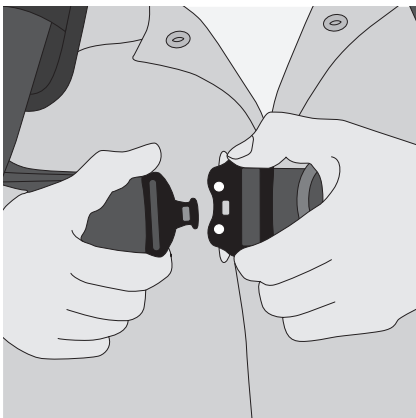


Turn the 3 bar buckle and push it through the 2 bar buckle



Ensure both buckles lay flat against one another and tension the strap

### **Quick Connect Buckles**



Align the tongue with the slot in the receptor buckle and insert

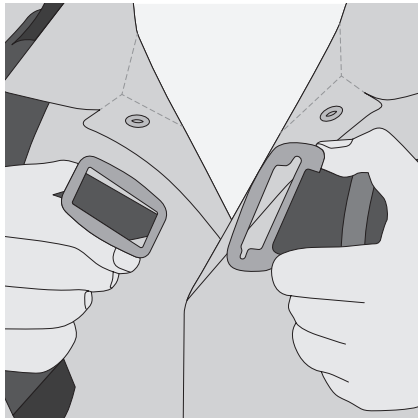


Push together until you hear a distinct click and the green mark appears in receiver window

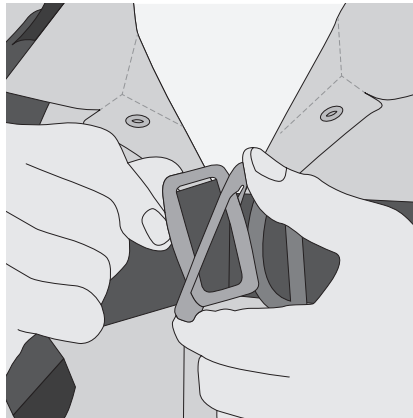


To release, push the two side tabs simultaneously and separate the buckles

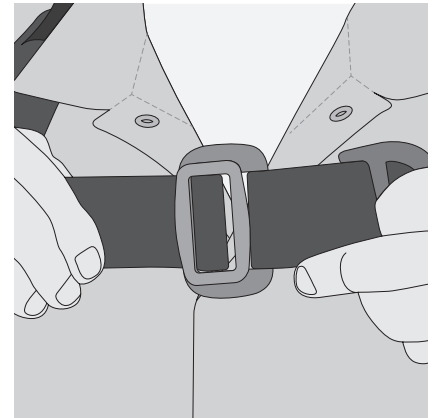
## Slotted Buckles



Bring the 2 buckles together, ensuring there are no twists in the webbing

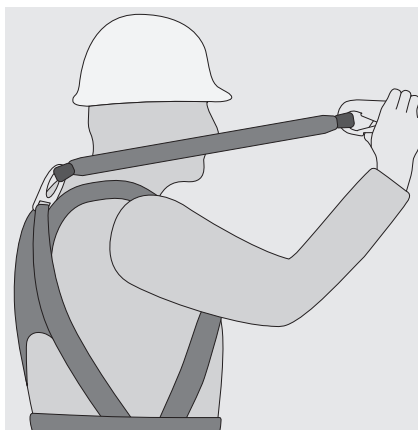


Push the smaller buckle through the slot in the larger buckle



Ensure both buckles lay flat against one another and tension the strap

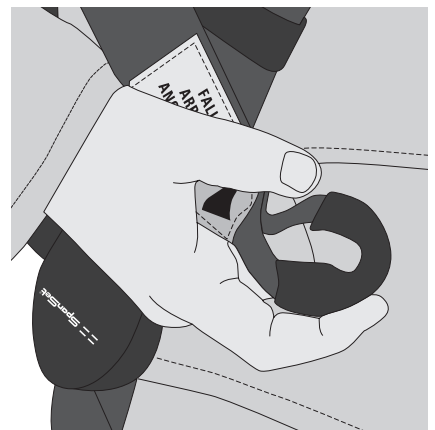
## Dorsal Extension



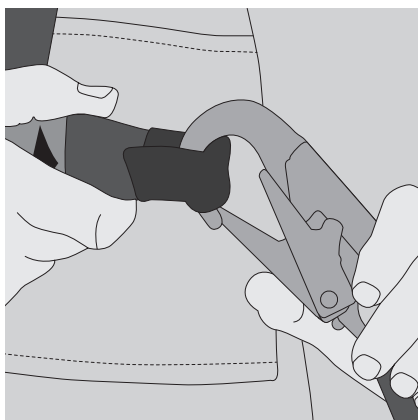
The dorsal extension is located at the rear of the harness, held in place by velcro strip



Remove dorsal extension from velcro strip and bring under the armpit



Ensure the eye is open to receive the connection hardware



Connect attachment hardware to the eye, making a visual check for secure connection

**Note:** All SpanSet dorsal extensions are deliberately located on the rear of the harness in order to keep an attached lanyard away from the neck and face.

The harness is correctly fitted (donned) when:

- The dorsal D ring (rear) is between the shoulder blades
- The shoulder straps are firm
- The chest strap is firm and located mid-chest
- The leg straps are firm
- There are no twists in any straps
- The butt strap is located just below the buttocks
- Spare strap ends are tucked away.

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## Types of Harnesses and Environmental Conditions

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### ERGOiplus Harnesses

These premium harnesses are padded for comfort and feature quick connect buckles for convenience when donning. For professional users in dry conditions where no excessive dirt, mud and grime build up is experienced. ERGOiplus also features iWeb inspectable webbing with Xtreme Guard coating

### ERGO Harnesses

These are the workhorses in the range and are best suited for dirty and harsh conditions by professional operators who appreciate no nonsense reliability. They feature the most reliable buckle system, being the 2 and 3 bar buckle, and don't feature any moving parts or unnecessary padding.

### Compliance Harnesses

Tradie and EWP (also known as Spectre) harness are compliant entry level harnesses without many of the features of the previous harness ranges such as confined space loops, centre front D and suspension trauma straps

### HotWorks Harnesses

These harnesses are for use around welding, grinding and similar hot work. They are made from heat resistant materials including the padding and have a lower total cost of ownership compared to polyester harnesses which are susceptible to heat.

### WaterWorks Harnesses

These are for use around constantly wet areas and confined spaces and utilise all stainless steel fittings for longevity. Additionally they have Xtreme Guard coated webbing for water oil and dirt resistance.

### ToughWorks Harnesses

These are PVC or polyurethane coated harnesses for added resistance to paint, abrasion and excessive wear.

### StageWorks

These particular harnesses have little or no reflectivity for working backstage and aloft at productions where the riggers and support personnel need to work at height but remain inconspicuous.

### Belts

Waist belts on their own must not be used for fall arrest applications. SpanSet generally only manufacture miners' belts, to carry battery packs and self-rescuer devices. These belts may be integrated into full body harnesses however only the load bearing and tested harness attachment points listed in AS/NZS 1891.1 may be utilised in fall, rescue or suspension applications.

### Maximum User Weights

SpanSet harnesses are rated in excess of 150kg.

## General Maintenance

A visual check should be carried out before and after daily use, and a 6 monthly periodic inspection is to be performed by a competent person and the results recorded.

Clean prior to inspection.

### Checklist for Inspection of Harnesses and Pole Straps

The following points should be checked before use:

- Check all webbing for effects of cuts, tears, abrasion, heat, chemicals, corrosives or solvents, hardening, excessive stretching, glazing due to friction, excessive wear or fuzziness, discolouration due to chemical contamination or prolonged ultraviolet exposure, excessive stiffness due to overloading, possibly as a result of a fall.
- Check all stitch blocks for broken, cut or worn stitching and damage due to heat, corrosives, solvents or mildew
- Check all buckles and D-rings for deformation, distortion, corrosion, wear and correct orientation
- Ensure the protective sleeve is in place on the pole strap
- Check ID number and Standards logo for legibility
- Check Date of manufacture - life shall not exceed 10 years
- Check for evidence of a fall. Must be withdrawn from service after a fall and destroyed if any damage has been sustained
- Check with the user for possible causes of damage.

If any of these points are not satisfactory then the harness 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.

Harness Size	Shirt Size							
	M	L	XL	2XL	3XL	4XL	5XL	6XL
Medium	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Light Grey	Light Grey	Light Grey	Light Grey
Large	Light Grey	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Light Grey	Light Grey	Light Grey
X Large	Light Grey	Light Grey	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Light Grey	Light Grey
2X Large	Light Grey	Light Grey	Light Grey	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Light Grey
3X Large	Light Grey	Light Grey	Light Grey	Light Grey	Dark Blue	Dark Blue	Dark Blue	Dark Blue



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### SpanSet Accreditations

ISO 9001:2015 Certified Quality Management System

ISO 14001:2015 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

Accredited for compliance with ISO/IEC 17025 - Testing

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 "Round Slings—Synthetic Fibre"

